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2010

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Library of Congress Catalog Card Number: 38-12082
 International Standard Book Number: 978-1-61535-366-8
 International Standard Serial Number: 0068-1156

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Foreword

Though the year 2009 was a gloomy one in terms of the deep recession that gripped the globe and the H1N1 flu pandemic that infected hundreds of thousands, the year also offered a chance to reflect upon the 200th anniversary of the births of two historical giants—Abraham Lincoln and Charles Darwin—who were born on the same day in 1809, as well as the 40th anniversary of the musical experience that became known as Woodstock. Though Mexico grappled with ferocious drug wars, Pakistan battled Islamist extremists, and the recruitment of child soldiers remained a scourge, the future looked promising in some respects. China prospered; electric cars geared up; and unmanned aerial vehicles helped fight wars and defend borders. In the sciences, autism therapies were tailored for youngsters, primate research became a key to understanding what it means to be human, and “Ardi,” a possible ancestor older than the hominin skeleton Lucy, captured headlines. All of these topics are featured in Special Reports.

Safety also became a byword during the year as the National Football League adopted new rules to protect players, particularly quarterbacks; central banks and regulatory bodies adopted measures to avert another banking crisis, such as the one experienced in 2008–09; the Chalk River nuclear reactor in Ontario experienced a long-term shutdown (probably into 2010) following a power outage and the detection of heavy water; and the Australian Country Fire Authority urged homeowners to vacate their properties rather than defend them following the deadly bushfires in February that claimed 173 lives on “Black Saturday.” In the swimming world, the advent of nontextile swimwear led to the smashing of hundreds of records. The Cuban Revolution marked a record of its own—a 50-year anniversary. In India, elections gave the governing Congress Party a stronger mandate. Meanwhile, the online microblogging service Twitter became a worldwide sensation as devotees “tweeted” in 140-character submissions, and the service’s users became adept at circumventing censorship, especially during the Iranian elections.

The arts and music world experienced a particularly grave loss of talent with the deaths of American painter Andrew Wyeth, German-born American composer Lukas Foss, American author John Updike, and pop superstar Michael Jackson. Also leaving the scene were Walter Cronkite, the dean of American journalism, and Edward Kennedy, the lion of the U.S. Senate. People in the news include U.S. Supreme Court Justice Sonia Sotomayor, Ponzi schemer Bernie Madoff, boxing phenomenon Manny Pacquiao, singing sensations Susan Boyle and Taylor Swift, and first lady Michelle Obama.

I thus offer the *Britannica Book of the Year 2010*—a compilation of those events and milestones of 2009 that stimulated our imaginations and provoked controversy. Was 2009 the end of the decade?

Karen Sparks
Director and Editor

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German soldiers stand at attention during a ceremony in Frankenberg on March 6 to mark their deployment to Afghanistan.

Sean Gallup/Getty Images



Dates of 2009



Giant dominoes (above) placed in front of the Brandenburg Gate fall in a symbolic act during ceremonies on November 9 to commemorate the 20th anniversary of the fall of the Berlin Wall. Chinese naval personnel (right) march past Tiananmen Square in Beijing on October 1 as part of China's celebrations marking 60 years of communist rule. A Samoan man (below) surveys damage left behind by a tsunami that was generated by a magnitude-8.0 earthquake near Samoa on September 30.

Photos: (background) Shutterstock; (above) Gero Breloer/AP; (right) AFP/Getty Images; (below) Phil Walter—Getty Images



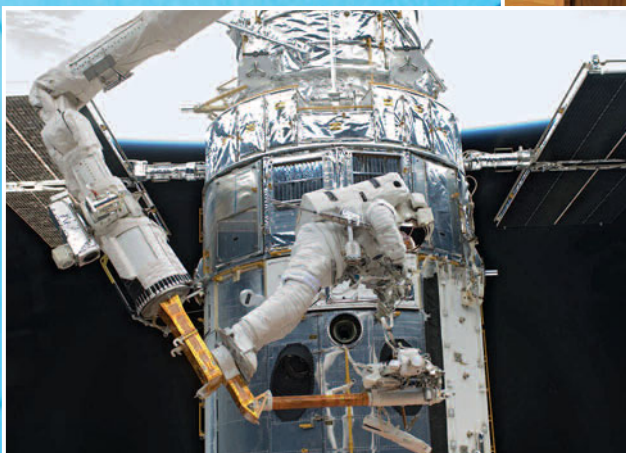


Members of the New York Yankees (left) celebrate their title-clinching win over the Philadelphia Phillies in game six of the World Series on November 4. Sri Lankan children (right) participate in a victory procession on May 20 following the capture of the final enclave of the Tamil Tiger rebels and an end to Sri Lanka's long-running civil war.

Photos: (left) Chris McGrath—Getty Images; (right) Eranga Jayawardena/AP

Photos: (right) Rodolfo Gonzalez/AP; (below) NASA

Family members (right) of a soldier killed during the November 5 mass shooting at the U.S. Army base at Ft. Hood, Texas, grieve during a memorial service honouring the 13 people who lost their lives. Astronaut Andrew Feustel (below) performs work on the Hubble Space Telescope on May 14.



January

“

In reaffirming the greatness of our nation, we understand that greatness is never a given. It must be earned.

Our journey has never been one of shortcuts or settling for less.

”

U.S. Pres. Barack Obama
in his inauguration address, January 20

1 With the beginning of the new year, the Czech Republic, led by Prime Minister Mirek Topolánek, assumes the presidency of the European Union.

Russia ceases shipment of natural gas to Ukraine; the previous day Ukraine had rejected sharp price increases demanded by Russia.

The Green Zone, a 14.5-sq-km (5.6-sq-mi) area in Baghdad that has been the centre of the U.S. occupation, is turned over to Iraqi control.

Two newspapers in Mexico report that more than 5,000 people were killed by gangsters in drug-related violence in 2008, more than twice as many as died in 2007.

2 The government of Sri Lanka announces that its military has captured the city of Kilinochchi, the administrative centre of the Liberation Tigers of Tamil Eelam.

At a gathering of leaders of a large tribe in Yusufiyah, Iraq, to discuss national rec-

onciliation, a suicide bomber kills at least 24 people.

3 After a week of aerial and naval assaults against Hamas targets in the Gaza Strip, Israeli troops and tanks cross the border into Gaza, initiating a ground war there.

John Atta Mills is declared the winner of the runoff presidential election held in Ghana in late December 2008.

4 A suicide bomber detonates his weapon among a crowd of pilgrims visiting a Shi'ite shrine in Baghdad; at least 40 people, many of them Iranians, are killed.

For the second time since it halted natural gas delivery to Ukraine, Russia raises the price that it requires Ukraine to pay for delivery of the fuel.

5 India gives Pakistan evidence that the terrorists who attacked

Mumbai (Bombay) in November 2008 were linked to Pakistan; it demands that those responsible be tried in India.

The new U.S. embassy compound in Baghdad is dedicated; it is the largest U.S. embassy in the world.

At a meeting of the American Astronomical Society, researchers report their finding that the Sun is moving more quickly around the

centre of the Milky Way Galaxy than had been believed, which indicates that the Galaxy is approximately as large as Andromeda, much larger than previously thought.

6 Some 40 Palestinians are killed by Israeli shelling outside a UN educational facility that was being used as a refuge in the Gaza Strip.

Nearly all natural gas delivered from Russia through Ukraine to Europe and Turkey is halted.

Sheikh Hasina Wazed takes office as prime minister of Bangladesh; she previously held the post in 1996–2001. (Photo left.)

In South Korea opposition lawmakers end a 12-day occupation of the parliament building after successfully blocking a vote on a free-trade agreement with the U.S. as well as other legislation.

U.S. Pres. George W. Bush creates the largest marine reserve in the world, totaling



Qamruzzaman—Xinhua/Landov

505,773 sq km (195,280 sq mi) in area, by designating the Mariana Trench, Pacific Remote Islands, and Rose Atoll as marine national monuments.

At the Macworld Expo trade show in San Francisco, Apple official Philip W. Schiller announces that anti-copying software will be removed from songs in its iTunes Store, that record companies may set a variety of prices for songs, and that users of iPhones will for the first time be able to download songs from iTunes over wireless networks.

7 B. Ramalinga Raju resigns as chairman of giant outsourcing company Satyam Computer Services in one of India's largest-ever accounting scandals.

North Korea sets legislative elections for March 8; the decision had been postponed for several months.

Violent protests take place in Oakland, Calif., where demonstrators are angry over the slow response to an incident in which an unarmed young black man was shot and killed early on January 1 by a transit policeman on the platform of a Bay Area Rapid Transit station.

The centenary of the U.K.'s domestic intelligence agency, MI5, is marked by the first-ever interview of the agency's head by the press as Jonathan Evans meets with reporters at MI5 headquarters in London.

8 The Bank of England lowers its benchmark interest rate by half a percentage point, to 1.5%, in an effort to help the economy of the U.K., which is in recession for the first time in 17 years; the interest rate

is at its lowest level since the founding of the bank in 1694.

Venezuela's central bank reports that the country's rate of inflation in 2008 was 30.9%, higher than it had been for more than a decade.

The U.S. Department of Labor releases statistics showing that the number of people receiving unemployment benefits at the end of 2008 reached 4.61 million, the highest number since November 1982.

The University of Florida defeats the University of Oklahoma 24-14 in college football's Bowl Championship Series title game in Miami to win the NCAA Football Bowl Subdivision championship.

9 The *Sirius Star*, a Saudi-owned supertanker that was seized by Somali pirates in November 2008, is released in return for the payment of \$3 million in ransom; however, a boat carrying pirates to shore capsizes, which results in the drowning of five of the pirates and the loss of some of the ransom money.

Julie L. Gerberding resigns her post as head of the U.S. Centers for Disease Control and Prevention.

Former U.S. treasury secretary Robert E. Rubin resigns as an adviser to the board of banking giant Citigroup, which is negotiating to sell its brokerage business Smith Barney to financial services provider Morgan Stanley.

10 Israel warns residents of the Gaza Strip that it intends to intensify its operations against Hamas, which

have so far left some 820 Palestinians dead, while heavy rocket fire from Gaza into Israel continues.

11 At the Golden Globe Awards in Beverly Hills, Calif., best picture honours go to *Slumdog Millionaire* and *Vicky Cristina Barcelona*; the award for best director goes to Danny Boyle for *Slumdog Millionaire*.

12 Pres. Lee Myung-Bak of South Korea and Prime Minister Taro Aso of Japan agree to embark on a program of economic cooperation in view of the global economic crisis.

An appellate court in South Africa rules that charges against African National Congress (ANC) leader Jacob Zuma should not have been dismissed and thereby makes it possible for the charges to be reinstated.

Health officials in Minnesota report that they have linked an outbreak of salmonella that has affected some 400 people in 43 states with peanut butter that is sold to institutions.

13 Ethiopian troops complete their withdrawal from Mogadishu, Som.; various Islamist groups, notably al-Shabaab, take over vacated posts, and fighting between Islamist forces and Ethiopian troops leaves at least 15 people dead.

Some 10,000 people demonstrate in Riga to show their unhappiness with the troubled economy and with corruption in government in Latvia; rioting erupts.

Carol Bartz, executive chairman of the design software company Autodesk, is cho-

sen as CEO of Internet company Yahoo!.

14 Protests against economic conditions in Sofia, Bulg., turn violent.

The U.S. Supreme Court rules that evidence found by arresting officers who had been misled by a computer file that had not been updated into believing that there was an outstanding warrant for the defendant is not subject to the exclusionary rule and can be used in trial.

After several days of severe flooding in Fiji, the country's sugar farms have been decimated, 9,000 people have been evacuated, and at least 11 people have died.

Nortel Networks, once one of the biggest telecommunications equipment makers in the world, files for bankruptcy protection in Canada, where it is based.

15 Israeli armed forces shell a hospital run by the Palestine Red Crescent Society and the headquarters of the United Nations Relief and Works Agency in Gaza City; another attack kills Said Siam, the head of Hamas security forces.

The U.S. Senate votes to allow the release of the second half of the fund created for the rescue of financial institutions affected by the subprime lending debacle.

Science Express, the online component of *Science* magazine, publishes a report by a team of scientists who found that the atmosphere of Mars contains methane, a gas that would decompose quickly in the Martian environment; the presence of the gas indicates that the planet is geologically alive or contains biological life.

A U.S. Airways A320 jet loses power in both engines because of bird strikes shortly after taking off from New York City's La Guardia Airport; pilot Chesley B. Sullenberger III successfully lands the plane in the Hudson River, and all 155 aboard are safely rescued. (Photo right.)



16 A demonstration in Vilnius by thousands of people opposed to proposed adjustments to economic austerity in Lithuania turns into rioting.

A 20-year sentence for corruption imposed in 2003 against Arnaldo Alemán, who was president of Nicaragua in 1997–2002, is overturned by the country's Supreme Court.

The American electronics retailer Circuit City Stores, with 567 outlets and 34,000 employees, announces that it is going out of business.

17 Israel declares that it will begin a cease-fire early the following day in its operations against Hamas in the Gaza Strip; some 1,200 Palestinians and 13 Israelis have died during the 22-day operation.

The organization Human Rights Watch details massacres in which at least 620 people have been slaughtered by the Lord's Resistance Army militia group in the Democratic Republic of the Congo over the past month.

The Dakar Rally, which began January 3 in Buenos Aires with some 530 teams who followed a 9,574-km (5,949-mi) loop that took them south and into Chile and then back to Buenos Aires, concludes; the winners are South African driv-

er Giniel De Villiers in a Volkswagen automobile, Spanish driver Marc Coma on a KTM motorcycle, Russian driver Firdaus Kabirov in a Kamaz truck, and Czech driver Josef Machacek in a Yamaha ATV.

18 Prime Minister Vladimir Putin of Russia and Prime Minister Yuliya Tymoshenko of Ukraine reach an agreement on the price that Ukraine will pay for Russian natural gas; previous accords have fallen through, and at least 12 people have frozen to death while some 20 countries are cut off from gas supplies from Russia.

McKee Foods Corp. recalls Little Debbie brand peanut butter crackers; the previous day the U.S. government had advised consumers to avoid cookies, cakes, and other items made with peanut butter paste, much of which comes from the Blakely, Ga., plant of the Peanut Corp. of America that has been implicated in a large salmonella outbreak.

19 In the Swat valley in Pakistan, five schools closed for winter vacation are bombed; authorities believe the culprits are Taliban fighters

determined to prevent the education of girls.

Prominent Russian human rights lawyer Stanislav Markelov and a freelance reporter for the independent newspaper *Novaya Gazeta* are shot down in broad daylight in Moscow.

20 Barack Obama is inaugurated as the 44th president of the United States before what is perhaps the largest crowd ever to attend a presidential inauguration.

A partnership is announced between troubled American car company Chrysler LLC and the Italian automobile manufacturer Fiat, which will acquire a stake in Chrysler and will sell its Fiat and Alfa Romeo brand cars in Chrysler dealerships.

21 Hillary Rodham Clinton is confirmed as U.S. secretary of state, and Janet Napolitano is sworn in as U.S. secretary of homeland security.

Former KGB agent and now wealthy capitalist Aleksandr Y. Lebedev announces that he will buy a majority stake in the iconic London newspaper *The Evening Standard*.

The online marketplace company eBay reports its first-ever revenue decline.

Richard D. Parsons is named chairman of financial services giant Citigroup.

22 Japan reports that its export rate in December 2008 fell drastically, while China announces a sharp slowdown in growth in the final quarter of the year, and South Korea says that its economy shrank in the same period; all these results are related to the economic crisis in the U.S. and Europe.

U.S. Pres. Barack Obama signs executive orders requiring that the military prison at Guantánamo Bay in Cuba be closed within a year, insisting that interrogation methods fall within the guidelines of the Army Field Manual, and ending the CIA's secret overseas prison program.

To the surprise of observers, Rwandan military forces capture Laurent Nkunda, the Tutsi warlord who has terrorized the eastern region of the Democratic Republic of the Congo for several years, during most of which time he was supported by Rwanda.

Prosecutors in India claim that B. Ramalinga Raju, the former head of the outsourcing company Satyam Computer Services, whose clients include a third of the Fortune 500 companies, confessed to falsely claiming more than 10,000 more employees than the company had and buying land with the money paid to the imaginary employees.

The computer software behemoth Microsoft, for the first time in its 34-year history, announces a major lay-off; it plans to shed about 5% of its workforce, amounting to some 5,000 employees.

23 The British Office for National Statistics releases data showing that the U.K. officially went into recession in the final quarter of 2008, and Spain's National Statistics Institute reveals that the country's unemployment rate during the last quarter of 2008 reached 13.9%, the highest in the euro zone.

The biggest wind-power complex that has been built in Latin America is ceremonially inaugurated along the southern coast of Mexico's Isthmus of Tehuantepec.

DC Comics announces that beginning in April the monthly satiric magazine *Mad* will begin publishing only quarterly.

24 A suicide car bomber detonates his weapon near an African Union peacekeeping base in Mogadishu, Som., as a public bus is passing; at least 15 people are killed.

Pope Benedict XVI revokes the excommunications of four bishops who were consecrated in 1988 without

Vatican permission by Archbishop Marcel Lefebvre, who opposed the reforms of the Second Vatican Council; one of the bishops has denied that the Holocaust took place.

25 A new constitution supported by Pres. Evo Morales is approved in a voter referendum in Bolivia.

The Sri Lankan military reports that it has taken control of Mullaitivu, the last major town controlled by the Liberation Tigers of Tamil Eelam.

26 The coalition government of Iceland falls, a victim of the collapse of the country's economy.

The Islamist insurgent group al-Shabaab takes control of Baidoa, the seat of Somalia's transitional national government, and the following day announces the imposition of Shari'ah rule.

Tens of thousands of protesters riot in the streets of Antananarivo, Madag., to demand the resignation of the government in response to the shutdown of a television channel owned by the head of the opposition; at least 25 people are killed.

Timothy F. Geithner is confirmed and sworn in as U.S. secretary of the treasury.

A merger of the pharmaceutical companies Pfizer Inc. and Wyeth is announced by Pfizer CEO Jeffrey B. Kindler; some 19,000 people will be laid off in the combined company, which will be the fourth largest in the U.S.

At Thoroughbred horse racing's 2008 Eclipse Awards, Curlin is named Horse of the Year for the second consecutive year.

In the field of children's literature, the Newbery Medal is awarded to Neil Gaiman for *The Graveyard Book*, and Beth Krommes wins the Caldecott Medal for her illustrations for *The House in the Night* by Susan Marie Swanson.

27 The U.K. offers a package of £2.3 billion (about \$3.2 billion) in aid to the faltering automobile manufacturers Jaguar Land Rover, owned by India's Tata Motors, and Vauxhall, owned by General Motors of the U.S.

Metropolitan Kirill of Smolensk and Kaliningrad is chosen by more than 700 delegates to replace the late Aleksey II as patriarch of the Russian Orthodox Church; he is to be enthroned on February 1.

28 The U.S. House of Representatives passes an \$819 billion economic stimulus package supported by Pres. Barack Obama.

The World Economic Forum convenes in Davos, Switz., in an atmosphere of crisis.

The Peanut Corp. of America expands its recall of goods to include all peanut butter products made since Jan. 1, 2007, at its now-closed plant in Blakely, Ga.; the salmonella outbreak identified as having originated at the plant has caused at least eight deaths.

29 Afghanistan's Independent Election Commission postpones the country's presidential election until August 20, saying it would be impossible to be ready sooner; the constitution requires that an election be held at least 30 days

before May 22, when Pres. Hamid Karzai's term of office ends.

The Illinois state Senate votes unanimously that Gov. Rod Blagojevich is guilty of abuse of power and removes him from office; Pat Quinn becomes governor in his place.

Ford Motor Co. reports that it suffered a net loss of \$14.6 billion in 2008, a record for the company.

30 Morgan Tsvangirai agrees to become prime minister of Zimbabwe in a coalition government with Pres. Robert Mugabe; the Southern African Development Community pushed for this solution to the impasse.

North Korea announces the nullification of all of its previous agreements with South Korea.

Grigol Mgaloblishvili resigns as prime minister of Georgia.

31 In Djibouti, Somalia's transitional legislature elects Sheikh Sharif Sheikh Ahmed, former head of the Islamic Courts Union, president; the news is greeted with exultation in Mogadishu.

Andry Rajoelina, mayor of Antananarivo, announces that he is now president of Madagascar; Pres. Marc Ravalomanana disagrees.

Elections to provincial councils are held throughout Iraq in relative peace.

American Serena Williams defeats Dinara Safina of Russia to win the Australian Open women's tennis championship; the following day Rafael Nadal of Spain defeats Roger Federer of Switzerland to win the men's title.

February

“*Hell in all its fury has visited the good people of Victoria. This is an appalling tragedy.*”

Australian Prime Minister Kevin Rudd in response to wildfires that have consumed 1,995 sq km (770 sq mi) and left dozens dead, February 8

1 Jóhanna Sigurðardóttir is sworn in as prime minister of Iceland at the head of a caretaker coalition government.

Michel Desjoyeaux of France crosses the finish line at Les Sables d'Olonne, France, to win the Vendée Globe around-the-world solo sailing race 84 days 3 hr 9 min after he started the 45,549-km (28,303-mi) journey, breaking the race record by more than 3 days; he is the first skipper to have won the race twice. (Photo below.)

In Tampa, Fla., the Pittsburgh Steelers defeat the Arizona Cardinals 27–23 to win the National Football League's Super Bowl XLIII.

2 A roadside bomb explodes near an African Union peacekeeping base in Mogadishu, Som., killing at least 20 people; the city's deputy mayor says that the peacekeepers responded by firing into a crowd of civilians, killing 39, but the peacekeepers deny that allegation.

At a meeting in Addis Ababa, Eth., Muammar al-Qaddafi of Libya is elected

chairman of the African Union.

Farmers from southern Crete attempt to reach government buildings in Athens with some 300 farm vehicles to demand greater economic help from the government; fighting with riot police takes place.

Eric Holder is confirmed as U.S. attorney general; he is the first African American to hold that position.

A government report in South Korea shows that the country's exports declined by a record 32.8% in January.

3 Iran announces that it has for the first time launched a satellite into orbit.

In Moscow, Kyrgyz Pres. Kurmanbek Bakiyev announces that he will close the Manas air base used by

the U.S. as a staging area for military forces in Afghanistan.

Carmakers report that new-car sales in the U.S. fell 37% in January in the industry's worst January figures since 1963.

The government of Madagascar removes Mayor Andry Rajoelina of Antananarivo from office; Rajoelina has been attempting to take over the country.

The International Court of Justice creates a new boundary between Romania and Ukraine in the Black Sea; about 80% of the disputed maritime area is awarded to Romania.

The government of Indonesia reports that the previous day it rescued some 200 ethnic Rohingya men who had been drifting in a wooden boat for close to three weeks and that 22 of the boat's passengers had perished during that time.

4 U.S. Pres. Barack Obama announces new rules that will cap the salary of top executives in companies receiving government financial assis-



Charles Platiau—Reuters/Landov

tance at \$500,000 and impose restrictions on bonus and severance pay for such company leaders.

In Puthukkudiyiruppu, Sri Lanka, the last operational hospital in the region where government forces are fighting the remnants of the Liberation Tigers of Tamil Eelam comes under fire, and patients, doctors, and other staff flee; it is thought that as many as 250,000 Tamil civilians are trapped in the war zone.

India signs an agreement with French energy company Areva that envisions Areva building and supplying a nuclear power plant in Jaitapur, Maharashtra state.

5 Scientists from Liberia and neighbouring countries announce that they will meet to try to find a way to contain a massive infestation of *Achaea catocaloides rena* caterpillars that is devastating forests and crops in northern Liberia.

A suicide bomber near a Shi'ite mosque in Dera Ghazi Khan, Pak., kills at least 24 people.

After the payment of \$3.2 million in ransom, the *Faina*, a Ukrainian ship carrying millions of dollars of military weaponry, is released by the Somali pirates who hijacked it in September 2008; the ship, which had been surrounded by U.S. warships to keep the pirates from unloading the weapons, arrives safely at Mombasa, Kenya, on February 12.

The journal *Nature* publishes a report describing the discovery in Colombia of a giant snake, dubbed *Titanoboa cerrejonensis*, that lived some 60 million years ago and was about 13 m (42 ft) long; the find also sheds light on the climate conditions in the

tropics during a time when the planet was much warmer than it is at present.

Pat Summitt, coach of the University of Tennessee Lady Vols women's basketball team, becomes the first NCAA Division I college basketball coach to win 1,000 games.

6 The U.S. Department of Labor releases figures showing that job losses in November and December were worse than previously reported, and job losses for January reached 598,000, the worst figure since December 1974; since the recession began in December 2007, 3.6 million jobs have disappeared.

The U.S. Food and Drug Administration approves a drug made with antithrombin, an anticlotting protein, extracted from the milk of goats that have been engineered with a human protein by GTC Biotherapeutics; the genetically engineered goats are also approved.

Nika Gilauri is confirmed as Georgia's prime minister by the legislature.

The Aragua Tigers (Tigres) of Venezuela defeat the Mazatlán Deer (Venados) of Mexico 5–3 to win baseball's Caribbean Series.

7 Supporters of opposition figure Andry Rajoelina clash with government troops in Antananarivo, Madag., and some 25 people are killed; the death toll in political violence is said to have reached 130.

8 Wildfires race through the Australian state of Victoria for a second day, consuming 1,995 sq km (770 sq mi) of forest and farmland, two towns, and 750 homes

and leaving at least 173 people dead; some of the fires are believed to have been deliberately set.

At the Grammy Awards in Los Angeles, the top winner is British and American duo Robert Plant and Alison Krauss, who win five awards, including album of the year for *Raising Sand* and record of the year for "Please Read the Letter"; the award for song of the year goes to Coldplay's "Viva la Vida," and the best new artist is British singer Adele.

9 As refugees fleeing the war zone in northern Sri Lanka are being searched by Sri Lankan soldiers at a checkpoint, a suicide bomber detonates her weapon, killing at least 28 people.

German Chancellor Angela Merkel names Karl-Theodor zu Guttenberg to replace Michael Glos as minister of the economy.

In Beijing the nearly completed Mandarin Oriental Hotel and China Central Television headquarters, a modernist building designed by Rem Koolhaas, is destroyed by fire; celebratory fireworks are to blame.

Star slugger Alex Rodriguez of the New York Yankees Major League Baseball team confesses that he used illegal performance-enhancing drugs when he played for the Texas Rangers in 2001–03.

10 In legislative elections in Israel, the centrist Kadima party wins 28 of the 120 seats, while Likud garners 27; the right-wing Yisrael Beiteinu takes 15, and the Labor Party secures only 13.

U.S. Secretary of the Treasury Timothy F. Geithner

announces a large and complex financial rescue package involving as much as \$2.5 trillion; the markets drop over the lack of details in the presentation.

The U.S. Senate passes an \$838 billion economic stimulus bill and begins talks to reconcile that bill with the one passed by the House of Representatives earlier; the resultant bill is signed into law on February 17.

After gunmen kidnap 9 people in Villa Ahumada, Mex., and murder 6 of them, government forces take pursuit, killing 14 of the suspected drug traffickers; one soldier is also killed.

In Saudi Arabia, Chinese Pres. Hu Jintao signs an agreement for the China Railway Corp. to build a monorail system in Mecca for the use of pilgrims making the hajj.

Clussexx Three D Grinchy Glee wins Best in Show at the Westminster Kennel Club's 133rd dog show; the Sussex spaniel, known as Stump, is at 10 years of age the oldest dog to win the top award at the premier American dog show.

11 Taliban attackers storm the buildings housing the ministries of justice and education and the prison directorate in a coordinated assault in Kabul, killing at least 26 people.

Pres. Robert Mugabe of Zimbabwe swears in Morgan Tsvangirai as prime minister; the previous day Tsvangirai chose Tendai Biti as finance minister.

12 Officials in Pakistan acknowledge that the terrorist attacks that took place in Mumbai (Bombay) in

November 2008 were partially planned in Pakistan and announce the arrest of six people in connection with the attack.

The Connecticut Opera, based in Hartford, shuts down after 67 seasons, leaving ticket holders stranded.

The David Wills House in Gettysburg, Pa., where U.S. Pres. Abraham Lincoln wrote the Gettysburg Address, opens as part of nationwide celebrations of the 200th anniversary of Lincoln's birth.

13 A suicide bomber kills at least 35 Shi'ite pilgrims who were on their way to Karbala, Iraq, for a religious observation.

Somalia's president names Omar Abdirashid Ali Shar-marke to serve as prime minister of the transitional government.

The Peanut Corp. of America, the company whose peanut butter and peanut paste products caused an outbreak of salmonella poisoning, goes out of business.

Researchers at the Max Planck Institute for Evolutionary Anthropology in Germany announce that they have reconstructed the genome of Neanderthals using DNA from bone fragments; analysis of the genome is expected to shed light on many areas of human evolution.

14 A missile attack from U.S. drones against Taliban and al-Qaeda targets in Pakistan's South Waziristan province kills 30 people.

King Abdullah of Saudi Arabia makes changes to the cabinet that include naming a woman as deputy minister

of education and replacing two Wahhabi clerics with members of more-moderate Sunni sects.

The Peruvian film *La teta asustada* (*The Milk of Sorrow*), directed by Claudia Llosa, wins the Golden Bear at the Berlin International Film Festival.

15 Voters in Venezuela approve a ballot measure that will remove term limits for all elected officials, including Pres. Hugo Chávez.

Belgium opens Princess Elisabeth station in East Antarctica; it uses wind and solar power and is the first zero-emission research station on the continent.

In Daytona Beach, Fla., the 51st running of the Daytona 500 NASCAR race, shortened to 152 laps from 200 because of rain, is won by Matt Kenseth.

16 The government of Pakistan agrees to an accord offered by the Taliban that will allow Shari'ah law in the Swat valley region of the North-West Frontier Province and restrict government military action to responding to attacks, in effect ceding that area to the Taliban.

Japan reports that its real gross domestic product contracted for the third consecutive quarter, shrinking in the most recent quarter at an annual rate of 12.7%.

The U.S. Securities and Exchange Commission declares that the Stanford Group, parent of Stanford International Bank, may have perpetrated an \$8 billion fraud involving certificates of deposit in its bank in Antigua.

17 The UN releases a report saying that the number of civilians killed in the war in Afghanistan in 2008 was 2,118, up from 1,523 the previous year, and that 828 of them had been killed by forces of the U.S.-led coalition and Afghan soldiers.

Kaing Guek Eav, known as Duch, becomes the first defendant in the opening trial before a UN-assisted tribunal investigating genocide carried out by members of the Khmer Rouge in Cambodia; he had run a particularly brutal prison during the regime.

The automakers General Motors and Chrysler LLC ask for an additional \$14 billion in assistance from the U.S. government, while promising to cut costs; GM pledges to lay off 47,000 workers, close five North American plants, and drop half of its brands.

Shoichi Nakagawa resigns as Japan's finance minister after having appeared to be drunk at a news conference while attending a meeting of the Group of Seven industrialized countries.

18 The Swiss bank UBS agrees to reveal the names of American holders of secret bank accounts whom U.S. authorities believe culpable of tax evasion.

U.S. Pres. Barack Obama announces a new \$275 billion plan that is intended to help as many as nine million people save their homes from foreclosure or refinance their mortgages.

At the Brit Awards in London, Welsh singer Duffy wins three prizes, including best British album for *Rockferry*; the award for best international album goes to American band Kings of Leon for *Only by the Night*.

19 The International Atomic Energy Agency reports that it has found that Iran has a third more enriched uranium than the country had disclosed and that the amount of uranium would be sufficient to make an atom bomb.

Officials in Equatorial Guinea say that they have arrested 16 Nigerians who had attempted to overthrow the government in an attack two days earlier; Equatorial Guinea maintains that the attackers belong to the Movement for the Emancipation of the Niger Delta, but spokesmen for that organization cast the blame on the government of Nigeria.

French Prime Minister François Fillon proposes that the income of the poor of the French overseas territory of Guadeloupe should be increased by \$250 per month; the island had suffered weeks of unrest over the rising cost of living.

LittleBigPlanet, a Sony jumping-and-climbing game for the PlayStation 3 console, wins the prize for game of the year at the 12th annual Interactive Achievement Awards in Las Vegas.

20 Ivars Godmanis resigns as prime minister of Latvia, as the country's economy suffers a collapse in the face of the global credit crisis.

Israeli Pres. Shimon Peres asks Benjamin Netanyahu, leader of the Likud party, to form a government.

A UN-sponsored meeting in Nairobi produces an agreement by 140 countries, including the U.S., to negotiate a treaty to limit the emissions of mercury into the atmosphere; mercury is a neurotoxin.

A Chinese official complains that Russia has responded inadequately to a situation in which Russian warships on February 14 fired on and sank a Chinese tanker flying a Sierra Leone flag; seven or eight sailors were lost at sea in the attack.

The Dow Jones Industrial Average falls 100 points, losing 1.3% of its value, to close at 7365.67, its lowest point since Oct. 9, 2002.

The Birgit Nilsson Foundation names Plácido Domingo the recipient of the inaugural Birgit Nilsson Prize for achievement in classical music; the prize carries a cash value of \$1 million and is to be awarded every two to three years.

21 U.S. military officials concede that an air strike in Afghanistan's Herat province by coalition forces on February 17 killed 13 civilians and 3 militants; the U.S. military had initially said that all the dead were militants.

Police in Athens say that a leftist militant grouping, the Sect of Rebels, has claimed responsibility for a grenade and gun attack on the headquarters of the Alter private television network that took place on February 18.

22 An attack by Islamist insurgents on an African Union compound in Mogadishu, Som., leaves 11 peacekeepers, all of them from Burundi, dead.

A study published in *Nature Structural & Molecular Biology* describes the engineering of antibodies that attack a portion of the influenza virus that does not mutate, suggesting the possibility of

a single vaccine effective against all strains of flu.

At the 81st Academy Awards presentation, hosted by Hugh Jackman, Oscars are won by, among others, *Slumdog Millionaire* (best picture) and its director, Danny Boyle, and actors Sean Penn, Kate Winslet, Heath Ledger, and Penélope Cruz.

23 The Liberation Tigers of Tamil Eelam send communications indicating that they would like to participate in an internationally brokered cease-fire.

The Dow Jones Industrial Average falls 250.89 points, to 7114.78, while the Nasdaq composite index loses 3.71% of its value, dropping to 1387.72.

The U.S. government describes its intention to give \$900 million to non-governmental organizations to help rebuilding efforts in the Gaza Strip.

24 The leader of the Taliban in the Swat valley region of Pakistan declares an indefinite cease-fire.

U.S. Pres. Barack Obama makes a nationally televised speech before both houses of Congress in which he lays out his plans and describes the goals of his budget.

25 Pakistan's Supreme Court rules that Nawaz Sharif is ineligible to hold elective office.

At a conference of the Bangladesh Rifles, a paramilitary border guard organization, in Dhaka, Bangladesh, hundreds of troops mutiny, leading to a lengthy gun battle between the mutineers and army troops

in which at least 50 people are killed.

Indigenous rights activist Mick Dodson, a member of the Yawuru people of Western Australia, is recognized as Australian of the Year.

26 At reconciliation talks in Cairo, leaders of the Palestinian parties Fatah and Hamas announce that committees have been established to find a way to form a unity government and to work out many other issues.

U.S. Pres. Barack Obama proposes a sweeping 10-year budget that would overhaul health care, push back global warming, and reverse a 30-year trend of increasing economic inequality.

The Royal Bank of Scotland posts an annual loss of £24.1 billion (about \$34.8 billion), the largest in British history, and immediately seeks to join the U.K.'s program for protecting bank assets.

The American computer company Dell Inc. reports that its net income in the most recent quarter fell 48% from the same quarter a year earlier.

The Fox television network declares that it has renewed the animated comedy series *The Simpsons* for two more seasons; *The Simpsons* is currently tied with *Gunsmoke* as the longest-running scripted prime-time show.

27 The U.S. Department of Commerce announces that the country's economy in the final quarter of 2008 contracted at a rate of 6.2%, not 3.8% as previously stated; also, the Department of the Treasury says that it is expanding its stake in the banking giant Citigroup from 8% to 36%.



A report published in the journal *Science* describes fossilized footprints found near Lake Turkana in Kenya that were made some 1.5 million years ago, probably by *Homo erectus* individuals, that show that *H. erectus* had both a gait and feet that are very similar to those of modern humans. (Photo above.)

The final issue of the *Rocky Mountain News* is published in Denver; the newspaper was founded in April 1859 and had been owned by the E.W. Scripps Co. since 1926, but Scripps had been unsuccessfully trying to sell it and felt it could not afford to keep publishing.

28 Two days of military consultations between China and the U.S. conclude with an agreement that high-level discussions about military issues between the two countries will be resumed.

Pres. Hamid Karzai of Afghanistan orders that presidential elections be held in accordance with the constitution, in April or May, not, as now scheduled, in August; it had been deemed logistically impossible to stage elections earlier than August.

March

“ *From here, God willing, the fate of this nation will change. From here, a journey of development will start. From here, a revolution will come.* ”

Pakistani opposition leader Nawaz Sharif, on the reinstatement of Ifikhar Muhammad Chaudhry as chief justice, March 16

1 More than 1,000 of the paramilitary Bangladesh Rifles border guards are charged with murder after it was learned that some 148 people, mostly officers, were massacred in the uprising on February 25.

The U.S. government agrees to allow American International Group (AIG) to draw as much as \$30 billion from the Troubled Asset Relief Program; it is the fourth time the government has had to intervene to save the insurance giant from bankruptcy.

2 Pres. João Bernardo Vieira of Guinea-Bissau is killed by army troops; the previous day the army chief of staff had died in a bomb attack.

The Dow Jones Industrial Average drops below 7,000 for the first time since October 1997, losing 4.2% of its value, while the major British stock index falls 5.3% and that in Italy sinks 6%.

3 Twelve well-armed gunmen ambush a bus carrying the Sri

Lankan cricket team to a match in Lahore, Pak.; six police officers escorting the bus and two bystanders are killed, six cricketers are wounded, and the attackers all escape.

Sales figures for automobiles in the U.S. reveal that sales throughout the industry in February were 41% lower than in the previous February.

The government of Armenia announces that it will let its currency, the dram, fall and is asking for a loan from the International Monetary Fund; the announcement creates panic among the populace.

4 The International Criminal Court issues an international warrant for the arrest of Pres. Omar al-Bashir of The Sudan to face charges relating to atrocities in the Darfur region; Bashir almost immediately expels several international aid groups working in Darfur.

Nigeria's health minister reveals that more than 5,000

people have become ill in a meningitis outbreak that has left 333 people dead in the past three months.

5 The European Central Bank lowers its key interest rate by half a percentage point, to 1.5%, its lowest level since its inception, and for the first time forecasts that the economy of the 16 euro-zone countries is likely to shrink in the coming year.

The Bank of England lowers its key interest rate to a record low of 0.5% and announces that it will add £75 billion (\$106 billion) of liquidity to the banking system.

Relief organizations in Sri Lanka say that some 150,000–200,000 civilians are trapped in a 26-sq-km (10-sq-mi) war zone in northern Sri Lanka.

Scientists from the Whitehead Institute in Cambridge, Mass., report in the journal *Cell* that they have changed skin cells from people who have Parkinson disease into dopamine-producing neu-

rons; they hope to learn the causes of the disease and possibly develop a treatment.

Jim Scherr abruptly resigns as head of the United States Olympic Committee.

6 U.S. government data show that the unemployment rate in February reached 8.1%, its highest level in 25 years.

NASA successfully launches its Kepler spacecraft into space; Kepler will scan the cosmos for planets that are about the size of the Earth and that are at distances from their stars that would allow water to remain in liquid form.

7 Salam Fayad submits his resignation as prime minister of the Fatah-dominated Palestinian Authority.

Gunmen attack a British army base in Antrim, N.Ire., killing two soldiers and wounding two soldiers and two pizza deliverymen; the dissident group the Real IRA claims responsibility for the

first attack on the British military in Northern Ireland since 1997.

8 A suicide bomber on a motorcycle kills at least 28 people outside a police academy in Baghdad.

Legislative elections in which all candidates are unopposed are held in North Korea.

In London *Black Watch* wins four Laurence Olivier Awards—best new play, best director (John Tiffany), best theatre choreographer (Steven Hoggett), and best sound design.

9 The Mamoond, a large clan in the Bajaur region of Pakistan that is connected with the Taliban, signs a peace agreement with the Pakistani government in which, among other things, the Mamoond agree to turn over local Taliban leaders.

The American pharmaceutical company Merck & Co., Inc., announces its planned acquisition of its rival company Schering-Plough.

In a case that has riveted observers in Germany, Helg Sgarbi of Switzerland pleads guilty to charges of having defrauded Susanne Klatten, an heiress whose family controls the carmaker BMW and who is reputed to be the richest woman in Germany; he lured her into an affair and attempted to blackmail her with video that depicted their liaison.

10 A suicide bomber detonates his weapon among a group of Iraqi army officers heading toward a reconciliation conference in the town of Abu Ghraib; at least 33 people are killed.

Representatives of Fatah, Hamas, and 11 other Palestinian groups begin reconciliation talks in Cairo.

A gunman goes on a shooting spree in southern Alabama, killing 10 people in and near Samson and leading the police on a chase before killing himself.

The \$250,000 A.M. Turing Award for excellence in computer science is granted to Barbara Liskov for her contributions to the use of data abstraction to make software easier to create, change, and maintain.

11 Pres. Nicolas Sarkozy of France announces that the country will once again become a full member of NATO; it had withdrawn from the organization's military command in 1966.

The government of Pakistan imposes a ban on a planned protest march led by opposition leader Nawaz Sharif and arrests hundreds of his supporters.

A 17-year-old gunman kills nine students and three teachers at a secondary school in Winnenden, Ger., and then hijacks a car, which takes him to Wendlingen, where he dispatches three more people before committing suicide.

Forbes magazine releases its annual list of the world's billionaires, of which there are 332 fewer than in the previous year; Joaquín Guzmán Loera, head of the drug-trafficking Sinaloa cartel in Mexico, appears on the list.

12 Madagascar opposition leader Andry Rajoelina backs out of a planned meeting with Pres. Marc

Ravalomanana and other community leaders to seek a solution to the country's political crisis.

Andorra and Liechtenstein agree to drop their bank secrecy laws and comply with international standards for transparency.

Bernard L. Madoff pleads guilty in U.S. federal court to 11 charges arising from the Ponzi scheme that he ran, which prosecutors say bilked investors of some \$50 billion—\$65 billion over 20 years.

Opposition figure Roy Bennett, an ally of Prime Minister Morgan Tsvangirai, is released from jail in Mutare, Zimb., on bail.

13 Medet Sadyrkulov, a high-ranking politician in Kyrgyzstan who had recently changed camps to join the opposition, is killed in a car accident that his supporters characterize as highly suspicious.

14 The revelation that executives at the troubled insurer American International Group (AIG) are to receive large bonuses, particularly in the financial products unit that caused the company's difficulties,

ignites a firestorm of public criticism.

For the second time, Andry Rajoelina announces that he is taking over the government of Madagascar.

15 In a closely contested presidential election in El Salvador, Mauricio Funes of the Farabundo Martí National Liberation Front emerges as his party's first victorious presidential candidate.

French driver Sébastien Loeb's win in the Cyprus Rally makes him the first competitor ever to have achieved 50 victories in World Rally Championship racing; he celebrates the milestone with his co-driver Daniel Elena. (Photo below.)

Venezuelan Pres. Hugo Chávez orders the takeover of two key ports in petroleum-exporting states in compliance with a new law shifting control of ports, airports, and highways from the state government to the central government.

The space shuttle *Discovery* takes off on a mission to the International Space Station to deliver a replacement part for the water-purification system and to install the final pair of solar arrays to provide power.



Stefanos Kouratzis—AFP/Getty Images

16 The day after opposition leader Nawaz Sharif broke out of house arrest in Lahore to lead a massive demonstration toward Islamabad, Pakistani Pres. Asif Ali Zardari agrees to restore Iftikhar Muhammad Chaudhry as chief justice.

Sheikh Nasir al-Muhammad al-Ahmad al-Jabir al-Sabah resigns as prime minister of Kuwait after members of the country's legislature sought to question him; two days later the emir dissolves the legislature and calls for elections.

The U.K. removes the premier and cabinet of its overseas territories Turks and Caicos and dissolves its legislature because of apparent corruption in the government; Gov. Gordon Wetherell is put in charge.

Bernard d'Espagnat, a French physicist and philosopher, is named the winner of the Templeton Prize for Progress Toward Research or Discoveries About Spiritual Realities.

17 Marc Ravalomanana resigns as president of Madagascar, turning power over to the military, which in turn cedes power to Andry Rajoelina, in spite of the fact that he is too young to legally hold the office of president.

After the Hawaii state Supreme Court rules that the transport service illegally bypassed an environmental review, the operator of the Hawaii Superferry, the first passenger-vehicle ferry between islands, announces that it will cease operations.

The last print edition of the *Seattle Post-Intelligencer* goes on sale; the newspaper will continue its online presence with a news staff of about

20 people; the previous staff numbered 165.

18 A constitutional amendment to end the limit of two terms of office for the president is approved in a referendum in Azerbaijan.

The U.S. Federal Reserve announces plans to buy about \$1 trillion in Treasury bonds and mortgage securities in an attempt to get more money moving in the economy.

U.S. Secretary of Defense Robert M. Gates announces that over the next two years, the department will phase out the stop-loss policy that kept soldiers in the field in Afghanistan and Iraq after the expiration of their enlistment contracts.

U.S. Attorney General Eric H. Holder, Jr., declares that the government will no longer seek to prosecute people distributing marijuana in compliance with state medical marijuana laws.

Data from the U.S. National Center for Health Statistics indicate that more babies were born in 2007 than in 1957, the height of the post-war baby boom, setting a new record.

Lance Mackey wins the Iditarod Trail Sled Dog Race for the third consecutive year, crossing the Burled Arch in Nome, Alaska, after a journey of 9 days 21 hours 38 minutes 46 seconds.

19 At a meeting in Tromsø, Nor., representatives of the U.S., Canada, Russia, Denmark, and Norway—all signatories of a 1973 treaty that limited polar bear hunting—issue a joint statement that the greatest long-term threat to the survival of polar bears is climate change.

Brazil's Supreme Court agrees to the creation of the Raposa Serra do Sol indigenous reserve, first established in 2005 by Pres. Luiz Inácio Lula da Silva, in Roraima state; this allows for the removal of rice farmers who petitioned to be permitted to remain in the 1.6 million-ha (4 million-ac) reserve.

Dad Mohammad Khan, a member of Afghanistan's legislature from Helmand province—together with three bodyguards and a local military commander—is killed by a roadside bomb outside Lashkar Gah.

20 The African Union suspends Madagascar's membership, saying that the country must restore a constitutional government within the next six months.

Former Puerto Rico governor Aníbal Acevedo Vilá is acquitted on all nine charges of corruption by a jury in San Juan.

The governing body of Formula 1 automobile racing announces that a new scoring method, in which the driver with the most wins would win the championship, will not be introduced until the 2010 season; the participating teams had objected to its immediate introduction.

21 Prime Minister Ferenc Gyurcsany of Hungary surprises observers by offering his resignation.

In Oakland, Calif., a man stopped by police opens fire, killing two officers; after a chase followed by a shootout, two more officers and the suspect are dead.

With its 17–15 defeat of Wales, Ireland wins its first

Six Nations Rugby Union championship, having achieved a won-lost record of 5–0.

22 Presidential and local elections are held in Macedonia; they are regarded as largely free and fair, and they result in the need for the holding of a presidential runoff.

When several men believed to be members of a motorcycle gang disembark from a plane in the airport at Sydney, they are ambushed by members of a rival gang, and a violent brawl ensues in the terminal; one man is beaten to death.

The 3,100-m (10,200-ft) volcano Mt. Redoubt in Alaska begins erupting, throwing ash on several cities north of Anchorage; it last erupted for a five-month period in 1989–90.

23 U.S. Secretary of the Treasury Timothy Geithner unveils a detailed and comprehensive three-part plan to help free banks from bad housing loans and mortgage-related securities; stock markets rise dramatically in response.

A suicide bomber kills at least 19 people at a wake in Jalawla, Iraq; earlier, at least 8 people died in a bomb explosion in the town of Abu Ghraib.

In an exciting final game, Japan defeats South Korea 5–3 in 10 innings in Los Angeles to win its second World Baseball Classic championship.

In New Delhi, Tata Motors introduces the much-anticipated Tata Nano, a small four-passenger fuel-efficient car that will sell for about \$2,230.

Bertrand Guay—AFP/Getty Images



24 The Czech Republic's legislature votes no confidence in Prime Minister Mirek Topolánek and his government; the Czech Republic holds the rotating presidency of the European Union.

Iranian-American journalist Roxana Saberi, who was arrested in Iran in January and accused of having worked after her press credentials had been revoked, reports that she has been told that she may remain imprisoned for months or years.

The winner of the Astrid Lindgren Memorial Award for Literature is announced as the Palestinian reading-promotion organization the Tamer Institute.

25 In a visit to Mexico, U.S. Secretary of State Hillary Rodham Clinton acknowledges that U.S. demand for illegal drugs and its failure to prevent arms from being smuggled from the U.S. into Mexico are significant contributing factors to the drug trade and the violence attending it in Mexico.

The U.S. Congress passes a law that will designate some 800,000 ha (2,000,000 ac) of public land in nine states as

protected wilderness area; the measure is signed on March 30.

Five days of battles between Islamic militants and Indian army troops in Kashmir have left some 25 combatants dead.

British photographer Paul Graham wins the Deutsche Börse Photography Prize for *A Shimmer of Possibility*, a 12-volume collection of photographic stories about life in the U.S.

26 A car bomb explodes in a market area in Baghdad; at least 16 people are killed.

Argentina's legislature approves a plan to hold legislative elections on June 28 instead of the previously agreed-on date of October 25.

The Norwegian Academy of Science and Letters awards its annual Abel Prize for outstanding work in mathematics to Russian-born French mathematician Mikhail L. Gromov for his contributions to geometry.

27 A suicide bomber detonates his

weapon in a mosque near Peshawar, Pak., during Friday prayers; the explosion causes the building to collapse, and some 40 people are killed.

Dylan Ratigan, who for five years has been the host of the CNBC television show *Fast Money*, suddenly leaves both the show and the network.

The Grand Palais in Paris opens an exhibition, "Tag," that celebrates graffiti art; among those represented are American graffiti artists Quick, Rammellzee, Seen, and Toxic. (Photo left.)

28 Researchers at the Munk Centre for International Studies at the University of Toronto reveal that they have found a sophisticated China-based computer-spying operation that has infiltrated some 1,300 computers in 103 countries; the network seems to be focused on the Dalai Lama, Tibetan exiles, and the governments of countries in South and Southwest Asia.

Well Armed wins the Dubai World Cup, the world's richest horse race, by a record 14 lengths.

29 Rick Wagoner resigns as chairman of the automobile manufacturer General Motors Corp., reportedly at the behest of the U.S. government's car industry task force.

A gunman invades a nursing home in Carthage, N.C., and kills seven elderly residents and a nurse before being stopped by police.

Volcano monitors report that the eruption of Mt. Redoubt in Alaska appears to have ended.

Oxford defeats Cambridge in the 155th University Boat

Race; Cambridge still leads the series, however, by 79–75.

Fiji wins the Hong Kong Sevens rugby title for a record 12th time with its 26–24 defeat of South Africa.

30 At the Arab League's annual summit, in Doha, Qatar, indicted Sudanese Pres. Omar al-Bashir is among the attendees, and other members express strong support for him.

U.S. Pres. Barack Obama announces that carmaker Chrysler LLC must complete a merger with Italian automobile company Fiat by April 30 and that General Motors has 60 days in which to greatly restructure itself, requiring major concessions from the United Auto Workers union, in order to remain eligible for government financial assistance.

31 Benjamin Netanyahu is sworn in as prime minister of Israel at the head of the country's largest-ever cabinet, which includes Avigdor Lieberman as foreign minister and Ehud Barak as minister of defense.

Mars500, an experiment in which six people will live in a facility under circumstances similar to what they would experience during a mission to Mars, with almost no outside contact for 105 days, begins in Moscow; the experiment is supported by, among others, the European Space Agency.

Computer-security experts say that the malicious Conficker computer program, which has infected at least 12 million computers and could operate the infected computers as a single entity called a botnet, has been making attempts to communicate with a control server.

April

“Taken together, these actions will constitute the largest fiscal and monetary stimulus and the most comprehensive support program for the financial sector in modern times.”

statement from the Group of 20 economic meeting, April 2

1 A protest against capitalism by some 4,000 people in London's financial district turns violent as some demonstrators attack the Royal Bank of Scotland building and fight with riot police.

•
The U.S. Department of Justice asks that the conviction of former U.S. senator Ted Stevens of Alaska for corruption be voided in light of new evidence of prosecutorial misconduct.

•
Sweden's legislature votes to permit same-sex couples to marry; the law will take effect on May 1, when Sweden will become the fifth country in Europe to allow gay marriage.

•
The television channel CBS announces the cancellation of the soap opera *Guiding Light*, broadcasting's longest-running scripted program; the final episode of the serial, which began on NBC radio in 1937 and moved to television in 1952, will air on September 18.

2 At the end of a meeting in London of the Group of 20 of the

world's major advanced and emerging economies, the members produce an agreement that, among other things, increases the resources available to the IMF by \$1.1 trillion, creates new regulations for hedge funds and rating companies, and sets new rules to govern the pay of bankers.

3 The U.S. Department of Labor reports that more than two million jobs were lost in the first quarter of 2009 and that the unemployment rate has reached 8.5%.

•
Datuk Seri Najib Razak is sworn in as prime minister of Malaysia the day after the resignation of Datuk Seri Abdullah Ahmad Badawi.

•
The Iowa Supreme Court lets stand a lower-court ruling that a law limiting marriage to heterosexual couples violates the civil rights of same-sex couples wishing to marry and thereby makes such marriages legally permissible.

•
After blocking the rear exit with a car, a gunman enters the American Civic Association

building in Binghamton, N.Y., where immigrants take classes in citizenship and language, and begins shooting; he kills 13 people before turning the gun on himself.

4 On a road that leads to a wealthy neighborhood in Islamabad, Pak., a suicide bomber attacks a post of paramilitary security personnel, killing eight officers; also, a missile attack from a U.S. drone kills 11 militants in North Waziristan, and shortly thereafter a suicide car bomber kills eight people near the capital of North Waziristan.

•
Ivan Gasparovic wins the runoff presidential election in Slovakia.

•
An ice bridge that is believed to hold the Wilkins Ice Shelf in Antarctica in place shatters at its narrowest point.

•
In a ceremony in Cleveland, the Rock and Roll Hall of Fame inducts solo musicians Jeff Beck, Bobby Womack, and Wanda Jackson, sidemen Bill Black, D.J. Fontana, and Spooner Old-

ham, and the groups Little Anthony and the Imperials, Metallica, and Run-DMC.

5 North Korea's test launch of a long-range missile rocket intended to put a satellite into orbit fails, though North Korea declares it a success; on April 13 the UN Security Council responds with a call for sanctions against the country to be strengthened.

•
A suicide bomber detonates his weapon at the entrance of a Shi'ite mosque in Chakwal, Pak., killing at least 26 people.

•
Lars Løkke Rasmussen takes office as prime minister of Denmark, replacing Anders Fogh Rasmussen, who is expected to become secretary-general of NATO.

•
Gjorge Ivanov is elected president of Macedonia in a runoff election with a turnout of only 43%.

6 In South Africa prosecutors drop corruption charges against African National Congress (ANC) leader Jacob Zuma.

Alessandra Tarantino/AP



A magnitude-6.3 earthquake centred on L'Aquila, Italy, causes widespread devastation; at least 294 people are killed, and some 60,000 are left homeless. (Photo above.)

A bomb goes off in a market in Baghdad's Sadr City neighbourhood, killing at least 11 people, while two bombings in a different neighbourhood leave at least 12 dead, and various other bombings bring the day's death toll up to 33.

The member countries of the European Union adopt restrictions on fishing intended to help the endangered bluefin tuna to return to a healthy population size.

The National Collegiate Athletic Association championship in men's basketball is won by the University of North Carolina, which defeats Michigan State University 89-72; the following day the University of Connecticut defeats the University of Louisville 76-54 to win the women's title, to become the fifth team in women's college basketball to achieve an undefeated season.

7 In Chisinau, Moldova, more than 10,000 young people attack government buildings and fight with police, protesting the apparent Communist vic-

tory in legislative elections held on April 5; the large crowd was convened via notices on Twitter and other social networking sites.

Alberto Fujimori, who was president of Peru in 1990-2000, is found guilty by a panel of judges of having ordered kidnappings and death-squad killings of 25 people in the early 1990s and is sentenced to 25 years in prison.

The state legislature of Vermont overrides Gov. Jim Douglas's veto and makes same-sex marriage legal in the state; also, the District of Columbia council votes to recognize same-sex marriages performed in other states as valid marriages.

8 About 100,000 supporters of Thailand's former prime minister Thaksin Shinawatra gather in downtown Bangkok to demand the resignation of the government; demonstrations have been building for about two weeks.

The *Maersk Alabama*, a U.S. container ship carrying agricultural supplies and food for aid agencies, including the World Food Programme, is seized by Somali pirates; after its crew disables the ship, the pirates release the crew in exchange for the captain, Richard Phillips, and begin ransom negotiations.

9 The discovery of the mutilated bodies of three members of the dissident Baluchistan National Party, including that of its leader, triggers rioting in southwestern Pakistan in which one policeman is killed.

In Tbilisi, Georgia, tens of thousands of people march to demand the resignation of Pres. Mikheil Saakashvili.

The U.S. Central Intelligence Agency declares that its secret overseas prisons will be decommissioned.

Algerian Pres. Abdelaziz Bouteflika is elected to a new five-year term of office.

Iran inaugurates its first plant that will manufacture nuclear fuel.

Japanese Prime Minister Taro Aso unveils an economic stimulus plan that contains \$154 billion in subsidies and tax breaks.

10 The day after a court ruled that Fiji's government, installed after a coup in 2006, is illegal, Pres. Ratu Josefa Iloilo abrogates the constitution, appoints himself head of government, and abolishes the judiciary.

The *British Medical Journal* publishes a study online that found that there are more than 32 million more boys than girls under the age of 20 in China.

11 A summit meeting of leaders of the Association of Southeast Asian Nations (ASEAN) and other Asian countries gathered to discuss the global economic crisis is abruptly canceled and participants evacuated after antigovernment protesters gain access to the convention centre in the resort

town of Pattaya, Thai., where the summit is being held.

Pres. Ratu Josefa Iloilo of Fiji appoints Voreque Bainimarama interim prime minister; Bainimarama, who initially became prime minister after a coup in 2006, reappoints most of the previous cabinet.

12 U.S. Navy snipers aboard the USS *Bainbridge* kill three Somali pirates who were holding Capt. Richard Phillips of the *Maersk Alabama* hostage on a lifeboat, rescuing Phillips.

Moldova's constitutional court orders a recount of the votes in the legislative election held on April 5.

Ángel Cabrera of Argentina wins the Masters golf tournament in Augusta, Ga., in a sudden-death playoff over Americans Kenny Perry and Chad Campbell.

13 U.S. Pres. Barack Obama lifts restrictions on travel to Cuba by those with family in that country as well as all restrictions on remittances to ordinary people living in Cuba; in addition, American telecommunications companies are empowered to seek licensing agreements in Cuba.

Swiss architect Peter Zumthor is named winner of the 2009 Pritzker Architecture Prize.

Pres. Fernando Lugo of Paraguay in a televised news conference admits that he is the father of a boy born in May 2007; his resignation as a priest and bishop was accepted in July 2008.

Legendary music producer Phil Spector is convicted of the 2003 murder of actress Lana Clarkson.

14 After the UN Security Council voted to respond to a trial missile launch by North Korea by tightening sanctions on Pyongyang, the country announces that it will abandon nuclear disarmament talks and will restart its nuclear weapons program.

Gordon Bajnai replaces Ferenc Gyurcsany as prime minister of Hungary.

Popular American boxer Oscar De La Hoya, winner of 10 world titles in six divisions, announces his retirement from the sport.

15 Some 300 Afghan women march in Kabul to demand the repeal of a law governing family life for Shi'ites; the women argue that the law treats them as the property of men.

A particularly brutal drug lord, Daniel Rendón Herrera, whose capture was a top priority for Colombian law enforcement, is arrested in northern Colombia.

The Dow Jones Industrial Average gains 109.44 points to close above 8000.

Iconic football analyst John Madden announces his retirement after 30 years in television broadcast booths.

16 The U.S. Department of Justice releases documents that describe in detail the harsh techniques employed by the Central Intelligence Agency in interrogating suspected al-Qaeda operatives in 2002-05.

Russia announces the end of its counterterrorism program in its republic of Chechnya.

Choreographer Merce Cunningham celebrates his 90th

birthday with the world premiere of his most recent work, *Nearly Ninety*, at the Brooklyn (N.Y.) Academy of Music.

17 Leaders of 34 countries in the Western Hemisphere gather for a Summit of the Americas in Port of Spain, Trinidad and Tobago; at the opening ceremony U.S. Pres. Barack Obama declares that the U.S. seeks a positive change in its relations with Cuba.

The U.S. Environmental Protection Agency declares six greenhouse gases to be pollutants that pose a danger to human health.

In Sweden the three founders of the large and popular file-sharing service Pirate Bay and one of its financiers are found guilty of violations of copyright law and sentenced to one year in prison.

Regulators seize American Sterling Bank of Sugar Creek, Mo., and Great Basin Bank of Nevada of Elko, Nev., bringing to 25 the number of bank failures in the U.S. in 2009.

18 A suicide bomber at a military and police checkpoint in Hangu district in Pakistan's North-West Frontier Province kills 20 people.

Iranian-American journalist Roxana Saberi is convicted of spying on Iran for the U.S. and sentenced to eight years in prison in Tehran.

19 Ayad al-Samarai is elected speaker of Iraq's legislature; he replaces Mahmoud al-Mashhadani, who resigned in December 2008.

South Korea agrees to engage in talks with North

Korea over the future of a joint industrial complex in Kaesong, N.Kor.

It is reported that 80% of the jobs that have been lost in the ongoing recession in the U.S. belonged to men.

20 At a UN conference on combating racism, Pres. Mahmoud Ahmadinejad in a speech denounces Israel as a racist regime; in response to his remarks, delegates from 23 European countries walk out.

Sri Lankan troops break through an earthen barrier used by the Liberation Tigers of Tamil Eelam, and refugees trapped inside the so-called safe haven begin escaping; the LTTE petitions for a truce.

The first government project to map the Great Wall of China finds that the length of the wall is 8,850 km (5,500 mi), much longer than the previously estimated 5,000 km (3,000 mi); sections of the wall dating to the Ming dynasty (1368-1644) were discovered in Gansu province.

The 113th Boston Marathon is won by Deriba Merga of Ethiopia, with a time of 2 hr 8 min 42 sec; the fastest woman is Salina Kosgei of Kenya, who posts a time of 2 hr 32 min 16 sec.

21 The IMF releases a report on the global financial crisis in which it estimates the amount of losses faced by financial establishments throughout the world as \$4.05 trillion.

It is reported that inter-ethnic violence over cattle rustling has left more than 100 people dead in the southern region of The Sudan.

The World Digital Library, containing some 1,250 books, maps, and works of art from more than 30 national libraries, is inaugurated in a ceremony at UNESCO headquarters in Paris; the international online library is supported by UNESCO and the U.S. Library of Congress.

22 Taliban militants complete their takeover of Buner district in the North-West Frontier Province of Pakistan; the district borders the Swat valley and is only 113 km (70 mi) away from Islamabad.

As expected, the African National Congress wins a resounding victory in legislative elections in South Africa.

Afghanistan's National Environmental Protection Agency announces the creation of the country's first national park, Band-e Amir, an area of deep blue lakes separated by natural dams of travertine. (Photo right.)

23 In Iraq a suicide bomber sets off her explosives in a line of women and children receiving food supplies in Baghdad, killing 28 people, and another suicide bomber targets a restaurant crowded with Iranian tourists in Muqdadiah; at least 89 people die there.

Nature magazine reports that scientists at the University of Stuttgart, Ger., have used ultracold temperatures to create a Rydberg molecule, composed of two rubidium atoms, one of which has a lone electron in its outermost orbit; the possibility of such molecules had been predicted by theoretical physicist Chris Greene.

AP



24 Officials in Mexico close museums and schools in and around Mexico City in an attempt to control an outbreak of what is believed to be a new strain of H1N1 swine flu that has killed 61 people and infected as many as 1,004 in the country.

Two suicide bombers attack in rapid succession outside a major Shi'ite mosque in Baghdad, killing at least 60 people.

Spain's National Statistics Institute reports that the country's unemployment rate in the first quarter of 2009 reached 17.4%, with a record four million people unemployed.

25 North Korea declares that it has begun reprocessing nuclear fuel rods.

In legislative elections in Iceland, the leftist parties of the caretaker government are decisively voted into power, supplanting the conservative Independence Party government that had been in power for almost 20 years until it was forced to resign in January.

26 In response to a declaration of a unilateral ceasefire by the Liberation Tigers of Tamil Eelam, the government of Sri Lanka calls for the militant organization to surrender.

Pres. Rafael Correa is elected to a second term of office in Ecuador.

Samuel Wanjiru of Kenya wins the London Marathon with a time of 2 hr 5 min 9 sec, and Irina Mikitenko of Germany is for the second year in a row the fastest woman in the race, with a time of 2 hr 22 min 11 sec.

27 In an attempt to avoid bankruptcy, the American car company General Motors announces a plan to cut 23,000 jobs in the U.S. by 2011, drop 40% of its dealers, close out the Pontiac brand, and offer a swap of company stock for unsecured debt to bondholders.

The Asian Development Bank releases a report detailing the dangers global warming presents to Southeast Asia, among them infiltration of brackish water into aquifers and the disap-

pearance of islands; it urges countries in the region to build infrastructure to cope with the expected changes from rising sea levels.

The international beekeeping organization Apimondia declares that high mortality in beehives throughout Europe threatens the industry with extinction within a decade; about 30% of the hives in Europe died in 2008.

28 Pakistan's military mobilizes to reverse the Taliban takeover of Buner district in the North-West Frontier Province; it is also reported that some 6,000 Pakistani troops will be moved from the border with India to the border with Afghanistan.

Supporters of Marc Ravalomanana, who recently yielded the presidency of Madagascar to Andry Rajoelina, announce that a new government has been formed under Ravalomanana.

29 The U.S. Department of Commerce releases figures showing that

output fell at a 6.1% annual rate in the first quarter of 2009 after having fallen at a 6.3% annual rate the previous quarter, a contraction of a magnitude last seen in 1958, but that consumer spending rose slightly after January.

For the first time ever, the World Health Organization raises its global alert level to Phase 5, meaning that it is highly likely that the new H1N1 swine flu will become a pandemic.

30 The automobile manufacturer Chrysler LLC files for bankruptcy protection after some of its smaller creditors refuse to accept a reduced repayment; an agreement may now be reached with Italian car company Fiat that will allow Chrysler to stay in business.

Pres. Abdoulaye Wade of Senegal names Souleymane Ndéné Ndiaye to replace Cheikh Hadjibou Soumaré as prime minister.

A driver attempts to crash his car into an open-topped bus carrying Queen Beatrix of The Netherlands and members of her family in a Queen's Day parade in Apeldoorn; seven people are killed, and the driver is fatally injured when he hits a stone monument.

Former South Korean president Roh Moo-Hyun is questioned by state prosecutors about his role in a burgeoning corruption scandal.

At the National Magazine Awards in New York City, *The New Yorker* wins three awards, including one for fiction; general excellence award winners are *Reader's Digest*, *Field & Stream*, *Wired*, *Texas Monthly*, *Foreign Policy*, and *Print*, and, in the online category, *Backpacker.com* and *Nymag.com*.

May

“

This battle has reached its bitter end....

We have decided to silence our guns.

”

Liberation Tigers of Tamil Eelam spokesman
Selvarasa Pathmanathan, on TamilNet, ahead of the Sri Lankan
government's declaration of victory, May 18

1 Fiji's military regime misses the deadline to return the country to democratic rule; the Pacific Islands Forum formally suspends Fiji's membership the next day.

Carol Ann Duffy is named poet laureate of Britain; she is the first woman appointed to the post in its 341-year history.

2 Gul Agha Shirzai withdraws from Afghanistan's presidential race; he was regarded as the most credible opposition to Pres. Hamid Karzai.

Fifty-to-one long shot Mine That Bird, ridden by Calvin Borel, wins the Kentucky Derby by six and three-quarters lengths.

3 Conservative businessman Ricardo Martinelli is elected president of Panama.

4 Pushpa Kamal Dahal (also called Prachanda) resigns as prime minister of Nepal after the president overruled his

attempt to fire the head of the army for refusing to integrate former Maoist guerrillas into the armed forces.

Masked men attack a wedding party in the Turkish village of Bilge, using automatic weapons and grenades to kill at least 45 of the attendees; a feud is said to be behind the massacre.

The U.S. Supreme Court rules unanimously that illegal immigrants who use false Social Security numbers cannot be charged with aggravated identity theft if they were unaware that the numbers belonged to someone else.

5 Officials in Afghanistan say that U.S. military air strikes the previous day following heavy fighting against Taliban militants in Bala Buluk district killed at least 30 civilians.

Talks between Indian cinema owners and Bollywood producers, who want a larger share of profits from movie showings, break down; Bollywood movies have not been shown since

the argument erupted in early April.

The Legend of Sigurd and Gudrun, written by J.R.R. Tolkien in the 1920s and '30s and edited by Christopher Tolkien, is published for the first time.

6 Jacob Zuma is elected president of South Africa by the country's legislature.

The Czech Republic's Senate approves the Lisbon Treaty to reform the government of the European Union; the treaty was previously approved by the Chamber of Deputies, the lower house of the parliament.

Maine becomes the fifth U.S. state to permit same-sex marriages when Gov. John Baldacci signs the legislative bill making the change into law.

7 Pakistani Prime Minister Yousaf Raza Gilani makes a televised speech in which he declares that the military is undertaking to eliminate the Taliban in the country.

Hundreds of women in Kathmandu demonstrate to demand the removal of Nepal's army chief; riot police officers fight with them.

The U.S. announces the results of its "stress tests" for banks and tells 10 major institutions, including Bank of America, Citigroup, Wells Fargo, and GMAC, that they must raise \$75 billion more in capital to achieve good financial health.

In Kenya wealthy white landowner Thomas Patrick Gilbert Cholmondeley is convicted of manslaughter in the shooting death of a black Kenyan poacher on Cholmondeley's land, to the surprise of many who were cynical about the chances of such an outcome to the trial; he is later sentenced, however, to only eight months in prison.

8 The Pakistani military offensive against the Taliban in the Swat valley intensifies as some 200,000 civilians flee the area.

The U.S. Department of Labor reveals that the national unemployment rate in April reached 8.9%.

9 The government of Chad announces that after two days of fighting in which as many as 220 insurgents and 21 Chadian soldiers were killed, it has won conclusive victory over rebels in eastern Chad who sought to overthrow the country's government.

The Guangzhou Opera House in China, designed by Zaha Hadid and still under construction, catches fire, halting construction.

10 A Sri Lankan government doctor reports that heavy shelling the previous day in the tiny area of land controlled by the Liberation Tigers of Tamil Eelam killed 378 civilians.

Violence between Islamist fighters supporting the interim government of Somalia and those supporting al-Shabaab flares in Mogadishu; at least 35 people are killed.

The slaying in Guatemala of lawyer Rodrigo Rosenberg—who foretold his murder in a videotape, discovered after his death, in which he accused Pres. Álvaro Colom, among others—excites unrest that leads to a political crisis over the following weeks.

Russia defeats Canada 2–1 to win the International Ice Hockey Federation world championship for the second consecutive year.

11 U.S. Secretary of Defense Robert M. Gates announces that Gen. David D. McKiernan is being replaced as the

top commander of U.S. forces in Afghanistan by Lieut. Gen. Stanley A. McChrystal, who has a stronger background in unconventional warfare.

Ichiro Ozawa resigns as head of Japan's opposition Democratic Party because of a campaign finance scandal in which one of his aides has been implicated.

Georgian Pres. Mikheil Saakashvili meets with opposition leaders, but no agreement is reached.

The space shuttle *Atlantis* takes off on the final mission to make repairs to the Hubble Space Telescope.

After an Iranian appeals court overturns her eight-year sentence for spying and orders a two-year suspended sentence instead, Iranian-American journalist Roxana Saberi is released from prison in Iran. (Photo right.)

12 In the annual report of the trustees of the U.S. Medicare and Social Security benefit systems, it is projected that the Medicare fund will run out of money in 2017 and Social Security in 2037; this is two years and four years, respectively, earlier than previous estimates.

The U.S. is among 10 countries elected to the United Nations Human Rights Council.

The Royal Swedish Academy announces that the winners of the Polar Music Prize are British rock musician Peter Dinklage and Venezuelan composer José Antonio Abreu.

13 A second day of shelling of a field hospital in Sri Lanka's war zone is said to have killed at least 50 people;

satellite images back up reports of destruction in the zone.

A suicide car bomber kills seven civilians outside a U.S. military base near Khost, Afg.; the previous day Taliban attackers in Khost triggered a five-hour gun battle in which 15 people, among them 8 of the insurgents, died.

Japan's legislature ratifies an agreement signed in February that will see 8,000 U.S. Marines transferred from Okinawa in Japan to Guam.

NASA's Kepler spacecraft, designed to scan the cosmos for planets similar to the Earth and launched in March, begins its mission.

14 In Myanmar (Burma), democracy leader Aung San Suu Kyi is arrested for having violated the terms of her house arrest; an uninvited American man had illegally swum across a lake to enter her house.

The New York state Supreme Court upholds a lower-court ruling that the America's Cup yacht race should be held in February 2010 by the Swiss-based team Alinghi, with the U.S.-based Oracle as its challenger; the location and design of the boats remain to be negotiated.

Ukraine's highest court rules that new elections must be moved from October 2009 to January 2010; Viktor Yushchenko was elected to a five-year term as president in January 2005.

Notice is given to 789 Chrysler dealerships across the U.S. that they will be forced to close next month.

The Herschel Space Observatory, which will collect long-range radiation and

Behrouz Mehri—AFP/Getty Images



study the creation of galaxies, is launched from French Guiana by the European Space Agency's Ariane 5 rocket.

15 U.S. government officials announce that some detainees at the military prison at Guantánamo Bay, Cuba, will be tried in military tribunals that have been changed in order to allow more rights for the defendants than had been earlier permitted.

Eurostat, the statistical office of the European Union, reports that the economies of both the EU and the euro zone shrank 2.5% in the first quarter of 2009.

The American carmaker General Motors informs some 1,100 dealerships that their franchises will be discontinued after this year.

The Wall Street Journal publishes an article describing a fossil found near Darmstadt, Ger., of an Eocene-era primate that may be ancestral to the anthropoid lineage that produced monkeys, apes, and humans; the species has been designated *Darwinius masillae*.

16 Preliminary results of legislative elections in India show a surprisingly strong win for the governing coalition led by the Indian National Congress party.

Women achieve elective office for the first time in Kuwait's history when four women win seats in the country's legislature; on May 20, Sheikh Nasir al-Muhammad al-Ahmad al-Jabir al-Sabah is reappointed prime minister.

The new 24,500-sq-m (264,000-sq-ft) Modern Wing of the Art Institute of Chicago, designed by Renzo Piano, opens to positive reviews. (Photo right.)

In Moscow, Norwegian singer and violinist Alexander Rybak wins the Eurovision Song Contest with his song "Fairytale."

Rachel Alexandra, under jockey Calvin Borel, becomes the first filly since 1924 to win the Preakness Stakes, the second event in U.S. Thoroughbred horse racing's Triple Crown, coming in one length ahead of Kentucky Derby winner Mine That Bird.

17 In presidential elections in Lithuania, Dalia Grybauskaitė, European Union budget director, wins a convincing victory.

In Manchester, Eng., Usain Bolt of Jamaica runs a 150-m street race in 14.35 sec, a world best in the rarely contested distance.

18 The Sri Lankan government reports that Liberation Tigers of Tamil Eelam leader Velupillai Prabhakaran has been killed, and the LTTE acknowledges defeat.



Charles Rex Arbogast/AP

A spokesman for the UN High Commissioner for Refugees declares that some 1.5 million people have been displaced by fighting in Pakistan's North-West Frontier Province since the beginning of the month.

19 Pres. Mahinda Rajapakse of Sri Lanka in a nationally televised speech declares that the government has defeated the Liberation Tigers of Tamil Eelam; the death of the group's leader is confirmed.

Michael Martin resigns as speaker of the British House of Commons in the burgeoning expense-account scandal; he is the first person forced from that position since 1695.

The Hubble Space Telescope, repairs completed, is released from the space shuttle *Atlantis*.

The Ruth Lilly Poetry Prize is presented in Chicago to Fanny Howe.

20 The Commission to Inquire into Child

Abuse, after nine years of investigation, releases a 2,575-page report detailing sexual and physical abuses routinely perpetrated at hundreds of reform schools and orphanages run by the Roman Catholic Church in Ireland from the 1930s to the 1990s.

Iran successfully test-fires a solid-fuel Sejil missile that is believed to have a range that is greater than 1,930 km (1,200 mi), which suggests the existence of a rapidly advancing weapons-development program.

At least 29 people die when a car bomb explodes outside a takeout restaurant in a Shi'ite area of Baghdad.

The Whitelee wind farm, south of Glasgow, Scot., is officially inaugurated; it is the largest onshore wind farm in Europe and is expected to generate 322 Mw of electricity, and there are plans to increase its capacity to 452 Mw.

The U.S. military says that aerial bombing in Afghanistan's Farah province on May 4 killed 60–65 Taliban militants and perhaps 20–30 civilians; Afghan authorities say that

all those killed, more than 140, were civilians.

The Ukrainian association football (soccer) club FC Shakhtar Donetsk defeats Werder Bremen of Germany 2–1 in overtime to win the final Union des Associations Européennes de Football (UEFA) Cup in Istanbul; the competition will be reorganized for the next season.

21 Well-connected multimillionaire Hisham Talaat Moustafa is sentenced to death in Cairo for having hired a man to murder Lebanese pop star Suzanne Tanim.

The U.S. National Weather Service reports that the Red River in North Dakota has, after a record 61 days, fallen below flood level.

Anne Mulcahy announces plans to retire as CEO of copier company Xerox, to be replaced by Ursula Burns; it is believed to be the first time that there have been two successive female CEOs at a *Fortune* 500 company.

The U.S. National Endowment for the Arts announces that the winners of its 2010 Jazz Masters Awards are musicians Kenny Barron, Annie Ross, Yusef Lateef, Muhal Richard Abrams, Bobby Hutcherson, Bill Holman, and Cedar Walton and producer George Avakian.

22 At a summit meeting between the European Union and Russia in Khabarovsk, Russia, no agreement is reached on how to prevent price disputes between Ukraine and Russia from interrupting natural gas supplies to EU countries.

Armed forces loyal to Somalia's transitional national

government launch an offensive to retake territory in Mogadishu from the Islamist militant groups al-Shabaab and Hizbul Islam; at least 20 people die in the violence.

23 Former South Korean president Roh Moo-Hyun commits suicide by throwing himself off a cliff in the village of Bongha; he was questioned the previous month in connection with a corruption scandal.

Nepal's interim legislature elects Communist Party of Nepal (Unified Marxist-Leninist) leader Madhav Kumar Nepal prime minister.

Germany's Federal Assembly narrowly elects Horst Köhler to a second term as president of the country.

24 A trilateral meeting in Tehran between Iranian Pres. Mahmoud Ahmadinejad, Afghan Pres. Hamid Karzai, and Pakistani Pres. Asif Ali Zardari produces an agreement to work together to fight Islamic extremism and drug smuggling.

Opposition candidate Tsakhiagiin Elbegdorj wins a closely contested presidential election in Mongolia.

In a Sikh temple in Vienna, several Sikhs attack two visiting sect leaders with knives and a handgun, killing one and igniting a fight; later, in apparent reaction, fighting among Sikhs erupts in Jalandhar, India.

Popular rapper T.I. plays a final concert before entering federal prison to serve a 366-day sentence for weapons violations.

The 93rd Indianapolis 500 automobile race is won by Helio Castroneves of Brazil

as the Indianapolis Motor Speedway, known as the Brickyard, celebrates its centennial.

25 North Korea conducts its second underground test of a nuclear weapon; its first was in October 2006.

The Organisation for Economic Co-operation and Development reports that the combined economies of its 30 member countries fell 2.1% in the first quarter of the year compared with the previous quarter and fell 2% in the final quarter of 2008; this is the biggest decline since such measurements began in 1960.

26 Pakistan's Supreme Court overturns a judgment made in February and rules that opposition leader Nawaz Sharif is entitled to run for and hold public office.

Protesters demanding the resignation of Georgian Pres. Mikheil Saakashvili take over the main train station in Tbilisi.

Pres. Mamadou Tandja of Niger, having had his attempts to change the constitution to allow him to run for a third term of office turned down by the Constitutional Court, dissolves the legislature.

U.S. Pres. Barack Obama names Sonia Sotomayor of the Court of Appeals for the Second Circuit as his choice to replace the retiring David Souter on the U.S. Supreme Court.

In a series of antidrug raids in Michoacán state in Mexico, federal police officers and soldiers arrest 10 mayors and a number of other government and police officials.

France opens a military base in Abu Dhabi; as many as 500 troops will be stationed there for training and support.

27 Armed men driving an explosives-laden car attempt to attack the Pakistani intelligence agency's command centre in Lahore; the car hits a police emergency-response station and explodes, killing at least 26 people.

Boubacar Messaoud of Mauritania accepts the 2009 Anti-Slavery International Award for his organization SOS Enslaves; the organization was instrumental in the creation of laws making slavery illegal in Mauritania and continues to fight the practice of slavery in a country in which it is believed that some 600,000 people are enslaved.

In association football (soccer), FC Barcelona of Spain defeats the English team Manchester United 2-0 to win the UEFA Champions League title in Rome.

28 The Sudan's minister of the interior reports that fighting between the Misseriya and the Rizeyqat, nomadic groups who live on either side of the border between Darfur and South Kordofan, has in the past few days left 244 people dead, 75 of them members of a neutral police force.

The media company Time Warner announces plans to spin off its online subsidiary AOL, acquired with much fanfare in 2000.

The retailer Toys "R" Us announces its purchase of the venerable toy store F.A.O. Schwarz.

The 82nd Scripps National Spelling Bee is won by Kavya

Shivashankar of California Trail Junior High School in Olathe, Kan., when she correctly spells *Laodicean*.

29 At the Lawrence Livermore National Laboratory in California, the National Ignition Facility, which will use lasers to create fusion reactions, is officially dedicated.

Eurostat reports that the annual inflation rate for the euro zone as a whole for the year to May was 0%.

A Russian Soyuz capsule delivers three astronauts to join the permanent crew on the International Space Station, bringing the size of the crew to six for the first time.

The Federal Deposit Insurance Corporation reports that as of the end of March, a record 7.75% of all loans and leases held by American banks were in distress.

30 Pakistan's military declares that it has achieved full control over Mingora, the biggest city in the Swat valley.

Chelsea, helmed by Guus Hiddink of The Netherlands, defeats Everton 2-1 to win England's FA Cup in association football (soccer).

31 In Georgia's breakaway region of South Ossetia, a new legislature dominated by followers of its president, Eduard Kokoity, who enjoys the favour of Russia, is elected.

George Tiller, one of three doctors in the U.S. who performs third-trimester abortions under certain circumstances, is shot to death in Wichita, Kan.; his clinic later closes.

June

“ *It is our duty to defend people's votes. There is no turning back.* ”

Mir Hossein Mousavi,
Iranian opposition presidential candidate, after the
government declared the election for Pres. Mahmoud Ahmadinejad, June 12

1 The 101-year-old American automobile company General Motors files for bankruptcy protection and announces the closing of 14 plants.

Air France Flight 447 from Rio de Janeiro to Paris disappears over the Atlantic Ocean; wreckage of the Airbus A330-200 found later shows that it went down and that all 228 aboard perished.

The Dow Jones Industrial Average replaces General Motors LLC with Cisco Systems and Citigroup with the Travelers Companies on its listing.

2 It is reported in South Korea that North Korean leader Kim Jong Il has chosen his youngest son, Kim Jong-Un, as his successor.

Eurostat announces that the unemployment rate in the euro zone reached 9.2% in April, while in the European Union as a whole, the figure was 8.6%, with the highest rate (18.1%) in Spain and the lowest (3%) in The Netherlands.

3 Moldova's legislature fails in its second attempt to elect a new national president; as a result, a general election must be held.

Gov. John Lynch of New Hampshire signs legislation making same-sex marriage legal in the state; the law will go into effect on Jan. 1, 2010.

4 The Australian-British mining company Rio Tinto announces the collapse of an

agreement for China's state-owned aluminum company to purchase an 18.5% stake in it.

In Cairo, U.S. Pres. Barack Obama makes a major speech addressing the Muslims of the world, asking for a change in the relationship between the West and the Muslim countries and addressing the conflict between Israel and Palestine. (Photo below.)

Two American reporters, Euna Lee and Laura Ling,

who were seized in March at North Korea's border with China, go on trial in North Korea for having illegally entered the country "with hostile intent"; on June 8 they are sentenced to 12 years of hard labour.

5 Violence between riot police in Peru and indigenous Amazonian protesters blocking access to an oil pipeline leaves at least 54 people, among them 14 police officers, dead.



Sucheta Das/AP

A Taliban suicide bomber detonates his weapon in a mosque in the Dir district of Pakistan's North-West Frontier Province, killing at least 30 people and sparking a local backlash against the Taliban.

Fighting over control of the town of Wabho, Som., between the al-Shabaab and Hizbul Islam militant groups and the government of Somalia leaves at least 56 militants dead.

The U.S. Department of Labor reports that the national unemployment rate in May rose to 9.4% but that the rate of job loss has slowed.

General Motors announces an agreement to sell its Saturn division to the Penske Automotive Group.

A ceremony is held in Orlando, Fla., to honour for the first time the 350 U.S. soldiers who were held at the Nazi slave labour camp at Berga, Ger., in the waning years of World War II; more than 100 died in the camp or on a subsequent death march, and 6 of the presently living 22 Berga survivors attend the ceremony.

Svetlana Kuznetsova of Russia defeats her countrywoman Dinara Safina to win the women's French Open tennis title; the following day Roger Federer of Switzerland defeats Robin Söderling of Sweden to capture the men's championship for the first time, making him the sixth man to have won all four Grand Slam titles.

Long shot Summer Bird wins the Belmont Stakes, the last event in Thoroughbred horse racing's U.S. Triple Crown, by two and three-quarter lengths; both

Summer Bird and Kentucky Derby winner Mine That Bird, which finished third, were sired by Birdstone.

In legislative elections in Lebanon, the March 14 coalition, led by Saad al-Hariri, wins 71 of 128 seats, while 57 seats go to the March 8 coalition of the militant group Hezbollah.

An overnight shootout between drug cartel members and soldiers in Acapulco leaves 16 drug gang members and 2 soldiers dead.

The 63rd annual Tony Awards are presented in New York City; winners include *God of Carnage*, *Billy Elliot*, *the Musical* (which takes 10 awards), *The Norman Conquests*, and *Hair* and the actors Geoffrey Rush, Marcia Gay Harden, Alice Ripley, and David Alvarez, Trent Kowalik, and Kiril Kulish, who shared a role.

Security forces in Indian-administered Kashmir use gunfire to quell a protest by thousands of demonstrators; since the discovery on May 30 of the bodies of two young women who had been raped and murdered, strikes and demonstrations by people who blame Indian soldiers for the assault have been spreading through the region.

Pres. Omar Bongo of Gabon dies in Barcelona; he had been in office since 1967 and was Africa's longest-ruling head of state.

An attack that includes a massive explosion of a car bomb destroys part of the luxury Pearl Continental Hotel in Peshawar, Pak.; at least 11 people, many of them foreigners, are killed.

The U.S. government announces that 10 major banks, including JPMorgan Chase, Goldman Sachs, Morgan Stanley, and U.S. Bancorp, will be permitted to return bailout funds to the government and exit from the Troubled Asset Relief Program.

The permanent members of the UN Security Council agree on a draft resolution to increase sanctions against North Korea; the full Security Council unanimously approves it on June 12.

Japanese Prime Minister Taro Aso announces that Japan will undertake to reduce its emissions of greenhouse gases 15% from 2005 levels, which is 8% lower than 1990 levels, by 2020.

An alliance between bankrupt American automaker Chrysler LLC and Italian carmaker Fiat is officially signed; the new Chrysler Group LLC, headed by Fiat CEO Sergio Marchionne, is owned by the United Auto Workers union, Fiat, and the governments of the U.S. and Canada.

A car bomb explodes in a market in Al-Bathah, Iraq, killing at least 28 people.

Rose Francine Rogombé is sworn in as interim president of Gabon.

Ali Abdessalam Treki of Libya is chosen to succeed Miguel d'Escoto of Spain as president of the UN General Assembly.

James W. von Brunn, an 88-year-old anti-Semitic white supremacist, enters the U.S. Holocaust Memorial Museum in Washington, D.C., and opens fire, killing security guard Stephen Johns.

The U.S. Senate approves a version of a bill that was earlier passed by the U.S. House of Representatives; it will give the Food and Drug Administration jurisdiction to regulate the manufacture and marketing of cigarettes and other tobacco products.

The World Health Organization declares the outbreak of H1N1 flu a pandemic; it has spread to 74 countries, caused 144 deaths, and sickened at least 27,000 people worldwide.

Shortly after the polls close for what was expected to be a very close presidential election in Iran, Pres. Mahmoud Ahmadinejad is declared the winner by a landslide; opposition candidate Mir Hossein Mousavi insists that in fact he has won the election.

Harith al-Obaidi, the head of the Iraqi National Accord, the largest Sunni bloc in the country's legislature, is assassinated in a mosque in Baghdad; his secretary and three bodyguards are also killed.

The final transition to fully digital transmission of television signals takes place in the U.S. as all analog transmitters are shut down.

The Pittsburgh Penguins defeat the Detroit Red Wings 2-1 to win the Stanley Cup, the National Hockey League championship trophy.

Thousands of people take to the streets of Tehran, enraged by what they believe to be fraudulent results in the previous day's presidential election.

The American amusement park operator Six Flags files for bankruptcy protection.

14 For the first time, Israeli Prime Minister Benjamin Netanyahu in a speech endorses the principle of a Palestinian state, but he makes no other changes in his previously stated position.

The UN World Food Programme reports that two days earlier a convoy of boats carrying food aid down the Akobo River in the southern part of The Sudan that was escorted by Sudanese soldiers was attacked in an outbreak of interethnic violence; at least 40 people were killed.

The Los Angeles Lakers defeat the Orlando Magic 99–86 in game five of the best-of-seven tournament to secure the team's 15th National Basketball Association championship.

Anna Nordqvist of Sweden wins the Ladies Professional Golf Association Championship tournament by four strokes over Lindsey Wright of Australia.

15 Iran's supreme leader, Ayatollah Ali Khamenei, calls for the Revolutionary Guard to review the results of the presidential election; nonetheless, tens of thousands march in Tehran in a silent protest.

The U.S. Department of State asks the social-networking site Twitter to postpone scheduled maintenance lest it disrupt the flow of information within Iran and from Iran to the West about the political situation there.

16 The U.S. Global Change Research Program posts a report saying that the effects of rapid climate change are already being experienced in the U.S. and will continue to

worsen and that unless steps toward reduction of greenhouse gases are quickly undertaken, very high costs will result.

Prime Minister Yehude Simon of Peru announces his intention to resign.

17 For the third consecutive day, tens of thousands of people who demand new elections march in silence in Tehran; demonstrations are also taking place in other cities in Iran.

Fighting for control of Mogadishu between Somali government forces and the Islamic Courts Union, on the one hand, and Islamist militias al-Shabaab and Hizbul Islam, on the other, leaves at least 18 people dead.

A convoy of paramilitary officers is ambushed by gunmen in Algeria; 18 officers and a civilian are killed.

18 The U.S. Supreme Court rules that convicted prisoners are not constitutionally entitled to DNA testing that could prove their innocence, noting that many state legislatures have conferred that legal right.

Peru's legislature overturns presidential decrees that would have opened the jungle to development; indigenous residents of the affected area rejoice.

A suicide car bomber kills Somalia's minister of security and at least 35 more people in Beledweyne.

NASA launches the Lunar Reconnaissance Orbiter, which will spend a year measuring and mapping the Moon to find suitable landing sites and resources; the mission also includes the Lunar Crater Observation and Sensing Mission, which will crash a portion of the expended rocket into a crater on the Moon so that subsurface strata can be analyzed.

The 2009 winners of the Kyoto Prize are announced: semiconductor scientist Isamu Akasaki (advanced technology), evolutionary biologists Peter Raymond Grant and Barbara Rosemary Grant (basic sciences), and composer and conductor Pierre Boulez (arts and philosophy).

19 Ayatollah Ali Khamenei, Iran's supreme leader, declares the presidential

election results valid and orders an end to demonstrations opposing the reported results.

The food company Nestlé USA recalls its Toll House refrigerated cookie dough; it has been linked to an outbreak of illness from *E. coli* infections.

20 In the largely Turkmen town of Taza in northern Iraq, a suicide truck bomb kills at least 68 people in an explosion that also damages many houses.

Members of Iran's Basij militia use violent beatings and tear gas in Tehran and other cities against thousands of demonstrators demanding new elections.

The long-awaited dramatic new glass-and-concrete Acropolis Museum in Athens celebrates its grand opening. *(Photo below.)*

Terry O'Neill is elected to succeed Kim Gandy as president of the National Organization for Women.

In Gelsenkirchen, Ger., International Boxing Federation and World Boxing Organization heavyweight champion Wladimir

Yiorgos Karahalios—Reuters/Landov



Klitschko defeats Ruslan Chagaev on a technical knockout, winning the *Ring* magazine title as well.

21 Greenland's new self-governing status within Denmark goes into effect amid official ceremony and celebration.

Emma Pooley of England wins the premiere women's bicycle race, the Grande Boucle Feminine, with an overall victory of 22 seconds.

At Lord's Cricket Ground in London, Pakistan defeats Sri Lanka to win the men's World Twenty20 championship; England beats New Zealand for the women's title.

22 Pres. Nicolas Sarkozy becomes the first French president to address the National Assembly and Senate since presidents were barred from Parliament in 1875; in his speech he discusses the economy and also declares that the burka worn by some Muslim women is a sign of subjugation that is not welcome in France.

The American photography company Eastman Kodak Co. announces that it is retiring its iconic colour film Kodachrome, which was introduced in 1935.

Lucas Glover holds off Phil Mickelson, David Duval, and Ricky Barnes to win a rain-delayed U.S. Open golf tournament in Farmingdale, N.Y.

23 An air strike, locally attributed to a U.S. drone, on the funeral of a Taliban commander in Pakistan's South Waziristan region, kills what is said to be at least 60 people.

Kyrgyzstan agrees to allow the U.S. to keep Manas Air Base open in spite of having ordered it closed in February; the U.S. will pay a much higher rent, and the base is to be renamed as a transit centre.

24 A bomb attached to a motorcycle explodes in a market in the Sadr City neighbourhood of Baghdad, killing at least 76 people.

South Carolina Gov. Mark Sanford, whose whereabouts had been unknown since June 18, publicly admits in a televised news conference that he had been in Argentina with a woman with whom he had been having an extramarital affair for the past year.

25 Israel agrees to allow Palestinian security forces greater authority in the West Bank towns of Ramallah, Qalqilyah, Bethlehem, and Jericho; also, several Israeli checkpoints in the West Bank have been removed.

One-time pop superstar Michael Jackson dies at the age of 50 in Los Angeles.

UNESCO removes Dresden, Ger., from its World Heritage List of culturally significant sites, citing the impact of a new four-lane bridge over the Elbe River.

26 In Iran, Ayatollah Ahmad Khatami states that leaders of the protests against the presidential election results should be punished, the Guardian Council reiterates the validity of the results, and opposition leader Mir Hossein Mousavi declares that he will not call

for more protests without first applying for permits.

The Human Rights Watch reports that in late 2008 members of Zimbabwe's armed forces violently took over the Marange diamond fields discovered in 2006 and have since illegally used their profits to benefit soldiers and leaders of the ZANU-PF political party of Pres. Robert Mugabe.

The U.S. Department of Commerce reports that the personal saving rate of Americans in May rose to 6.9%, its highest rate since December 1993.

27 Pres. Michel Suleiman of Lebanon announces that Saad al-Hariri has been chosen to serve as prime minister.

The pro-British militias the Ulster Volunteer Force and the Red Hand Commando state that they have disarmed and put their weapons beyond use, an assertion that the government of Northern Ireland corroborates.

After 127 days Ericsson Racing Team's yacht *Ericsson 4* crosses the finish line of the 2008–09 Volvo Ocean Race in St. Petersburg, becoming the official winner of the 37,000-nautical-mile around-the-world race.

28 The military of Honduras overthrows Pres. Manuel Zelaya in a coup and deports him to Costa Rica; the country's legislature replaces him with Roberto Micheletti.

Legislative elections in Argentina result in a loss of seats for the Peronist Party of Pres. Cristina Fernández de Kirchner; the following day Néstor Kirchner resigns as head of the party.

Legislative elections in Albania result in a narrow victory for the coalition led by Prime Minister Sali Berisha.

A presidential election in Guinea-Bissau results in the need for a runoff.

A Taliban attack on a Pakistani military convoy in North Waziristan leaves at least 30 soldiers dead.

29 Pres. Mamadou Tandja of Niger dissolves the Constitutional Court that had ruled his referendum to extend the period of time that a president may hold office illegal.

Bernard L. Madoff, convicted of having run the largest Ponzi scheme ever uncovered, is sentenced to 150 years in prison.

30 In accordance with the terms of a security agreement, U.S. troops withdraw from Iraq's cities; the milestone is celebrated in Iraq, although a bomb in Kirkuk kills 33 people.

Malaysian Prime Minister Najib Razak announces a significant weakening of the system of ethnic preferences that for nearly 40 years has benefited ethnic Malays and other indigenous groups over the Chinese and Indian minorities.

China agrees to indefinitely delay the requirement that computers sold in China after July 1 be equipped with Green Dam filtering software.

Some eight months after the U.S. election, Minnesota's Supreme Court dismisses a challenge from Norm Coleman, saying that Al Franken was the winner and can be seated as senator.

July

“ *I vote for a European Bulgaria,
which has to prove that it is not the poorest and
most corrupt country in Europe.* ”

Boyko Borisov,
on the Bulgarian election that his party won, July 5

1 Ivo Sanader abruptly resigns as prime minister of Croatia; Jadranka Kosor is sworn in to replace him on July 6.

The presidency of the European Union rotates to Sweden, led by Prime Minister Fredrik Reinfeldt.

2 U.S. military forces begin a campaign to retake Afghanistan's Helmand province from Taliban insurgents.

U.S. health officials announce plans to donate 420,000 packets of the antiviral medicine Tamiflu to the Pan-American Health Organization, as South American countries see higher numbers of deaths from H1N1 swine flu.

The U.S. Department of Labor releases figures showing that the country's unemployment rate reached 9.5% in June; stock markets drop precipitously in response.

The Shanghai Composite index climbs 52 percentage points to close at 3060.25, up 68% for the year.

3 Russian and U.S. officials say that Russia has agreed to allow U.S. military flights en route to Afghanistan to fly through Russian airspace.

UN Secretary-General Ban Ki-Moon meets with the leaders of the military regime of Myanmar (Burma) in Naypyidaw to seek the release of political prisoners and to encourage fairness in the legislative elections scheduled to take place in 2010.

The post-coup government of Honduras announces that the country is withdrawing from the Organization of American States.

Former vice presidential nominee Sarah Palin astounds political observers with an announcement that she will step down as governor of Alaska with a year and a half left in her term of office; her purpose is unclear.

4 The Association of Researchers and Teachers of Qum, a group founded by Ayatollah Ruhollah Khomeini,

declares that the Iranian election of June 12 and the new government are in its eyes illegitimate.

American Serena Williams defeats her sister Venus Williams to take her third All-England (Wimbledon) women's tennis championship; the following day Roger Federer of Switzerland wins the men's title for the sixth time when he defeats American Andy Roddick for a record 15th Grand Slam victory.

American radio host Casey Kasem broadcasts his final countdown of the American top 20 popular songs; *American Top 20* is a spinoff of *American Top 40*, a show he initiated on July 4, 1970.

5 Ethnic Uighur protesters begin rioting in Urumqi, the capital of China's Uygur Autonomous Region of Xinjiang; at least 156 people are killed.

In lively legislative elections in Bulgaria, the opposition centre-right Citizens for the European Development of Bulgaria, led by Boiko

Borisov, wins a resounding victory over the ruling Socialist-led coalition.

Legislative elections take place in Mexico; the Institutional Revolutionary Party (PRI) wins 36.7% of the vote, and the ruling National Action Party (PAN) garners only 28%.

6 The Chinese government shuts down the city of Urumqi, imposing a strict curfew and cutting off connections to cell phones and the Internet, and casts blame for the previous day's violence on the expatriate World Uighur Congress, led by Rebiya Kadeer.

U.S. Pres. Barack Obama meets in Moscow with Russian Pres. Dmitry Medvedev; they agree to negotiate a treaty on nuclear-arms reduction to replace the START I treaty, which will expire on December 5.

The Italian automaker Fiat Group announces that it plans to enter into a joint venture with the Chinese state-owned Guangzhou

Automobile Group; a plant will be built in Changsha to produce cars and engines to be sold in China, with production expected to begin by the end of 2011.

7 Missiles from a U.S. drone kill 13 Taliban and 3 Uzbek militants in Pakistan's South Waziristan province.

8 Two attacks from U.S. remotely piloted aircraft reportedly kill at least 43 militants in South Waziristan in Pakistan.

After a two-day battle ignited when insurgents attacked police posts and a government building in Afghanistan's Nuristan province, some 21 insurgents and 6 police officers have been killed.

Susilo Bambang Yudhoyono handily wins reelection as president of Indonesia.

9 Chinese Pres. Hu Jintao issues a statement calling for the preservation of security in Xinjiang and for security forces to "deal a blow" to those who were responsible for the killings in Urumqi.

A double suicide bombing leaves at least 35 people dead in Tal Afar, Iraq.

Explosives inside a truck that had overturned in Logar province in Afghanistan are detonated; the huge blast kills 24 people, among them 16 children.

Thousands of pro-democracy demonstrators take to the streets of Tehran, undeterred by tear gas and beatings from security forces.

10 Talks in San José, Costa Rica, between ousted

Honduran president Manuel Zelaya and de facto president Roberto Micheletti are unsuccessful, with neither side willing to compromise, but they agree to further talks.

The reorganized car company General Motors exits bankruptcy 40 days after filing for it.

11 During a visit to Ghana, U.S. Pres. Barack Obama makes a speech in Accra that is televised throughout Africa in which he enjoins the continent's people and leaders to take responsibility for their future.

Pres. Alan García of Peru names as his new prime minister Javier Velásquez Quesquén.

Tennis players Monica Seles and Andres Gimeno, sports management entrepreneur Donald Dells, and Robert Johnson, who pioneered the desegregation of the sport, are inducted into the International Tennis Hall of Fame in a ceremony in Newport, R.I.

12 Denis Sassou-Nguesso is reelected president of the Republic of the Congo in a vote that falls short of international standards for fairness.

Attacks by Naxalite guerrillas in India's Chhattisgarh state leave 27 police officers dead.

Ji Eun-Hee of South Korea wins a one-stroke victory over Candie Kung of Taiwan to win the U.S. Women's Open golf tournament in Bethlehem, Pa.

13 In Zimbabwe, the first meeting of a national

conference to create a new constitution is disrupted by backers of Pres. Robert Mugabe.

At the invitation of the reinsurance giant Munich Re, a group of large companies form a consortium, Desertec, and sign a memorandum of understanding that the group will undertake to construct a system of solar thermal power stations in the Sahara to create emissions-free electricity.

Henry Okah, a leader of the rebel Movement for the Emancipation of the Niger Delta, is released from prison in Nigeria; on July 15 the movement leaders declare a 60-day cease-fire.

U.S. Pres. Barack Obama nominates Dr. Regina M. Benjamin, head of the Alabama Medical Association and of a family clinic in Bayou La Batre, Ala., as surgeon general.

A touring art project called "Play Me, I'm Yours," created in 2008 by Luke Jerram, closes in London after a three-week run; passersby were invited to sit down and play music on 30 pianos distributed along the city's streets. (Photo below.)

14 At its triennial convention in Anaheim, Calif., the Episcopal Church USA votes to affirm that any level of the ministry may be filled by openly gay persons; on July 17, the convention votes to allow the blessing of same-sex unions in jurisdictions in which such unions are legal.

The banking company Goldman Sachs reports its most profitable quarter ever and plans to offer \$11.4 billion in bonuses to its executives.

Former Polish prime minister Jerzy Buzek is elected president of the European Parliament.

15 In Miranda state, Venezuela, which is led by people opposed to Pres. Hugo Chávez, national guard troops take over a state police station in Curiepe, an action that ignites fighting between the troops and protesters angered by the move.

Natalya Estemirova, a well-known human rights worker who documented abuses in the Russian republic of Chechnya, is kidnapped outside her home in Grozny, and her body is later found



Patrick Ward/Alamy

in the neighbouring republic of Ingushetia.

The American commercial lender CIT Group, which provides loans to a large number of medium-size and small companies, is turned down for a second infusion of government funds.

The space shuttle *Endeavour* takes off from the Kennedy Space Center in Florida on a mission to continue construction of the International Space Station.

16 At a summit meeting of the Nonaligned Movement in Egypt, the prime ministers of Pakistan and India release a joint statement that they have agreed to cooperate to combat terrorism and will continue to engage in talks to resolve their differences.

Iceland's legislature votes to start membership talks with the European Union.

17 Pakistan's Supreme Court acquits former prime minister Nawaz Sharif of the crime of hijacking, of which he had been convicted following his unsuccessful attempt to prevent Pervez Musharraf from taking over the country in a coup in 1999; the ruling makes Sharif eligible to hold public office.

Jean Eyeghe Ndong resigns as prime minister of Gabon, saying he intends to run as an independent in the upcoming presidential election; he is replaced in the office by Paul Biyoghé Mba.

18 Some 5,500 Mexican soldiers are deployed to Michoacán state in Mexico after a series of horrific attacks on police by drug cartel members.

Mohamed Ould Abdel Aziz, who took power in a coup in 2008, is elected president of Mauritania in a national referendum.

Seattle's first light-rail line, the 22.5-km (14-mi) Central Link, begins operation.

19 Anthony Wesley, an amateur astronomer in Australia, finds a dark spot the size of the Pacific Ocean in Jupiter's atmosphere, which suggests that the planet was hit by a comet.

Stewart Cink of the U.S. defeats crowd favourite Tom Watson, age 59, in a four-hole playoff to win the British Open golf tournament at Turnberry in Ayrshire, Scot.

20 Four U.S. soldiers are killed by a roadside bomb in eastern Afghanistan, which brings the total number of U.S. troops killed in the country in July to 30, the highest number in any month since the 2001 invasion; the 56 coalition troops killed in July is also a record.

Iceland announces an agreement to inject 270 billion krónur (about \$2.1 billion) to recapitalize Íslandsbanki, New Kaupthing, and New Landsbanki, the institutions created from the good assets of the three collapsing banks that the government seized in October 2008, to help them return to full operation.

The European Union suspends aid payments to Honduras, citing the failure of reconciliation talks due to the intransigence of the de facto government.

It is revealed that on July 16 prominent African American scholar Henry Louis Gates, Jr., was briefly jailed for disorderly conduct after an

altercation with a police officer responding to a report of a possible home invasion from a neighbour who had seen Gates struggling with a stuck door when returning home from a trip; the incident provokes outrage and arguments about racial bias.

21 The Israeli pacifist group Peace Now reports that Israel has declared plans to annex some 14,022 ha (34,650 ac) of land in the West Bank that has emerged as the Dead Sea has shrunk.

Spanish Foreign Minister Miguel Ángel Moratinos enters Gibraltar for talks with British Foreign Secretary David Miliband and Gibraltar's chief minister, Peter Caruana; no Spanish minister has visited Gibraltar, which Spain ceded to Britain in 1713, in more than three centuries.

22 A tribunal at the Permanent Court of Arbitration at The Hague redraws the borders of the disputed Abyei region between northern and southern Sudan; both the government of The Sudan and the Sudan People's Liberation Movement accept the new borders.

U.S. Pres. Barack Obama holds a televised news conference to bolster support for his planned overhaul of the health care system in the U.S.

23 During the presidential election in Kyrgyzstan, the leading opposition candidate, Almazbek Atambayev, announces his withdrawal, citing fraud; the incumbent, Kurmanbek Bakiyev, wins by a landslide in an election that falls short of international standards.

A team of archaeologists reports that it has discovered off the coast of the Italian island of Ventotene five well-preserved ancient Roman shipwrecks dating from the 1st century BC to the 5th century AD.

Mark Buehrle of the Chicago White Sox pitches the first perfect game since 2004 and the 18th in Major League Baseball history when he dismisses 27 consecutive batters in his team's 5-0 victory over the Tampa Bay Rays.

The Dow Jones Industrial Average closes at 9069.29, its first close above 9000 since the beginning of the year.

24 Under strong pressure from Supreme Leader Ayatollah Ali Khamenei, Esfandiar Rahim Mashaei resigns as Iran's deputy president.

The U.S. Army Corps of Engineers reports that it has completed a project to block off the Mississippi River-Gulf Outlet, a shipping channel between the Mississippi River and the Gulf of Mexico that is believed to have been a contributing factor in the flooding of New Orleans after Hurricane Katrina in 2005.

25 In regional elections in Kurdistan in Iraq, the ruling coalition retains power, in spite of a surprisingly strong showing by the opposition coalition.

In protest over poor working conditions, including lack of pay, some 500 players of association football (soccer) resign from Peru's soccer federation.

26 Malam Bacai Sanhá of the ruling African

Party for the Independence of Guinea and Cape Verde (PAIGC) wins the runoff presidential election in Guinea-Bissau.

A suicide bomber detonates his explosives outside a crowded theatre in Grozny, the capital of Russia's secessionist republic of Chechnya; at least six people are killed.

On the first day of the world swimming championships in Rome, six world records are set in eight events.

Spanish cyclist Alberto Contador wins the Tour de France, completing the race 4 min 11 sec faster than Andy Schleck of Luxembourg and 5 min 24 sec faster than seven-time champion Lance Armstrong of the U.S.

The National Baseball Hall of Fame in Cooperstown, N.Y., inducts outfielders Rickey Henderson and Jim Rice and second baseman Joe Gordon.

27 At the end of two days of violence sparked by attacks on police stations in northern Nigeria by Muslim fundamentalist organization Boko Haram, some 55 people have died.

Eduardo Medina Mora, attorney general of Mexico, announces a new program that will make it possible for drug addicts who have committed minor crimes to be sent to rehabilitation rather than prison.

28 The United Nations High Commissioner for Refugees reports that as many as 12,000 people in Somalia fleeing the fighting in Mogadishu are taking refuge in the port of Bossaso, from which more than 30,000 people have migrated to Yemen in 2009, some 300 of whom died in the attempt.

The Virginia Tech Transportation Institute releases a study of the texting behaviour of long-haul truckers that took place over a period of 18 months which found that texting while driving increases the risk of collision by a factor of 23; talking on the phone while driving increases the risk by only a factor of 4.

At the world swimming championships in Rome, German swimmer Paul Biedermann, wearing a polyurethane swimming suit, shatters the world record in the 200-m freestyle race, set by Michael Phelps of the U.S. in 2008, by nearly a full second, with a time of 1 min 42.00 sec.

29 Legislative elections are again held in Moldova, after the results of the balloting in April led to rioting by people who believed that electoral fraud had taken place; this time the Communist Party wins only 44.7% of the vote, and the remaining parties plan to form a coalition, which would have a majority of 53 seats in the legislature.

Nigerian military forces destroy the headquarters of

the Boko Haram Islamist militants in Maiduguri as violence continues throughout the area.

Police in Bishkek, Kyrgyz., arrest 64 people who are among those demonstrating against the official results of the previous week's presidential election.

30 The death of Mohammad Yusuf, the leader of the militant Islamist group Boko Haram, in Maiduguri, Nigeria, is confirmed; it is believed that hundreds of people may have died in several days of violence.

Josefa Iloilo retires as president of Fiji; Epeli Nailatikau becomes acting president.

U.S. Pres. Barack Obama (far right) and Vice Pres. Joseph Biden (far left) host a "beer summit" at the White House between Sgt. James Crowley (near right), a member of the police force in Cambridge, Mass., and scholar Henry Louis Gates, Jr. (near left), in an attempt to calm emotions aroused by the July 16 incident at Gates's home, which Obama had exacerbated with an answer at a news conference.

31 Pakistan's Supreme Court rules that the emergency rule imposed (Nov. 3–Dec. 15, 2007) by then president Pervez Musharraf was illegal and that all acts taken under that rule, including the appointment of judges, are void; more than 100 judges appointed at that time are still on the courts.

Bombs go off outside five Shi'ite mosques in Baghdad, killing at least 29 people, most of them at a single mosque where followers of cleric Muqtada al-Sadr worship outside the building.

The U.S. government releases figures showing that the country's economy in the second fiscal quarter shrank at an annual rate of 1%, a significant improvement over the 6.4% contraction in the first quarter.

FINA, the governing body of international swimming, announces that from Jan. 1, 2010, the use of polyurethane swimming suits in competition will be banned and that, in addition, men's suits may cover the body from the waist to kneecaps only, while women's suits must be limited to the area between the shoulders and the kneecaps.



Alex Brandon/AP

August

“ *The road ends outside Libreville. After that we eat dust. It's impossible. We can't continue like this.* ”

Mathieu Ngoma, a voter in Gabon, on the lack of change promised in the next day's presidential election, August 29

1 More than 100 opposition figures, many of them prominent, go on trial in Iran, accused of having attempted to foment a revolution after the disputed election on June 12.

In Kuala Lumpur, Malay, some 10,000 people led by opposition leader Anwar Ibrahim protest against a law permitting citizens to be imprisoned without a trial; hundreds are arrested.

Days of attacks by a militant Muslim group against Christians in Gojra, in Pakistan's Punjab province, culminate in the burning and looting of more than 100 homes in the Christian quarter and the killing of six Christians.

American swimmer Michael Phelps sets a new record of 49.82 sec in the 100-m butterfly at the world swimming championships in Rome.

2 Members of the Murle ethnic group attack a camp in The Sudan's Jonglei state; more than 160 people, mostly women and children of the Lou Nuer ethnic group, are killed.

At the opening of its new global headquarters in Yokohama, the automobile manufacturer Nissan introduces the Leaf, an all-electric hatchback that is expected to go on sale in the U.S., Japan, and Europe by the end of 2010.

Scottish golfer Catriona Matthew captures the Women's British Open golf tournament.

3 Ayatollah Ali Khamenei, Iran's supreme leader, ceremonially approves Mahmoud Ahmadinejad as the country's president.

The board of troubled insurance giant American International Group (AIG) names former MetLife head Robert H. Benmosche to replace Edward M. Liddy as CEO; on August 6 Harvey Golub is designated Liddy's successor as chairman.

4 The Palestinian movement Fatah opens its first party conference in 20 years in Bethlehem in the West Bank; Palestinian leader Mahmoud

Abbas declares it an opportunity for a new beginning.

A referendum on a new constitution that would end term limits and increase the power of the president is held in Niger; the country's electoral commission on August 7 says that the document was overwhelmingly approved.

A panel of federal judges orders California to reduce its prison population by more than 25% within the next two years.

5 Tens of thousands of Filipinos attend the funeral procession for Corazon Aquino, who restored democracy to the Philippines in 1986 and served as president in 1986–92; she died on August 1.

Former U.S. president Bill Clinton leaves North Korea with American journalists Laura Ling and Euna Lee after having secured a pardon for them from North Korean leader Kim Jong Il; Ling and Lee had been sentenced to 12 years of hard labour for having entered North Korean territory. (Photo right.)

6 Officials in the U.S. and Pakistan say that a missile attack by American drones on the South Waziristan village of Zanghara the previous day may have killed Baitullah Mehsud, the head of the Taliban militia in Pakistan.



KNS—AFP/Getty Images

In Tokyo a panel of six lay jurors and three judges convicts Katsuyoshi Fujii of murder and sentences him to 15 years in prison in the first jury trial to take place in Japan since the use of juries in criminal trials was banned in 1943.

The Bank of England and the European Central Bank leave their benchmark interest rates unchanged, and the Bank of England plans to inject an additional £50 billion (about \$85 billion) into the economy.

In London, robbers steal 43 pieces of diamond jewelry with an estimated value of \$65 million from the Graff jewelry store in one of Britain's largest-ever diamond heists.

7 A massive truck bomb near a Shi'ite mosque in Mosul, Iraq, kills at least 37 people, and assorted bombings in Baghdad leave at least 12 people dead.

After a North Korean ship ostensibly carrying sugar to the Middle East inexplicably anchors in the Bay of Bengal, not far from Myanmar (Burma), it is seized by Indian authorities; it is the first time that a North Korean ship has been seized since UN sanctions permitting the action were enacted in June.

The U.S. Bureau of Labor Statistics reports that the country's unemployment rate fell to 9.4% in July and that the monthly loss of jobs was the smallest since August 2008.

A gun battle between criminals and police leaves 12 people, 3 of them police officers, dead in Pachuca, Mex.

Archaeologists in Italy report that they have found a luxurious villa in the ancient vil-

lage of Falacrine that they believe to be the birthplace of the Roman emperor Vespasian (AD 9–79).

8 Typhoon Morakot strikes Taiwan, inundating the island over several days with more than 200 cm (80 in) of rain and triggering massive mud slides that leave at least 117 people dead, with dozens missing, though it is feared that the eventual death toll will be in the hundreds, with most of the dead in the village of Hsiao-lin; the storm had earlier killed some 22 people in the Philippines.

At the party conference of the Palestinian movement Fatah, Mahmoud Abbas is overwhelmingly chosen to continue to lead the organization.

Police in Indonesia conduct a raid on a house in Bekasi, foiling what they believe to have been an assassination plot against Pres. Susilo Bambang Yudhoyono.

Sonia Sotomayor is sworn in as the first Hispanic person to become a justice of the U.S. Supreme Court.

A tourist helicopter with six people aboard collides with a private plane carrying three people over the Hudson River in New York City; there are no survivors.

Muscle Hill wins the Hambletonian harness race by six lengths at Meadowlands Racetrack in East Rutherford, N.J.

9 In Maputo, Mozam., Pres. Andry Rajoelina of Madagascar and Marc Ravalomanana, whom Rajoelina ousted as president, sign an accord agreeing on an interim government that will be put in place by September and rule until elections are held within 15 months.

The 50th Edward MacDowell Medal for outstanding contribution to the arts is awarded to American visual artist Kiki Smith at the MacDowell Colony in Peterborough, N.H.

10 The Iraqi village of Khazna, near Mosul, is largely destroyed by two huge truck bombs, and 28 or more people are killed; also, assorted bombings in Baghdad leave at least 22 people dead.

A U.S. federal judge turns down a consent decree between the Securities and Exchange Commission and Bank of America in which Bank of America would pay a \$33 million fine for failing to disclose bonuses paid to Merrill Lynch executives; he is angered by the failure of the agreement to address the allegations in the complaint against the company.

11 In Myanmar (Burma), opposition figure Aung San Suu Kyi is sentenced to 18 further months of house arrest for having allowed an American intruder into her home; the American, John Yettaw, is sentenced to seven years of imprisonment and hard labour but is released to U.S. Sen. Jim Webb on August 16.

Armed forces in Yemen begin an offensive against Shi'ite rebels in Sa'dah province.

12 The Philippine military begins an offensive against two encampments of the militant Muslim organization Abu Sayyaf on Basilan island; at least 20 insurgents and 23 soldiers are killed.

The World Trade Organization rules that China's limits on imported books, movies,

and songs, which may be sold only through state-approved distributors, violate international trade rules.

It is reported that the *Arctic Sea*, a Maltese-flagged, Russian-crewed cargo ship carrying timber from Finland to Algeria, was apparently hijacked off Sweden on July 24 and has not been sighted since July 31; it was due in Algeria on August 4.

U.S. Pres. Barack Obama bestows the Presidential Medal of Freedom on 16 people, among them Sen. Edward M. Kennedy, former Supreme Court justice Sandra Day O'Connor, historian Joseph Medicine Crow, actor Sidney Poitier, tennis star Billie Jean King, and physicist Stephen Hawking.

13 The government of Taiwan for the first time agrees to accept foreign help in responding to the disaster caused by Typhoon Morakot.

The journal *Cell* publishes a study by a team at the Broad Institute who found a way to identify drugs that kill cancer stem cells but not other cells; the finding could lead to more effective ways to treat cancer.

14 Pakistani Pres. Asif Ali Zardari lifts the ban, in place since the period of British rule, on political organization and activity in the Federally Administered Tribal Areas.

The U.K. revokes self-rule in Turks and Caicos, removing its premier, cabinet, and assembly, suspending many provisions of the constitution, and imposing rule by its governor, who represents Queen Elizabeth II; the action is in response to pervasive corruption.

U.S. federal regulators seize the Colonial BancGroup in the largest bank failure of 2009 and broker its sale to North Carolina's BB&T Corp.

A riot breaks out in a state penitentiary housing federal inmates in Gómez Palacio, Mex.; 19 prisoners are killed.

The U.S. National Oceanic and Atmospheric Administration reports that the average temperature of the surface waters of the world's oceans in July reached 16.98 °C (62.56 °F), the highest temperature ever recorded.

15 In the city of Rafah in the Gaza Strip, fighting between Hamas security forces and members of the Warriors of God, a radical Islamist group that had taken over a mosque, ends with 22 people, including the leader of the Warriors of God, 'Abd al-Latif Musa, dead.

A suicide car bomb in Kabul, outside the headquarters of the NATO forces in Afghanistan and the Ministry of Transportation building, kills seven civilians.

At the Bethel Woods Center for the Arts in Bethel, N.Y., the 40th anniversary of the legendary Woodstock Music and Art Fair is celebrated with a concert by the so-called Heroes of Woodstock, bands that performed at, or otherwise had a connection with, the original three-day festival; among the performers is Levon Helm. *(Photo right.)*

16 The bodies of 18 Taliban militants are found in the streets of six towns in Pakistan's Swat valley.

Usain Bolt of Jamaica breaks his own world record

in the 100-m sprint by 0.11 sec with a time of 9.58 sec at the track-and-field world championships in Berlin.

At the Hazeltine National Golf Club in Chaska, Minn., Yang Yong-Eun of South Korea defeats Tiger Woods of the U.S. by three strokes in the Professional Golfers' Association championship to become the first Asian-born man to win a major golf tournament.

17 North Korea agrees to reopen its border with South Korea to tourism.

Government figures in Japan show that the country's economy grew by 0.9% in the second fiscal quarter of 2009, which means that Japan is no longer in recession.

In the Russian republic of Ingushetiya, a suicide truck

bomber rams the police headquarters in Nazran; at least 25 people are killed.

A person said to be the former wife of the groom confesses to having set fire to the women's tent at a wedding on August 15 in Al-Jahra, Kuwait; the fire consumed the tent and incinerated 41 people.

The Kenya Wildlife Service declares that the population of lions in the country has fallen to 2,000 from its 2002 total of 2,749 and that the species could disappear from Kenya within 20 years.

Russia reports that the missing cargo ship *Arctic Sea* has been found 483 km (300 mi) off Cape Verde; the crew is reported to be safe.

18 The UN World Food Programme says that in spite

of its efforts to provide food to people in Kenya suffering from a lengthy drought, some 1.3 million people there are still going hungry.

19 In Baghdad a powerful truck bomb explodes outside the Ministry of Finance, collapsing an elevated highway and killing at least 35 people; within three minutes a stronger explosion from a truck bomb at the Foreign Ministry kills a minimum of 60 people.

The major Swiss bank UBS agrees to disclose information to the U.S. Internal Revenue Service on 4,450 holders of secret accounts whom the U.S. suspects of tax evasion.

Germany introduces a program that is intended to make the country a leader in the use of electric cars, with a stated aim of having one million of the vehicles on the road by 2020.

20 A presidential election is held in Afghanistan in spite of Taliban intimidation; turnout is close to 40%.

'Abd al-Basit al-Megrahi, the only person convicted in the 1988 bombing of Pan Am Flight 103 over Lockerbie, Scot., returns to a hero's welcome in Libya after having been released from prison for compassionate reasons (he has terminal prostate cancer) by a magistrate in Scotland; Megrahi served 8 years of a 27-year sentence.

A law is enacted in Mexico that decriminalizes possession of small amounts of marijuana, cocaine, heroin, methamphetamine, and LSD.

Switzerland sells its stake in investment banking giant



Craig Ruttle/AP

UBS for about \$1.1 billion more than it paid to shore up the bank in October 2008.

At the track-and-field world championships in Berlin, Jamaican phenomenon Usain Bolt breaks his own record in the 200-m sprint by an astonishing 0.11 sec, with a time of 19.19 sec.

21 The Islamist militant organization al-Shabaab attacks an African Union peacekeeping base in Mogadishu, Som.; at least 24 people die in the ensuing battle.

Delegates to the national assembly of the Evangelical Lutheran Church in America in Minneapolis, Minn., vote to allow people in committed same-sex relationships to serve as clergy.

At a meeting of central bankers from around the world, the chairman of the U.S. Federal Reserve Board, Ben Bernanke, indicates that the worst of the global financial crisis may be over.

22 The government of Greece declares a state of emergency as wildfires that started the previous day near Grammatiko spread to Varnava and Marathon.

A fire, possibly started by a mosquito net's igniting from a candle used by a student for light by which to study, burns to death at least 12 girls in a dormitory at Idodi Secondary School in Tanzania.

23 On the occasion of the state funeral of former president Kim Dae-Jung, South Korean Pres. Lee Myung-Bak meets with a delegation of officials from North Korea who went to Seoul to pay their respects.

The Picasso Museum in Paris closes for an extensive renovation and expansion that is expected to take about two years.

England defeats Australia by 197 runs in a cricket Test match at the Oval in London to retake the Ashes series.

24 The Bank of Israel becomes the first central bank to raise its benchmark interest rate since the onset of the global financial crisis; it increases the rate by a quarter of a percentage point, to 0.75%.

In Iraq bombs attached to two buses traveling from Baghdad to Al-Kut go off, killing at least 20 passengers.

The U.S. government's popular cash-for-clunkers program ends; it provided financial incentives of up to \$4,500 to consumers who traded in old cars for new, more fuel-efficient ones.

25 Palestinian Prime Minister Salam Fayad presents a plan that maps out the government of a Palestinian state; it is intended to be in place within two years and is to be pursued in parallel with peace negotiations with Israel.

Stalwart liberal Sen. Edward M. Kennedy of Massachusetts dies at his home in Hyannis Port, Mass.

Argentina's Supreme Court strikes down laws mandating penalties for the private possession and use of marijuana by an adult.

Leaders of the Taliban in Pakistan acknowledge that the organization's leader, Baitullah Mehsud, was in fact killed in a missile strike on August 5.

26 Prime Minister Zinaida Greceanii of Moldova announces the resignation of the country's government.

A plan to create a system for voluntary organ donation is announced in China, where much of the need for organ transplantation goes unmet and organs that are available often come from executed prisoners or black-market sellers.

27 The U.S. Federal Deposit Insurance Corp. reports that the country's banking industry lost \$3.7 billion in the second fiscal quarter of 2009.

At a post in Pakistan on the main route for delivering supplies to NATO forces in Afghanistan, a suicide bomber ostensibly offering food to security officers gathering in the evening to break the Ramadan fast detonates his explosives, killing at least 22 people.

28 The International Atomic Energy Agency reports that Iran has increased its number of centrifuges for enriching uranium but has slowed its production of enriched uranium since June and that it has increased its cooperation with the agency in some but not all areas.

North Korea and South Korea agree to resume cross-border family reunions beginning in late September.

Iceland's legislature votes to allow the government to repay to the U.K. and The Netherlands some \$6 billion that the governments of those countries gave depositors who lost money in savings accounts in Icelandic banks when the institutions collapsed in 2008.

29 Suicide truck bombers kill 10 people at and near a police garrison in the Iraqi village of Hamad; another truck bomb, in Sinjar, leaves 4 people dead.

India's space agency loses contact with its lunar orbiter, Chandrayaan-1.

30 In legislative elections in Japan, the opposition Democratic Party of Japan wins a landslide victory with 308 of the 480 seats in the lower house; the Liberal Democratic Party had held almost uninterrupted power since the end of World War II.

A presidential election is held in Gabon; Ali Ben Bongo, the son of the late president, Omar Bongo, wins handily, though many Gabonese believe the election was rigged.

Former Israeli prime minister Ehud Olmert is indicted on three charges of corruption; all of the alleged incidents took place before Olmert was prime minister.

In Tulsa, Okla., Byeong-Hun ("Ben") An, age 17, wins the U.S. men's amateur golf championship; he is the youngest to have won.

The Park View team from Chula Vista, Calif., defeats the Kuei-Shan team from Taoyuan, Taiwan, 6-3 to win baseball's 63rd Little League World Series.

31 Turkey and Armenia announce that they have agreed to take steps toward establishing diplomatic relations.

The Walt Disney Co. announces that it will acquire the comic book publisher and movie studio Marvel Entertainment.

September

“

This is a savagery that can't be explained. What's going on with us here is horrible. The people are in shock here.

”

Thierno Maadjou Sow of the Guinean Organization for Human Rights, on the massacre of pro-democracy demonstrators in Conakry, September 28

1 The Afghan Electoral Complaints Commission declares that it has so far received more than 2,600 reports of vote fraud, including vote stealing; close to half of the votes from the August 20 presidential election in Afghanistan have been counted.

A ban on the purchase or import of frosted-glass incandescent light bulbs by retailers goes into effect throughout the European Union.

Pakistani forces destroy four bases belonging to the militant group Lashkar-e-Islam near the Khyber Pass, killing some 40 insurgent fighters.

Eurostat, the European Union's statistical agency, reports that the unemployment rate in the euro zone in July rose to 9.5%, its highest level in a decade.

2 A suicide bomber outside the main mosque in Mehtar Lam, Afg., kills at least 16 people, including Abdullah Laghmani, deputy director

of Afghanistan's intelligence service.

In Juárez, Mex., masked men carrying automatic guns invade a drug-rehabilitation centre and slaughter 18 recovering addicts; more than 300 people in the city died violently in August alone.

Members of a faction of the Sendero Luminoso (Shining Path) guerrilla organization shoot down an air force helicopter in Peru, killing three military personnel; the crew had been attempting to rescue soldiers wounded by the rebels earlier.

Greek Prime Minister Kostas Karamanlis announces that elections will be held early.

Vanuatu's electoral college elects Iolu Abil president of the country on the third ballot.

3 A belief that the August 30 presidential election was stolen leads to rioting in Port-Gentil, Gabon; the French embassy is set on fire.

South Korean Pres. Lee Myung-Bak replaces Prime Minister Han Seung-Soo with Chung Un-Chan as part of a cabinet shake-up.

The world premiere of *The Orphans' Home Cycle*, a three-part, nine-play work by Horton Foote, takes place at Hartford (Conn.) Stage.

4 A NATO air strike near Kunduz, Afg., called for by German forces, causes two fuel trucks that had been stolen by the Taliban to explode; scores of people are believed to have been killed, but it is unclear how many of them were militants and how many civilians.

The U.S. Bureau of Labor Statistics reports that that country's unemployment rate rose to 9.7% in August, its highest level in 26 years, in spite of a decreased number of job losses.

The journal *Science* publishes a study saying that the Earth's slow momentum toward an ice age in some 20,000 years has been abruptly and decisively

stopped by warming in the Arctic that began in 1900 and accelerated after 1950.

5 After two days of protests by Han Chinese who say that Uighurs have been stabbing people with needles, the Communist Party secretary of Urumqi, China, is removed from his post.

6 North Korea unexpectedly releases water from a dam on the Imjin River, which flows through both North and South Korea; the resultant wall of water sweeps away six South Koreans who were camping and fishing on the river.

Finnish driver Mikko Hirvonen is named the winner of the Rally Australia after time penalties are assessed against Sébastien Loeb, Dani Sordo, and Sébastien Ogier.

7 Liu Chao-shiuan resigns as premier of Taiwan because of criticism of the government's response to Typhoon

Morakot, which killed some 600 people when it hit Taiwan on August 8; Pres. Ma Ying-jeou appoints Wu Den-yih as his replacement.

Mohamed ElBaradei reports to the board of the International Atomic Energy Agency that the organization has reached a stalemate with Iran, which refuses to stop enriching uranium or engage in negotiations over its nuclear program.

Pres. Felipe Calderón of Mexico replaces Attorney General Eduardo Medina Mora with Arturo Chávez.

8 As Afghanistan's election commission declares that preliminary results from the August 20 presidential election give a resounding victory to Pres. Hamid Karzai, the Electoral Complaints Commission calls for a partial recount of votes.

The price of gold rises to \$1,000 an ounce; the precious metal has risen 13.6% in value during the course of the year.

China signs an agreement with the American solar-energy developer First Solar that calls for the company to build a 2,000-MW photovoltaic farm in Inner Mongolia.

The U.S. Federal Reserve reports that the amount of money borrowed by American consumers in July fell by a record \$21.6 billion from the previous month.

9 U.S. Pres. Barack Obama addresses a joint session of Congress with a nationally televised speech laying out his vision of meaningful health care reform, a large undertaking that has roiled both the public and lawmakers wrestling with creating legislation embodying reform.

Hywind, the first full-scale floating wind turbine, opens in Norway; the turbine is attached to the seabed some 10 km (6 mi) from the island of Karmøy.

NASA reveals the first pictures of the cosmos taken by the Hubble Space Telescope since it was repaired in May. (Photo right.)

The music companies EMI and Apple Corps release newly remastered compact discs of all the original Beatles recordings, which are rapturously reviewed; the video game *The Beatles: Rock Band* is also released.

The fabled jewelry maker Fabergé presents its first jewelry collection in some 90 years; the pieces will be sold only through its Web site and through 15 salespeople.

10 Saad al-Hariri, who was designated prime minister of Lebanon after elections in June, announces his resignation, frustrated at his inability to form a government.

The Czech Republic's Constitutional Court rules that legislation requiring that elections be held by mid-October violated the constitution, thus canceling elections scheduled to take place on October 9 and 10.

Turkey's Higher Education Board approves the study of the Kurdish language at Mardin Artuklu University in Mardin province; Turkey had long banned the use of Kurdish.

Venezuela becomes the third country, after Russia and Nicaragua, to recognize the independence of the enclaves of South Ossetia and Abkhazia in Georgia; Russia agrees to sell Venezuela any weapons that it requests.

Hubble SM4 ERO Team—ESA/NASA



The carmaker General Motors announces that it plans to sell a majority stake of its European operations, Opel and Vauxhall, to Canadian automobile parts manufacturer Magna International and Magna's Russian investment partner, Sberbank.

11 Vladimir Voronin resigns as Moldova's interim president; he is replaced in that capacity by Mihai Ghimpu.

Former president Chen Shui-bian of Taiwan is convicted of corruption and sentenced to life in prison.

The space shuttle *Discovery* returns to Earth in the Mojave Desert in California after a mission to the International Space Station; Timothy Kopra returns with the shuttle after 58 days on the space station, where he was replaced by Nicole Stott.

The Naismith Memorial Basketball Hall of Fame in

Springfield, Mass., inducts as members National Basketball Association players Michael Jordan, John Stockton, and David Robinson and coach Jerry Sloan and women's college coach C. Vivian Stringer.

12 Salah Ezzedine, a Hezbollah-connected owner of a publishing house and a financial institution, is charged in a pyramid scheme in which many in Lebanon's Shi'ite community lost a total of hundreds of millions of dollars in investments.

13 Two days of legislative elections get under way in Norway; the balloting results in a narrow victory for the ruling Labour Party.

Kim Clijsters of Belgium defeats Caroline Wozniacki of Denmark to win the women's U.S. Open tennis championship; the following day, in an astonishing upset,

Juan Martín del Potro of Argentina defeats five-time winner Roger Federer of Switzerland to take the men's title.

In golf's Walker Cup competition in Ardmore, Pa., the U.S. defeats Great Britain and Ireland for the third time in a row with a 16½-9½ victory.

14 U.S. air strikes near Baraawe, Som., kill Saleh Ali Saleh Nabhan, a top al-Qaeda operative believed to have been behind the bombing of a hotel in Mombasa, Kenya, in 2002, and to have played a part in the bombings of the U.S. embassies in Kenya and Tanzania in 1998.

The Takutu River Bridge, linking Brazil and Guyana, is formally opened in a ceremony in Bon Fin, Braz.

The 2009 Lasker Awards for medical research are presented: winners are John Gurdon and Shinya Yamana, for their contributions to stem cell research, and Brian Druker, Nicholas B. Lydon, and Charles L. Sawyers, for their work on a drug that successfully treats myeloid leukemia; New York City Mayor Michael Bloomberg is given a public service award for his efforts to curtail the use of tobacco and improve unhealthy eating habits.

15 Pres. Denis Sassou-Nguesso of the Republic of the Congo abolishes the post of prime minister, which he had created in 2005 in spite of the fact that the country's constitution does not make a provision for such a post.

A report on the three-week war conducted by Israel in the Gaza Strip beginning in late December 2008 is released by a UN fact-finding mission headed by Richard Goldstone of South

Africa; it says that both the Israeli military and Palestinian militants engaged in war crimes, but it is especially critical of Israel.

For the second time in September, a drug-treatment centre in Juárez, Mex., is invaded by gunmen; 10 people are shot to death.

16 Election monitors from the European Union state that about one-third of the votes that were tallied for Pres. Hamid Karzai in Afghanistan's presidential election on August 20 should be further examined for possible fraud.

Lebanese Pres. Michel Suleiman again designates Saad al-Hariri prime minister, instructing him to try again to form a government.

Yukio Hatoyama assumes the post of prime minister of Japan.

An air strike by Yemeni military forces against al-Houthi rebels in Adi, in northern Yemen, reportedly leaves at least 80 people, many of them refugees from violence, dead.

Richard L. Trumka of the United Mine Workers takes office as the new president of the AFL-CIO labour organization.

17 U.S. Pres. Barack Obama cancels plans to base components of an antiballistic missile shield, which was intended to protect the U.S. against attack by long-range missiles, in Poland and the Czech Republic, ordering that a different system to protect against short- and medium-range missiles from Iran be put in place.

Al-Shabaab rebels bomb the headquarters of the African

Union peacekeeping force in Mogadishu, Som., killing 21 people, among them the second in command of the peacekeeping force.

Fondly Do We Hope. . . . Fer-vently Do We Pray, a dance piece choreographed by Bill T. Jones and commissioned by the Ravinia Festival of Highland Park, Ill., to commemorate the bicentennial of the birth of Abraham Lincoln, has its world premiere at Ravinia.

18 A powerful car bomb explodes in the Shi'ite village of Ustarzai in Pakistan's North-West Frontier Province; at least 35 people are killed.

The U.S. Bureau of Labor Statistics reports that the unemployment rate in California in August reached 12.2%, its highest level in 70 years; the same report reveals that the unemployment rate reached at least 10% in 14 states and the District of Columbia, with the highest rate (15.2%) in Michigan.

The new Liège-Guillemins railway station in Belgium, designed by Santiago Calatrava, officially opens in Liège; it will be a hub in Europe's high-speed train network, serving some 36,000 people a day.

19 A statement ostensibly from Taliban leader Mullah Omar, in which he warns Western countries away from Afghanistan, telling them to study the country's military history, is posted on a Web site used by the Taliban.

20 Fighters of the Lou Nuer people attack the village of Duk Padiet in the

southern part of The Sudan; the violence results in the deaths of 51 villagers, 28 army and security personnel, and 23 attackers.

In Yemen, al-Houthi rebels launch an attack in an attempted takeover of the presidential palace in Sa'dah, but they are driven back by the Yemeni military, which reports having killed more than 140 militants.

Colombian music star Juanes headlines a free open-air concert in Havana, called Peace Without Borders, that is attended by hundreds of thousands of ecstatic fans.

Haile Gebrselassie of Ethiopia wins the Berlin Marathon for a fourth consecutive time with a time of 2 hr 6 min 8 sec; Atsede Besuye of Ethiopia is the fastest woman, with a time of 2 hr 24 min 47 sec.

The Emmy Awards are presented in Los Angeles; winners include the television shows *30 Rock* and *Mad Men* and the actors Alec Baldwin, Bryan Cranston, Toni Collette, Glenn Close, Jon Cryer, Michael Emerson, Kristin Chenoweth, and Cherry Jones.

21 In a federal district court in Denver, Najibullah Zazi is ordered held without bail on charges of having lied to federal investigators; the Afghanistan-born man is thought to have been planning an attack in the U.S., but the investigation was short-circuited when Zazi learned of it.

Manuel Zelaya, the deposed president of Honduras, contrives to reenter the country and takes up residence in the Brazilian embassy in Tegucigalpa.

The Philippine military seizes control of the main

camp of the Islamist group Abu Sayyaf on the island of Jolo; some 20 militants are killed.

An avant-garde staging of the Puccini opera *Tosca* by director Luc Bondy is booed by the opening-night audience at the Metropolitan Opera in New York City.

22 The U.S. Environmental Protection Agency issues new rules that from Jan. 1, 2010, will require the biggest emitters of greenhouse gases in the country to track and report to the agency their emissions; some 10,000 industrial sites and fossil-fuel suppliers will have to start reporting their emissions at the beginning of 2011.

Irina Bokova of Bulgaria is elected director general of UNESCO. (Photo below.)

The U.S. Food and Drug Administration bans the sale of cigarettes infused with chocolate, clove, and other such flavours.



Thibault Camus/AP

In a massive raid, police in Los Angeles arrest 45 suspected members of the violent Avenues street gang.

The heavy rain of the past several days in the southeastern region of the U.S. begins to taper off; most of the damage has occurred in Georgia, where at least eight people drowned.

23 Libyan leader Muammar al-Qaddafi gives a 90-minute address before the UN General Assembly in which he demands that a seat on the Security Council be opened for Africa and raises a large number of often bizarre other issues; about 75 minutes into the speech, his translator declares that he cannot go on.

A dust storm blankets Sydney and other parts of Australia's east coast with red dust; it is the worst such event Sydney has experienced since the 1940s.

24 Federal charges of having acquired and prepared explosive materials are brought against Najibullah Zazi.

The U.S. Federal Reserve decides to scale back two emergency lending programs that it put in place to shore up the faltering economy; the previous day it chose to slow a program intended to push down mortgage rates.

The journal *Science* publishes online a report that data from three different spacecraft indicate the presence on the Moon of water or of hydroxyl (one hydrogen atom plus one oxygen atom).

25 The Group of 20 countries with industrialized

and emerging economies agree to coordinate their economic strategies with each other in an effort to prevent future global meltdowns and to attempt to reach a new international trade agreement; it is also decided that global economic issues will now be discussed by the Group of 20 rather than by the Group of 7 industrialized countries.

Police in Mexico arrest five men, said to be members of the Sinaloa drug cartel, in connection with the killings of 45 people, including two massacres at drug-treatment centres in Juárez earlier in September.

Vlad Filat is sworn in as prime minister of Moldova.

26 Typhoon Ketsana strikes the main island of Luzon in the Philippines, causing massive flooding in Manila and leaving at least 464 people dead and some 380,000 homeless.

For the first time since late 2007, reunions of families that had been split up by the Korean War (1950–53) take place in a resort in North Korea.

Film director Roman Polanski is arrested in Switzerland in connection with a 1977 sex-offense conviction in the U.S., from where he fled before being sentenced.

27 Legislative elections in Germany result in a win for the ruling Christian Democratic Union; its coalition partner, the Social Democratic Party, loses ground.

28 As tens of thousands of people demonstrate in an association football (soc-

cer) stadium to demand democracy in Guinea, guard troops embark on a brutal rampage during which they viciously attack women and open fire on the rally, killing some 157 people.

Revisions to North Korea's constitution made in April are for the first time made public; Kim Jong Il is given the new title of supreme leader.

The large utility company Exelon announces that it will leave the U.S. Chamber of Commerce because of the chamber's opposition to government policies to limit greenhouse-gas emissions; it is the second major utility to take the step.

29 A magnitude-8.0 earthquake takes place under the South Pacific Ocean about the same distance from both American Samoa and Samoa, causing a tsunami that damages both island groups as well as Tonga and leaves at least 190 people, most of them in Samoa, dead.

Typhoon Ketsana makes landfall in Vietnam; at least 99 people are killed.

A roadside bomb destroys a bus traveling from Herat to Kandahar in Afghanistan; at least 30 passengers perish.

30 A magnitude-7.6 earthquake strikes some 50 km (30 mi) off the coast of Padang, Indon., collapsing buildings and killing at least 1,100 people.

To the shock of all concerned, the Penske Automotive Group ceases talks with the carmaker General Motors to acquire its Saturn unit; as a result, Saturn models will be discontinued, and all 350 Saturn dealerships will close.

October

“

My message today is very simple: Thank you, Ireland. Ireland has given Europe a new chance.

”

José Manuel Barroso, president of the European Commission, on learning that Ireland had approved the Lisbon Treaty, October 3

1 In a significant constitutional development, the first-ever Supreme Court of the United Kingdom is sworn in; the independent body replaces the Appellate Committee of the House of Lords.

After the resignation of nine ministers from the Social Democratic Party in reaction to the firing of the minister of the interior, Romania is left with a minority government.

A team of scientists reports the finding of a new hominin species, exemplified by a nearly complete skeleton dating from 4.4 million years ago in Ethiopia; the skeleton, dubbed Ardi and classified as *Ardipithecus ramidus*, is of a species that lived after the human line diverged from that of chimpanzees and has features that resemble those of extinct apes; “Ardi” was also at least somewhat bipedal and lived in a forest environment.

The Roscoe Wind Complex, with 627 turbines the world's largest wind farm, begins operations in Texas, generating 781.5 MW of electricity.

A huge and spectacular military parade in Beijing marks

the 60th anniversary of the proclamation by Mao Zedong of the People's Republic of China.

2 Voters in Ireland take part in a second referendum on the Lisbon Treaty to change the governing structure of the European Union; this time the pact is overwhelmingly approved.

The U.S. Department of Labor reports that the country's unemployment rate in September rose to 9.8%.

Al-Shabaab militants take control of the port city of Kismaayo in Somalia, ousting the militant group Hizbul Islam; the two groups previously shared control of the town.

At its meeting in Copenhagen, the International Olympic Committee chooses Rio de Janeiro as the site of the Olympic Games to be held in summer 2016.

3 Flood levels in the Indian states of Karnataka and Andhra Pradesh begin to recede after astonishingly heavy rains that left at least 221 people

dead in Karnataka and 63 dead in Andhra Pradesh.

Gustavo Dudamel of Venezuela conducts the Los Angeles Philharmonic in a free concert taking place at the Hollywood Bowl in his debut as the orchestra's artistic director.

4 Mohamed ElBaradei, head of the International Atomic Energy Agency, says that Iran has agreed to allow nuclear inspectors to visit its newly disclosed facility in Qom on October 25 and that it will engage in talks about exporting low-enriched uranium to be made into fuel for medical nuclear reactors.

Legislative elections in Greece result in a convincing victory for the opposition Panhellenic Socialist Movement party; Georgios Papandreou is sworn in as prime minister two days later.

With his win in the Prix de l'Arc de Triomphe, Irish colt Sea The Stars wins his sixth consecutive Group 1 race and becomes the only horse to have won the 2,000 Guineas, the Derby, and the Prix de l'Arc de Triomphe.

5 The U.S. Federal Trade Commission announces that under new rules to go into effect on December 1, people reviewing products in blogs, in social networks on the Internet, or on talk shows must disclose any relationship they have with advertisers, including having received gifts.

Rafael Ángel Calderón, who was president of Costa Rica in 1990–94, is convicted of embezzlement and sentenced to five years in prison.

At a conference organized by the environmental group Greenpeace in São Paulo, four major meat-producing companies agree to eschew the purchase of cattle from deforested areas of Brazil; Greenpeace has documented the link between increased cattle farming and expanded deforestation of the rainforest.

The Nobel Prize for Physiology or Medicine is awarded to Elizabeth Blackburn, Carol Greider, and Jack Szostak of the U.S. for their discoveries about the functioning of telomeres (structures at the ends of chromosomes) and of the enzyme telomerase.

6 Australia's central bank raises its benchmark interest rate a quarter percentage point, to 3.25%; it is the first member of the Group of 20 countries with industrialized or emerging economies to raise its rate.

International mediators announce an agreement whereby Andry Rajoelina will serve as president of a transitional government in Madagascar but will not be a candidate in elections to be held in 2010.

In Stockholm the Nobel Prize for Physics is awarded to Charles Kao of the U.K. for his work in developing the light-carrying properties of fibre-optic cables and to Americans Willard Boyle and George Smith for their invention of the charge-coupled device, the first digital sensor.

The Man Booker Prize goes to British writer Hilary Mantel for her historical novel *Wolf Hall*.

7 Italy's Constitutional Court rules that a law shielding Prime Minister Silvio Berlusconi and other top officials from prosecution in criminal cases while they hold office violates the constitution.

The Nobel Prize for Chemistry is awarded to Venkatesan Ramakrishnan of the U.K., Thomas Steitz of the U.S., and Ada Yonath of Israel for their research on the atomic structure and function of the ribosome, a cellular structure that transcribes DNA to make protein.

8 Landslides caused by Typhoon Parma in the Philippine provinces of Benguet and Mountain Province leave at least 193 people dead; inten-

tional dam releases to limit flooding caused some of the damage.

Maoist militants known as Naxalites ambush a patrol by 45 police commandos in Maharashtra state in India; 17 police officers are killed, and their weapons are taken.

The Nobel Prize for Literature is awarded to Romanian-born German writer Herta Müller.

9 A massive car bomb kills at least 48 people in Peshawar, Pak.; most of the dead were passengers in a public minibus that was alongside the car when it exploded.

The Nobel Peace Prize is awarded to U.S. Pres. Barack Obama.

The Phoenix Mercury defeats the Indiana Fever 94-86 in game five of the finals to win the Women's National Basketball Association championship by three games to two.

10 Militants dressed in military fatigues shoot their way into the Pakistani army headquarters compound in Rawalpindi, killing six people and taking several others hostage; by the time the siege has ended the following day, 23 people have been killed, but 42 hostages have been rescued.

In Zürich the foreign ministers of Armenia and Turkey ceremonially sign an agreement to establish diplomatic relations and to open their borders.

With his first-place finish in the Indy 300 race in Homestead, Fla., Scottish driver Dario Franchitti wins the overall IndyCar drivers' championship.

Carlos Osorio/AP



"The Accidental Mummies of Guanajuato," an exhibition of some 36 bodies that were naturally mummified from about 1850 to 1950 in Guanajuato, Mex., with cultural and scientific information, opens in the Detroit Science Center; the exhibit will move to several other museums over the next two years. (Photo above.)

11 Two car bombs explode outside a building in Al-Ramadi, Iraq, where a meeting on efforts to achieve reconciliation between the Shi'ite-led government and the Sunni population is taking place; 23 people are killed.

The government of Mexico announces that it is closing down Luz y Fuerza del Centro, a state-run company that provides power to Mexico City and the surrounding area, and that the Federal Electricity Commission will take over operations for the shuttered company.

12 A suicide car bombing in a crowded market in Shangla district in the Swat valley in Pakistan kills at least 41 people.

The Nobel Memorial Prize in Economic Sciences goes to Elinor Ostrom and to Oliver E. Williamson, both of the U.S., for their respective work in the area of economic governance.

13 A group of government ministers from Turkey and Syria, in meetings held in Aleppo, Syria, and Gaziantep, Tur., sign several agreements on a range of issues, including the removal of visa requirements, the use of water from the Euphrates River, and a pipeline project.

The minority government of Romania loses a no-confidence vote in the legislature and falls.

The price of gold reaches a new intraday record of \$1,069 an ounce.

In Sweden the Right Livelihood Awards are granted to René Ngongo of the Democratic Republic of the Congo for his work to preserve and sustain the rainforests of his country, to peace activist Alyn Ware of New Zealand, to Australian-born physician Catherine Hamlin for her work in treating obstetric fistulas in Ethiopia, and to David Suzuki of Canada for his advocacy of socially responsible science and for raising awareness of the peril of global warming.

14 Senior Movement for Democratic Change leader Roy Bennett is arrested and charged with possession of weapons for terrorism in Zimbabwe.

The Dow Jones Industrial Average closes at 10,015.86, its first close above 10,000 since October 2008.

The NASCAR Hall of Fame in Charlotte, N.C., announces its first five inductees: drivers Richard Petty, Dale Earnhardt, and Junior Johnson and NASCAR founder Bill France, Sr., and his son, Bill France, Jr., who led NASCAR for close to three decades.

15 Prime Minister Nuri al-Maliki of Iraq and Turkish Prime Minister Recep Tayyip Erdogan sign pacts on cooperation on oil and gas exports and sharing water from the Euphrates River, among other agreements.

Attacks on two police training facilities and on a building housing federal investigators in Lahore, Pak., leave more than 30 people, including police officers and militants, dead.

NASA scientists report that an image of the solar system's heliosphere made by

the Interstellar Boundary Explorer spacecraft revealed a previously unknown ribbon of energetic neutral atoms winding through the heliosphere.

A family in Fort Collins, Colo., reports that their six-year-old son is stranded inside a runaway helium balloon, and a large rescue effort is mounted; the boy is found safe at home, however, and it is later learned that the event was a hoax staged by a family that wanted to star in a reality television show.

16 Prime Minister Morgan Tsvangirai of Zimbabwe announces that he and other members of his party will disengage from, but not pull out of, the unity government with Pres. Robert Mugabe.

Ian Khama wins reelection as president of Botswana in general elections.

An official in the southern region of The Sudan says that an agreement has been reached on specifications for an independence referendum to take place in January 2011.

The U.S. government reports that the budget deficit for the fiscal year that ended on October 1 reached \$1.4 trillion, some 10% of GDP; it has not been so large since 1945.

Raj Rajaratnam, founder and head of the Galleon Group hedge fund, is charged with securities fraud because of insider trading in New York City; he was arrested the previous night.

17 The Pakistani military begins a long-planned major ground offensive against militants in South Waziristan.

After a turf war between rival gangs breaks out in Rio de

Janeiro, police move in in an effort to end the violence; gang members shoot down a police helicopter, killing three officers aboard and thereby adding to a death toll in the violence of at least 26.

An underwater cabinet meeting is held in Maldives to dramatize the very real danger that sea-level rise caused by global warming will drown the archipelago country.

18 In the Baluchistan region of Iran, a suicide attack on a meeting led by Revolutionary Guards and a roadside attack on a car carrying Revolutionary Guards leaves some 42 people dead, including 5 Revolutionary Guard commanders.

With a fifth-place finish at the Brazilian Grand Prix, which is won by Mark Webber of Australia, British driver Jenson Button secures the Formula 1 automobile racing drivers' championship.

19 In Afghanistan the Electoral Complaints Commission orders that votes from 210 polling stations be discounted; this leaves Pres. Hamid Karzai short of 50% of legitimate votes cast, which would make a runoff election necessary.

Kofi Annan, chairman of the committee that governs the award, announces that the Mo Ibrahim Prize for Achievement in African Leadership will not be awarded in 2009.

20 After intense lobbying by U.S. officials, Afghan Pres. Hamid Karzai announces that he accepts the need for a runoff presidential election, scheduled for November 7.

The president of Nicaragua's Supreme Court declares that he will not accept a decision by the court's constitutional commission to overturn laws that prohibit consecutive reelection and the serving of more than two terms of office.

In legislative elections that are boycotted by the opposition and not regarded as legal by many in the international community, the governing party of Niger wins 76 of the 113 seats; in response, the Economic Community of West African States (ECOWAS) suspends Niger's membership.

21 After several days of fruitless negotiations, the speaker of Iraq's legislature, acknowledging the impasse, adjourns efforts to pass a new election law; the measure was to have been passed by October 15.

Pres. Litokwa Tomeing of the Marshall Islands is voted out of office by the legislature; on November 2 he is replaced by Jurelang Zedkaia.

22 In the U.S. more than 3,000 federal agents and state and local police officers conclude a two-day sweep through 38 cities in 19 states in an operation targeting the Mexican drug cartel La Familia Michoacana that culminates in the arrests of 303 people.

A report is published in the journal *Nature* showing that the Eocene-era primate *Darwinius masillae*, whose finding near Darmstadt, Ger., was widely reported in May, belongs in the grouping of primates to which lemurs belong, not the branch containing apes and humans, as had been speculated.

The European Parliament names Oleg Orlov and his activist group Memorial, which fights human rights abuses in the area of the former Soviet Union, the winner of the Sakharov Prize for Freedom of Thought in memory of the murdered Russian human rights worker Natalya Estemirova.

In Tokyo the Japan Art Association awards the Praemium Imperiale to Austrian pianist Alfred Brendel, British sculptor Richard Long, British architect Zaha Hadid, British playwright Tom Stoppard, and Japanese photographer Hiroshi Sugimoto.

23 Palestinian Authority Pres. Mahmoud Abbas declares that elections must be held in Jerusalem, the West Bank, and Gaza on Jan. 24, 2010, in spite of the lack of agreement between his party, Fatah, and Hamas, which rules Gaza.

Federal regulators take over seven banks—three in Florida, one in Georgia, one in Wisconsin, one in Minnesota, and one in Illinois—which brings the total number of bank failures in 2009 to 106, the highest one-year figure since the savings-and-loan crisis in 1992.

24 Chancellor Angela Merkel of Germany announces a new government with a new coalition partner, the Free Democrats.

In Melbourne celebrated trainer Bart Cummings's colt So You Think wins the Cox Plate under jockey Glen Boss.

25 Suicide car bombs strike the Ministry of Justice and the provincial councils building in downtown

Baghdad after penetrating several security checkpoints; more than 155 people are killed.

Presidential elections in Uruguay result in the need for a runoff ballot; the ruling Broad Front wins a majority of seats in both houses of the legislature.

Sébastien Loeb of France secures a record sixth successive world rally championship automobile racing drivers' title with his first-place finish in the Wales Rally GB.

26 In response to pressure from the European Commission, the Dutch financial conglomerate ING Group announces plans to quickly sell its insurance business and its Internet banking operation in the U.S.

The 12th annual Mark Twain Prize for American Humor is awarded to comedian Bill Cosby in a ceremony at the John F. Kennedy Center for the Performing Arts in Washington, D.C.

27 The European Union lifts its sanctions

against Uzbekistan, imposed in 2005, citing the release of some political prisoners and the abolition of the death penalty in Uzbekistan.

The death of 8 American soldiers in combat in Afghanistan brings the total number of U.S. troops killed in the country in October to 53; it is the highest monthly death toll since the war began in 2001.

28 A massive car bomb in a market frequented by women in Peshawar, Pak., leaves some 114 people dead.

Norway's central bank raises its basic interest rate to 1.5% in response to an active economy; it is the first country in Europe to raise its key rate.

29 Under pressure from the U.S., Roberto Micheletti, the de facto leader of Honduras, agrees to allow ousted president Manuel Zelaya to complete his term of office as the head of a unity government.

Sükhbaataryn Batbold is confirmed as Mongolia's new prime minister; he

replaces Sanjaagiin Bayar, who resigned for health reasons on October 26.

The U.S. Department of Commerce reports that the country's economy grew 3.5% in the third fiscal quarter of 2009, which means that the U.S. has officially emerged from recession.

30 The Dow Jones Industrial Average falls nearly 250 points, while the Standard and Poor's 500-stock index loses 2.8% of its value, and the Nasdaq composite index also sinks.

The *Oasis of the Seas*, at 360 m (1,200 ft) in length and with 16 decks the largest cruise ship ever built, sets sail from Turku, Fin., where it was built, to its home port, Port Everglades, Fla. (Photo below.)

31 U.S. Secretary of State Hillary Rodham Clinton meets separately with Palestinian leader Mahmoud Abbas and with Israeli Prime Minister Benjamin Netanyahu in an attempt to persuade them to engage in peace negotiations.



Royal Caribbean International—UPI/Landov

November

“

I hoped there would be a better process.

*But it is final. I will not
participate in the November 7 elections.*

”

Opposition candidate Abdullah Abdullah,
announcing his withdrawal from the runoff presidential election
in Afghanistan, November 1

1 In Afghanistan, opposition presidential candidate Abdullah Abdullah announces his withdrawal from the runoff election scheduled for November 7, saying that Pres. Hamid Karzai has failed to make the changes necessary to assure a free and fair election.

The CIT Group, a major lender to midsize companies, files for bankruptcy protection; it expects to emerge from bankruptcy under the ownership of its creditors, but the money lent to it by the U.S. government will not be repaid.

Officials in Cuyahoga county, Ohio, report the finding of the badly decomposed bodies of six women in the Cleveland home of sex offender Anthony Sowell; four more bodies are found two days later.

Meb Keflezighi of the U.S. wins the New York City Marathon with a time of 2 hr 9 min 15 sec, while Ethiopia's Derartu Tulu is the fastest woman, with a time of 2 hr 28 min 52 sec.

2 Hamid Karzai is officially declared the winner of the Afghan presidential election; U.S. Pres. Barack Obama tells him that he must now take action against corruption in the government and against the drug trade in the country.

A suicide bomber kills at least 35 people in an attack near the army headquarters in Rawalpindi, Pak.

The Ford Motor Co. announces earnings of \$997 million in its third fiscal quarter; the carmaker also says that it made a profit in the North American market for the first time since 2005.

3 Pres. Vaclav Klaus of the Czech Republic signs the Lisbon Treaty; the Czech Republic is the last of the European Union's member states to ratify the document, which creates a new governing structure for the organization.

In a referendum in Maine, voters reject a law passed in May that allowed same-sex marriage.

The board of directors of the carmaker General Motors decides not to sell its European divisions Opel and Vauxhall; the sale of the units to Canadian auto supplier Magna had been in the works.

American investor Warren Buffet agrees to buy the railroad company Burlington Northern Santa Fe Corp.

4 A march by hundreds of antigovernment protesters to subvert an official anti-American rally to mark the 30th anniversary of the takeover of the U.S. embassy in Tehran is quickly suppressed.

In the World Series, the New York Yankees defeat the Philadelphia Phillies 7-3 in game six to win the Major League Baseball championship.

5 Thailand recalls its ambassador to Cambodia in protest against Cambodia's appointment of former Thai prime

minister Thaksin Shinawatra as an economic adviser to Cambodian Prime Minister Hun Sen.

After a meeting with leaders of the Southern African Development Community, Prime Minister Morgan Tsvangirai of Zimbabwe announces that his party's boycott of cabinet meetings with Pres. Robert Mugabe has ended.

Pres. Fernando Lugo of Paraguay replaces the leadership of the country's armed forces for the third time in 15 months.

At the Ft. Hood U.S. Army post in Texas, a man identified as Maj. Nidal Malik Hasan, an army psychiatrist, goes on a rampage, using civilian firearms; 13 people are killed and at least 28 wounded, including the shooter.

Ratu Epeli Nailatikau is sworn in as president of Fiji.

At the Latin Grammy Awards in Las Vegas, Puerto Rican hip-hop and reggaeton act Calle 13 wins five

awards, including album of the year for *Los de atrás vienen conmigo* and record of the year for "No hay nadie como tú" (Calle 13 featuring Café Tacuba).

6 Ousted Honduran president Manuel Zelaya declares that an agreement with de facto leader Roberto Micheletti in late October has failed one day after Micheletti unilaterally appointed a so-called unity government.

The U.S. Department of Labor releases figures showing that the country's unemployment rate rose to 10.2% in October; it is the first time since 1983 that the rate has been in double digits.

7 At a meeting in St. Andrews, Scot., of finance ministers of the Group of 20, British Prime Minister Gordon Brown proposes a tax on financial transactions to create a fund for any future financial bailouts of banks.

Jean-Max Bellerive is ratified by the legislature as prime minister of Haiti.

The Yomiuri Giants defeat the Hokkaido Nippon-Ham Fighters 2-0 in game six to win baseball's Japan Series.

The Breeders' Cup Classic Thoroughbred horse race is won by Zenyatta at Santa Anita Park in Arcadia, Calif.; Zenyatta is the first female horse to win the race.

8 At the Forum on China-Africa Cooperation in Ra's Nasrani (Sharm el-Sheikh), Egypt, Chinese Prime Minister Wen Jiabao offers \$10 billion in low-interest development loans to African countries; he also pledges assistance in addressing global warming in Africa.

A law to govern elections scheduled for January 2010 is passed by Iraq's legislature.

Abdul Malik, mayor of the Pakistani village of Mattani (near Peshawar) and a major figure in the local resistance to the Taliban, is killed by a suicide bomber at a cattle market in the village; 11 others are also killed in the attack.

9 In Lebanon a new cabinet led by Prime Minister Saad al-Hariri is appointed; the country had been unable to form a government since elections in June.

National Hockey League players Brett Hull, Luc Robitaille, Brian Leetch, and Steve Yzerman, executive Lou Lamoriello, broadcaster John Davidson, and journalist Dave Molinari are inducted into the Hockey Hall of Fame in Toronto.

10 A car bomb kills at least 34 people in Charsadda, Pak., near Peshawar.

Navy ships from North Korea and South Korea exchange gunfire, accusing each other of border violations; one North Korean sailor is reported killed, and North Korea issues a series of bellicose demands for an apology.

Joe Cada of Michigan wins the World Series of Poker title; at 21, he is the youngest winner of the card game tournament.

11 The president of the Independent Electoral Commission of Côte d'Ivoire declares that the country's presidential election, scheduled for November 29 following several postponements, will be further delayed; a new date is not announced.

The day after the signing of an agreement between the Seychelles and the European Union to allow EU forces to seek and detain Somali pirates off the Seychelles, a Greek container ship is seized by pirates in those waters.

Longtime American conservative television host Lou Dobbs abruptly resigns from the network CNN.

12 Election officials of the Palestinian Authority announce that the presidential and legislative elections scheduled for January 2010 will have to be postponed because of the lack of cooperation on the part of Hamas, which rules Gaza, with election preparations in the territory.

In Kathmandu, Maoist protesters led by former prime minister Pushpa Kamal Dahal (Prachanda) surround the seat of government to demand the resignation of Nepal's president.

13 Prime Minister Recep Tayyip Erdogan of Turkey announces a plan to allow the use of the Kurdish language in broadcast media and to restore the original Kurdish names of cities that had had their names changed to Turkish ones.

NASA scientists report that an experiment in which it crashed a satellite onto the surface of the Moon on October 9 yielded, among other results, evidence of at least 98.4 litres (26 gal) of water.

14 A truck bomb explodes at a police checkpoint in Peshawar, Pak., killing at least 12 people.

In an act of political theatre, a mock funeral is held for Venice by a group decrying the shrinking of the city's historic centre, the population of which has fallen from 108,300 in 1971 to 74,000 in 1993 to fewer than 60,000 in 2009. (Photo left.)

In Las Vegas, Manny Pacquiao of the Philippines defeats Miguel Cotto of Puerto Rico in a technical knockout in the 12th round to win the World Boxing Organiza-



Manuel Silvestri—Reuters/Landov

tion welterweight title, his seventh title in as many different weight classes.

In a tournament in Moscow, Magnus Carlsen of Norway becomes at age 18 the youngest person to hold the number one ranking in chess when he defeats Peter Leko of Hungary.

15 U.S. Pres. Barack Obama attends a summit meeting of the Association of Southeast Asian Nations (ASEAN) in Singapore, where he also engages in substantive talks with Russian Pres. Dmitry Medvedev and attends Asia-Pacific Economic Cooperation (APEC) talks; later he flies to Shanghai to meet with Chinese leaders.

Patriarch Pavle, since 1990 the head of the Serbian Orthodox Church, dies.

16 The government of Japan announces that the country's GDP grew at an annual rate of 4.8% in its third fiscal quarter, its second consecutive quarter of growth.

The automobile manufacturer General Motors announces that it will begin paying back to the U.S. government some of the \$50 billion it was given to keep it from going under.

The U.S. Preventive Services Task Force, an independent panel of experts, releases revised guidelines on mammograms: rather than having a mammogram every one to two years starting at age 40, as was recommended in 2002, women are now advised to have a mammogram every two years between ages 50 and 74.

Paul McCartney is named the winner of the third Gershwin Prize for Popular Song.

17 The legislature of Honduras declares that on December 2 it will vote on whether ousted president Manuel Zelaya should be restored to office until the end of his term in January 2010; a presidential election is scheduled to take place on November 29.

Israel announces that plans to build 900 housing units in a part of Jerusalem that Palestinians believe belongs to them have advanced closer to approval.

The U.S. Internal Revenue Service says that in the past few months 14,700 Americans have revealed their secret bank accounts in foreign banks; many are clients of the Swiss bank UBS.

The Original of Laura, an unfinished novel written by Vladimir Nabokov, is published in the U.S. and the U.K.

18 Tariq al-Hashimi, one of Iraq's two vice presidents, reports that the previous day he vetoed the election law passed by the legislature on November 8; all three members of the country's presidency council are required to approve the law for it to go into effect.

The National Book Award for fiction is presented to Colum McCann for *Let the Great World Spin*.

19 Belgian Prime Minister Herman Van Rompuy is elected to become the first president of the European Council under the Lisbon Treaty when it enters into force on December 1; he will serve a term of office of two and a half years.

Just outside the courthouse complex in Peshawar, Pak.,

a suicide bomber detonates his weapons when challenged by a police officer; at least 17 people are killed.

Egypt recalls its ambassador to Algeria amid complaints of violence following Algeria's defeat of Egypt the previous day in a World Cup qualifying association football (soccer) match in Khartoum, Sudan.

A report is published in the journal *Nature* on a study showing that the proportion of atmospheric carbon dioxide absorbed by the world's oceans has slowed since the 1980s and more dramatically since 2000; the carbon dioxide absorbed changes the ocean's chemistry to make it less able to absorb more.

20 In the city of Farah in western Afghanistan, a suicide bomber on a motorcycle kills at least 16 people in a marketplace.

Officials at Britain's University of East Anglia acknowledge that hackers have taken 13 years of e-mail messages from the servers of its Climatic Research Unit and made them public; many of the e-mails reveal contempt for those who are skeptical of the evidence for man-made global warming, and such skeptics say other e-mails show willingness on the part of the university researchers to manipulate data.

The legislature in Croatia ratifies an agreement with Slovenia that calls for international arbitrators to determine the border between the countries in the Adriatic Sea.

Rioting takes place outside the Algerian embassy in Cairo.

Pakistani authorities release the names of the more than 8,000 politicians who have benefited from an amnesty

decree issued in 2007 that dismissed past allegations of criminal activity; the decree will expire at the end of the week.

The second movie in the Twilight saga, *New Moon*, opens in midnight showings throughout the U.S.; it sets a box-office record for midnight openings.

Phenomenally popular television talk-show host Oprah Winfrey announces that she will end *The Oprah Winfrey Show* in September 2011, in its 25th season, to concentrate on her cable TV channel, OWN: the Oprah Winfrey Network.

21 A Sri Lankan government official declares that the 136,000 people still in government-run ethnic Tamil refugee camps will be permitted to leave the camps beginning December 1 and that the camps will be closed by the end of January 2010.

22 Voters in Romania choose to abolish the upper house of its legislature and reduce the number of seats in its lower house from 471 to 300; the presidential election, however, results in the need for a runoff.

After the final auto race of the season, Jimmie Johnson is crowned winner of the NASCAR drivers' championship for a record fourth year in a row.

Real Salt Lake wins the Major League Soccer title with a 5-4 victory in a penalty shoot-out over the Los Angeles Galaxy in the MLS Cup in Seattle.

23 In Maguindanao province on Mindanao island in the Philippines, in

what appears to be part of a feud between clans, members of the entourage of a gubernatorial candidate, consisting of relatives, supporters, and journalists, are abducted and massacred; the dead number at least 57.

Iranian Pres. Mahmoud Ahmadinejad meets with Brazilian Pres. Luiz Inácio Lula da Silva in Brasília, where they agree on cooperation in several areas; Ahmadinejad is the first Iranian leader to visit Brazil since 1965.

The first particle collisions are produced by the Large Hadron Collider near Geneva, sooner than had been expected; though the particles have energies of only 450 billion electron volts, scientists celebrate the milestone.

24 The U.S. Federal Deposit Insurance Corp. (FDIC) declares that as of the end of the third fiscal quarter on September 30, its deposit fund had a negative balance of \$8.2 billion.

A consortium led by Swedish carmaker Koenigsegg Group AB withdraws from an agreement to buy General Motors Corp.'s Saab division.

25 The government of Dubai in the United Arab Emirates and the conglomerate Dubai World ask to put off debt repayments for six months; the action causes a shock wave in the world's stock markets.

Formal charges are brought in Pakistan against seven people believed to be behind the attacks in Mumbai (Bombay) in November 2008 that killed at least 174 people.

Israeli Prime Minister Benjamin Netanyahu announces a planned 10-month morato-

Geert Vanden Wijngaert/AP



rium on new construction of housing in Jewish settlements in the West Bank.

Election officials in Haiti announce that the Lavalas Family, the political party founded by former president Jean-Bertrand Aristide, will be barred from participation in legislative elections scheduled for February 2010.

Yves Leterme is sworn in as prime minister of Belgium. (Photo above.)

A new constitution that would have replaced the British queen as head of state with a president chosen by the legislature is rejected in a referendum in Saint Vincent and the Grenadines.

26 Andal Ampatuan, Jr., the mayor of the Philippine city of Datu Unsay, surrenders to authorities in connection with the massacre of supporters of a rival politician three days earlier; 20 others have also been arrested.

Gen. Wolfgang Schneiderhan resigns as chief of staff of Germany's armed forces after German media reported that the military had been aware of civilian casualties in an airstrike in Afghanistan in September during the time that

it had denied that civilians had been killed; the following day Minister of Labour Franz Josef Jung, who had been defense minister at the time, also resigns.

27 The Nevsky Express, a luxury train traveling from Moscow to St. Petersburg, derails when it encounters a homemade bomb on the tracks; the explosion causes the deaths of at least 30 passengers.

The governing board of the International Atomic Energy Agency, meeting in Vienna, passes a resolution demanding that Iran immediately stop work at its nuclear enrichment plant in Qom.

Meeting in Rambouillet, France, French Prime Minister François Fillon and Russian Prime Minister Vladimir Putin sign several agreements on oil pipelines and automobile manufacturing.

Golf star Tiger Woods crashes his car into a fire hydrant and a neighbour's tree during an apparent domestic dispute in Florida; in the following weeks his personal life begins to unravel as infidelities are made public and his wife leaves him.

28 At the end of two days of voting, Pres. Hifikepunye Pohamba of Namibia wins reelection, and his party, the South West Africa People's Organization (SWAPO), gains the majority of seats in the legislature; both victories are landslides.

Rwanda becomes the 54th member of the Commonwealth of Nations.

29 A presidential election of questionable validity is held in Honduras; the con-

servative candidate, Porfirio Lobo, wins resoundingly.

The central bank of the United Arab Emirates announces that it will lend money to banks in Dubai in hopes of heading off a more general financial crisis caused by Dubai's inability to make timely payments on its debt.

José Mujica of the ruling Broad Front coalition wins the presidential runoff election in Uruguay.

Teodoro Obiang Nguema Mbasogo is overwhelmingly reelected president of Equatorial Guinea.

Voters in Switzerland ban the construction of minarets in the country.

Yokozuna Hakuho defeats *yokozuna* Asashoryu to win the Kyushu grand sumo tournament with a 15-0 record; Hakuho's 86-4 score for the year is a record number of wins in a single season.

30 A preliminary report is issued that shows the inflation rate in the euro zone in November to have reached 0.6%, its first rise above zero in five months; on November 13 data were released showing that the euro zone is no longer in recession, with 1.6% annualized growth in the third fiscal quarter.

Government figures show that Canada's economy grew at an annualized rate of 0.4% in the third fiscal quarter; the country thus joins those that have officially exited recession.

Beams of protons are sent at 1.18 trillion electron volts in the Large Hadron Collider near Geneva, setting a new record for proton acceleration; the previous record, not quite 1 trillion electron volts, was set at the Tevatron collider at Fermilab in Batavia, Ill.

December

“ *This progress did not come easily, and we know that this progress alone is not enough.* ”

U.S. Pres. Barack Obama,
announcing a limited agreement at the UN conference
on climate change in Copenhagen, December 18

1 U.S. Pres. Barack Obama in a nationally televised speech at the U.S. Military Academy in West Point, N.Y., lays out his plan for the war in Afghanistan, saying that he intends to send 30,000 extra troops in the next few months but will begin pulling the U.S. military out of the country in 2011.

South African Pres. Jacob Zuma addresses his country to describe a new approach to the AIDS epidemic that is in line with recommendations issued the previous day by the World Health Organization, including early treatment for HIV-positive pregnant women, babies, and those with tuberculosis; he urges the consistent use of condoms as well.

Hearings open at the International Court of Justice in The Hague on a petition by Serbia for the court to find that Kosovo's declaration of independence in 2008 was illegal.

2 The legislature of Honduras overwhelmingly votes to deny ousted president Manuel Zelaya the right to

finish out the final two months of his term of office.

The Bank of America declares that it will repay the U.S. government the \$45 billion in financial aid that it accepted during the worst of the financial crisis.

The state Senate of New York decisively votes down a bill to legalize same-sex marriage in the state.

3 Shooting breaks out in Conakry, Guinea, possibly between rival factions of the military, and the country's military ruler, Moussa Dadis Camara, is wounded in an apparent assassination attempt.

In Mogadishu, Som., a suicide bomber disguised as a veiled woman kills at least 15 people, including the ministers of education, health, and higher education, at a college graduation ceremony.

The European Central Bank decides to phase out low-interest loans intended to help keep banks solvent but to leave the benchmark interest rate at 1%.

Gold prices close at a record high of \$1,217.40 an ounce.

It is announced that an agreement has been reached that will see control of the media company NBC Universal pass from General Electric to the cable television company Comcast.

4 At a mosque attended by military officers in a secure area of Rawalpindi, Pak., several attackers make an assault with guns and grenades; at least 38 people, several of them high-ranking officers, are killed.

The U.S. Department of Labor reports that the unemployment rate in November decreased to 10% and that only 11,000 jobs were lost during the month.

5 Tens of thousands of people rally in Rome to demonstrate their displeasure with the administration of Italian Prime Minister Silvio Berlusconi.

The Strategic Arms Reduction Talks (START) treaty of

1991 between the U.S. and Russia expires; negotiations on a treaty to replace it continue.

In a case that has riveted Italy, American college student Amanda Knox and her Italian former boyfriend, Raffaele Sollecito, are found guilty of having murdered Knox's British roommate, Meredith Kercher, in 2007; Knox and Sollecito both receive lengthy prison sentences.

Spain defeats the Czech Republic 5-0 to win the Davis Cup in men's international team tennis for the second consecutive year.

6 Iraq's legislature reaches a new agreement on a law that will permit national elections to be held in 2010; the law expands the number of seats in the legislature from 275 to 325.

In elections in Bolivia, Evo Morales wins reelection as president by a comfortable margin, and his Movement Toward Socialism party wins a majority in both houses of the legislature.

Toby Melville—Reuters/Landov

In the runoff presidential election in Romania, Pres. Traian Basescu wins by a slim margin.

The annual Kennedy Center Honors are presented in Washington, D.C., to jazz musician Dave Brubeck, opera singer Grace Bumbry, filmmaker Mel Brooks, actor Robert De Niro, and rock musician Bruce Springsteen.

7 At a market in Lahore, Pak., the detonation of two bombs kills at least 49 people.

Britain's Turner Prize is presented in London to artist Richard Wright for work that includes a gold-leaf wall painting; Wright stresses the ephemerality of his work, which is always to be painted over at the conclusion of its exhibition. *(Photo right.)*

8 Five car bombings in Baghdad leave at least 121 people dead; on the same day, national elections in Iraq are set for March 2010.

Antigovernment protests and fights between the protesters and Basij militia members continue for a second day on university campuses in Iran.

The human rights group Amnesty International releases a report saying that in Mexico's drug wars, the country's army engaged in illegal killings, torture, and detentions; earlier reports by Human Rights Watch and similar organizations based in Mexico had raised similar issues.

Japanese Prime Minister Yukio Hatoyama introduces a new \$81 billion economic stimulus plan, saying that Japan's economy is in danger of falling back into recession.

The U.S. government announces a tentative settlement of a class-action suit brought in 1996 that accused the government of mismanaging American Indian trust funds; the complex settlement envisions payment from the government of \$3.4 billion.

9 Alistair Darling, British chancellor of the Exchequer, announces a one-time 50% tax on bonuses of more than £25,000 (about \$40,700) received by banking-company executives.

King 'Abdullah of Jordan accepts the resignation of Prime Minister Nader Dahabi and appoints Samir al-Rifai in his place; in November the king dissolved the legislature without setting a date for a new election.

After Indian politician K. Chandrasekhar Rao has engaged in a fast for 10 days and people in Hyderabad have staged a general strike, the national government accedes to their demands and agrees to begin the process of creating a new

state of Telangana from the southern portion of Andhra Pradesh.

10 Lebanon's legislature approves the new government and its policy platform, one part of which allows the militant group Hezbollah to retain its arms.

Switzerland permanently closes a geothermal project to extract renewable energy near Basel after a study is released showing that the project would likely generate earthquakes that would cause millions of dollars' worth of damage annually.

The CIT Group, which finances small and midsize companies, emerges from bankruptcy 38 days after entering.

The 120-m (394-ft) cable-stayed Samuel Beckett Bridge, designed by Santiago Calatrava, opens in Dublin.

11 The constitutional court in Turkey disbands the Democratic Society Party, the only pro-Kurdish political party, citing its cooperation

with the Kurdistan Workers' Party rebel organization.

Leaders of the European Union say that they will provide \$10.5 billion to help less-developed countries address the effects of global warming.

Beleaguered American golf star Tiger Woods announces on his personal Web site that he will take an "indefinite break" from playing professional golf.

12 Authorities in Bangkok seize a North Korean cargo plane loaded with weapons, including missiles, that had stopped to refuel en route to an unknown destination; the UN forbids the export of such weapons from North Korea.

Steer roper Trevor Brazile of Texas wins his seventh all-around cowboy world championship at the 51st annual Wrangler National Finals Rodeo in Las Vegas.

13 At a political rally in Milan, Italian Prime Minister Silvio Berlusconi is struck in the face by a man wielding a



souvenir model of Milan's cathedral; Berlusconi suffers a broken nose and broken teeth.

Sergei V. Bagapsh is reelected president of the separatist region of Abkhazia in Georgia; Georgia views the election as invalid, as ethnic Georgians living in Abkhazia are denied the vote.

14 Greek Prime Minister Georgios Papandreou announces an ambitious plan to revive Greece's economy, including a 90% tax on private-sector bank bonuses and a pledge to reduce federal spending by 10%.

The energy company Exxon Mobil agrees to buy the natural-gas producer XTO Energy.

In the United Arab Emirates, the emirate of Abu Dhabi, where the central government is located, agrees to grant the troubled emirate of Dubai a \$10 billion bailout.

Citigroup and Wells Fargo become the last major American banks to exit the federal Troubled Asset Relief Program as both declare that they will repay the money that they received from the fund.

Austria nationalizes the Hypo Group Alpe Adria bank to prevent its collapse, which would have had deleterious effects on the economies of Croatia, Serbia, and Slovenia.

Chinese Pres. Hu Jintao ceremonially opens a natural-gas pipeline that runs from Turkmenistan through Kazakhstan and Uzbekistan into China's autonomous region of Xinjiang.

15 The members of the Gulf Cooperation Council at a

summit meeting in Kuwait agree to launch a single currency similar to the euro in the region; the first step will be the creation of a monetary council in 2010.

In return for foreign aid from Russia, Nauru becomes the fourth country to recognize Abkhazia in Georgia as an independent country; the following day it extends recognition to South Ossetia as well.

16 Pakistan's Supreme Court rules as unconstitutional an amnesty created in 2007 for politicians charged with corruption; the decision affects some 6,000 people, including Pres. Asif Ali Zardari.

In view of the logistic impossibility of holding an election, the central council of the Palestine Liberation Organization indefinitely extends the term of office of Palestinian Authority Pres. Mahmoud Abbas as well as that of its currently non-functioning legislature.

It is reported that British singing sensation Susan Boyle's debut album, *I Dreamed a Dream*, has scored its third consecutive week at the top of the *Billboard* album chart.

The final leg of the farewell tour of venerable French rock hero Johnny Hallyday is canceled because of Hallyday's health difficulties.

17 The Yemeni military conducts strikes against al-Qaeda bases in the mountainous area of Abyan and in Sanaa; at least 34 militants are reportedly killed.

U.S. drone missile attacks in Pakistan's North Waziristan region kill at least 15 people.



18 At international climate talks in Copenhagen, the U.S., China, India, Brazil, and South Africa forge an agreement to be presented to the conference that calls for developed countries to reduce their greenhouse-gas emissions and to provide financial assistance to less-developed countries to monitor and report their greenhouse-gas emissions, and for the world to keep the global temperature from rising as far as 2 °C (3.6 °F) above preindustrial levels by 2050.

A law goes into effect permitting citizens of 25 of the member countries of the European Union to travel freely among those countries without the need for a visa.

Pres. Andry Rajoelina of Madagascar dismisses Prime Minister Eugène Mangalaza, replacing him with Cécile Manoroahanta; two days later he appoints Albert Camille Vital prime minister and rejects all power-sharing agreements.

The American car company General Motors announces that it will have to shut down its Saab division, based in Sweden, as it is unable to close a deal with a potential buyer.

The wrought-iron sign reading "Arbeit Macht Frei" ("Work Makes [You] Free") at the entrance to the Nazi death camp Auschwitz in Poland is stolen; it is found, cut into three pieces, three days later. (Photo above.)

19 Over the objections of the U.S. and the UN, Cambodia deports to China 20 Uighurs who had sought asylum in Cambodia.

20 A large protest by Maoists and their sympathizers in Kathmandu, Nepal, is met by riot police, and fighting breaks out; some 70 people are arrested.

The giant American radio broadcasting company Citadel Broadcasting Corp. files in New York City for bankruptcy protection.

21 Tens of thousands of people in Iran turn the funeral of Grand Ayatollah Hossein Ali Montazeri into an antigovernment protest.

Large protests continue for a second day in Nepal, which has been largely shut

down by a general strike called by Maoists.

Cambodia signs several agreements with China that involve investments by China in Cambodia worth some \$850 million.

The legislature of Mexico City passes a law giving same-sex couples the same rights as opposite-sex couples, including the rights to marry, adopt, and inherit.

22 Serbia applies for membership in the European Union.

Canada's Supreme Court issues two rulings that loosen the country's stringent libel laws, setting guidelines for responsible reporting that would not be construed as libel.

Gennady Pavlyuk, a well-known opposition journalist in Kyrgyzstan, dies of injuries he sustained when he was thrown out of a window in Almaty, Kazakh., where he had traveled on business; opposition politicians maintain that Kyrgyz Pres. Kurmanbek Bakiyev is behind the murder.

23 The UN Security Council imposes sanctions on Eritrea, saying that it supports Islamist militants in Somalia.

Mohammed Younus, a member of the House of Elders, the upper house of Afghanistan's legislature, is shot to death by Afghan police officers when he fails to stop at a checkpoint set up in an area in which fighting with militants had recently taken place.

24 Greece's legislature passes an austerity budget

in an attempt to rein in the budget deficit.

The Yemeni military makes an air strike against what is believed to be a gathering of al-Qaeda leaders in the southern part of the country; some 30 people are killed.

A report in the journal *Nature* analyzes the first genomes of the first 56 microbial species sequenced in the online Genomic Encyclopedia of Bacteria and Archaea, created by the Joint Genome Institute of the U.S. Department of Energy; the analysis yields nearly 2,000 new gene families.

The journal *Nature* publishes a report describing data from NASA's Voyager spacecraft as they exit the solar system, which show that the Local Interstellar Cloud just outside the solar system is extremely strongly magnetized, allowing it to withstand the pressure of the hot gas surrounding it; physicists had been at a loss as to how the cloud was able to survive.

25 As Northwest Airlines Flight 253 from Amsterdam is approaching its destination of Detroit, Umar Farouk Abdulmutallab of Nigeria apparently makes a not entirely successful attempt to ignite a powerful explosive that he had concealed in his underwear; he is immediately subdued by passengers and crew and is arrested upon the plane's safe landing in Detroit.

Democracy advocate Liu Xiaobo is sentenced to 11 years in prison in China after having been convicted of incitement to subvert state power.

26 During a Shi'ite holiday, clashes take place between antigovernment

protesters and government forces in several public squares in Tehran.

Narayan Dutt Tiwari resigns as governor of India's state of Andhra Pradesh.

27 On the holiday of 'Ashura', police in Iran fire their guns into huge crowds of government protesters; at least 10 people, including a nephew of opposition leader Mir Hossein Moussavi, are killed.

Legislative elections in which all parties support the government of Pres. Islam Karimov take place in Uzbekistan.

28 Military officers in Thailand armed with riot shields and clubs begin to forcibly return some 4,000 Hmong refugees seeking asylum to Laos.

In Bauchi, Nigeria, fighting among members of the Islamic militant group Kata Kalo and between them and the Nigerian military leaves at least 38 people dead.

Alfa Romeo is the first across the finish line and *Two True* is the overall winner of the 2009 Sydney Hobart Yacht Race in Australia.

29 In spite of the lack of a new election law deemed necessary for fair balloting by the UN and the U.S., Afghanistan announces that legislative elections will be held in spring 2010.

A tax on carbon emissions in France that was to take effect at the beginning of the new year is rejected by the Constitutional Council, which rules that it unfairly targeted only some sources of emissions.

Pres. Lee Myung-Bak of South Korea pardons Lee Kun-Hee, who resigned in 2008 after some 20 years as chairman of the conglomerate Samsung and was later convicted of tax evasion and embezzlement.

30 A double agent viewed as a valuable informant blows himself up at a meeting with CIA agents at a CIA base in Afghanistan's Khost province, killing eight CIA employees, a significant loss to intelligence operations working against Taliban and al-Qaeda on the border between Afghanistan and Pakistan.

For the third time in his administration, Canadian Prime Minister Stephen Harper prorogues Parliament, shutting it down until March 3, 2010.

A gun battle takes place between government and al-Qaeda forces in western Yemen; al-Qaeda forces operating in Yemen have claimed responsibility for the attempted bombing of Northwest Airlines Flight 253 on December 25.

A car bomber and a suicide bomber at a checkpoint in Al-Ramadi, Iraq, kill at least 24 people and injure 58, including the governor of Anbar province.

31 By the last bell of the year at the New York Stock Exchange, the Dow Jones Industrial Average has risen 18.8% since the beginning of the year; the Standard & Poor's 500-stock index has risen 23.5%, and the Nasdaq composite has gained 43.9%.

Al-Houthi rebels in Yemen post on the Internet an offer of peace talks with Saudi Arabia.

Disasters

Listed here are **MAJOR** disasters that occurred in 2009. The list includes **NATURAL** and **NONMILITARY** mechanical disasters that claimed more than 15 lives and/or resulted in significant damage to **PROPERTY**.

Aviation

February 7, Brazil. A twin turboprop plane operated by Manaus Aerotaxi and chartered by a family to fly from Coari to Manaus plunges into the Manacapuru River; 24 of the 28 aboard die.

February 12, Near Buffalo, N.Y. Continental Connection Flight 3407, a Bombardier Dash 8 Q400 turboprop traveling from Newark, N.J., to Buffalo, goes down on its approach and crashes into a house in Clarence Center, N.Y., killing all 49 on board as well as an occupant of the house; icing on the wings is suspected of being the cause.

March 12, Off Newfoundland. A helicopter ferrying workers to offshore oil platforms plummets into the Atlantic Ocean; 17 passengers are lost.

April 1, Scotland. A Super Puma helicopter ferrying workers to Aberdeen from a North Sea oil platform operated by the energy company BP goes down in calm weather 14 nautical miles off Peterhead; all 16 aboard are lost.

April 6, Indonesia. A military training flight ends in disaster when the Fokker 27 airplane crashes while attempting to land at an air base in West Java; all 24 military personnel aboard are killed.

May 20, Indonesia. A C-130 Hercules military transport plane crashes into four houses in the East Java village of Geplak and thence into a rice field, after which it bursts into flames; at least 98 of the 112 people aboard perish.

June 1, Atlantic Ocean. Air France Flight 447, an Airbus A330-200 that is flying from Rio de Janeiro to Paris, disappears; wreckage and bodies found over the following few weeks indicate that it went down some 970 km (600 mi) off northern Brazil, that all 228 aboard died, and that faulty air speed indicators may have played a role in the disaster.

June 30, Off Comoros. Yemenia Flight 626, which had taken off from Sanaa, Yemen, en route to Moroni, Comoros, goes down in the Indian Ocean

off Comoros; 152 of the 153 aboard are killed.

July 3, Northwestern Pakistan. A Pakistani military transport helicopter crashes in Chapri Ferozkhel, killing at least 26 and possibly as many as 41 military personnel; it is unclear whether the disaster is due to overloading, bad weather, or insurgent gunfire.

July 15, Iran. A Caspian Airlines Tupolev Tu-154M jetliner en route from Tehran to Yerevan, Arm., crashes near the village of Jannatabad and explodes; all 168 people aboard perish.

July 19, Afghanistan. A Russian-made transport helicopter working for the NATO-led military crashes as it attempts to take off from the military base in Kandahar, killing 16 civilians.

July 24, Iran. An Aria Air airplane skids off the runway during an emergency landing at the airport in Mashhad; at least 17 of the 153 aboard perish.

Fires and Explosions

January 1, Bangkok. At Santika, a nightclub, fireworks set off to celebrate the new year cause a fire, which quickly spreads; the conflagration and resulting stampede result in the deaths of 66 people.

January 9, Karachi. A deadly blaze of unknown origin kills at least 40 people in a shantytown.

January 28, Nairobi. A large fire consumes a Nakumatt supermarket; some 39 people perish.

January 31, Near Molo, Kenya. After a tanker transporting high-grade gasoline overturns, looters rush to collect the fuel; an explosion, possibly caused by a tossed match, kills at least 115 villagers.

January 31, Fujian province, China. Fireworks set off at a birthday celebration in a restaurant in Changle ignite a fire that leaves at least 15 people dead.

January 31, Podyelsk, Russia. A fire quickly spreads through a wooden structure housing a nursing home; at least 23 of the residents perish.

Rescuers search for victims of a C-130 military transport plane in a rice field in East Java, Indon., where it crashed and burst into flames on May 20, killing at least 98 of the 112 people aboard.



AP

Apichart Weerawong/AP



Firefighters in Bangkok finish extinguishing a fire in the nightclub Santika that was started by fireworks and killed 66 partygoers on January 1.

April 13, Kamien Pomorski, Pol. A quickly spreading fire at a three-story building housing the homeless results in the deaths of 23 residents.

April 29, Dar es Salaam, Tanz. A series of explosions as ammunition detonates at the Mbagala military depot flattens hundreds of houses and kills at least 22 people.

June 5, Hermosillo, Mex. A fire that may have started in a neighbouring warehouse sweeps through a day-care centre, killing at least 47 babies and small children.

September 13, Taldykorgan, Kazakh. A quickly moving fire kills at least 39 patients and staff members at a drug-treatment centre with barred windows.

December 5, Perm, Russia. As the Lame Horse nightclub celebrates its eighth anniversary, pyrotechnic fountains ignite a suspended ceiling decorated with twigs, and panicked patrons stampede the single exit; at least 152 people die.

Marine

January 4, Nepal. A river ferry capsizes in the Kosi River; two bodies are recovered, and some 20 other people are missing.

January 11, Indonesia. A ferry traveling from Parepare across the Makassar Strait to Samarinda is caught in a storm and sinks; some 300 people are lost.

January 11, Off Guinea-Bissau. An open wooden boat capsizes

in the Atlantic Ocean; more than 40 people, among them members of the National Islamic Council, which runs mosques and schools in the country, are missing.

January 16, Thailand. Officials in Thailand deny a report in Hong Kong's *South China Morning Post* that the country had repeatedly turned away ethnic Rohingya people attempting to migrate from Myanmar (Burma) and Bangladesh and had sent them back to

In the port of Tripoli, Libya, the bodies of some of the more than 230 migrants who drowned when their vessel capsized in late March lie on a ship that took part in a rescue operation.



AP

sea in unseaworthy vessels; the report said that at least 300 of the Rohingya have disappeared at sea.

January 19, Near Tunis, Tun. A boat carrying would-be migrants to Italy strikes a rock and capsizes; as many as 30 Tunisian passengers are believed to have drowned.

January 25, Quang Binh province, Vietnam. A greatly overloaded ferry sinks in the Gianh River; at least 42 of the passengers, mostly women and children, drown.

February 1, Indonesia. The Indonesian navy rescues some 200 Rohingya men who were spotted by fishermen after drifting in a wooden boat for close to three weeks, during which time 22 of the boat's passengers perished.

February 15, Off the Canary Islands. A small fishing boat carrying African migrants capsizes; at least 21 of the occupants drown.

February 19, Southern Bangladesh. A trawler collides with a small ferry on a river, causing the ferry to capsize; at least 17 people are drowned.

March 30, Off the coast of Libya. At least one of several boats carrying migrants from various countries in Africa and Asia capsizes; more than 230 people are believed to have lost their lives.

April 22, Off Yemen. A smuggler's boat capsizes in the Gulf of Aden, and some 35 would-be migrants from Somalia and Ethiopia drown.

July 13, Kiribati. A double-hulled catamaran ferrying passengers from Tarawa to Maiana island sinks; 33 of the 55 passengers lose their lives.

July 26-27, Off the Turks and Caicos Islands. A sailboat grossly overloaded with Haitian would-be migrants sinks; 15 bodies are recovered, and a further 67 people are believed to have drowned.

August 5, Tonga. The MV *Princess Ashika*, an interisland ferry traveling from Nuku'alofa to Ha'afeva island, sinks; some 74 passengers drown.

August 20, Off the coast of Lampedusa, Italy. Italian border police rescue five Eritreans; the Eritreans say that 75 others perished during a three-week trip from Libya, and Italy and Malta blame each other for having failed to prevent the tragedy.

September 5, Macedonia. The *Ilinden*, a tourist boat plying the waters of Lake Ohrid, sinks; though most of the passengers

are rescued, 15 Bulgarian tourists lose their lives.

September 6, Mindanao, Phil. A ferry carrying 968 passengers and crew capsizes during the night off the coast of Zamboanga del Norte province; though more than 900 are rescued, 9 bodies are recovered and 33 people are missing.

September 8, Sierra Leone. In waters off Freetown, an overloaded boat carrying children returning from school holidays encounters a storm and sinks; at least 150 passengers perish.

September 13, Democratic Republic of the Congo. An overloaded ferry sinks in darkness in the Congo River near Ankoro; at least 15 passengers die, and some 90 others are missing.

September 19, Mediterranean Sea. An inflatable dinghy crowded with Africans attempting to migrate sinks off the Spanish islet of Perejil, near Morocco; there are 11 survivors and 8 bodies, and dozens are feared lost.

September 30, Kerala state, India. A sightseeing boat in Periyar Lake capsizes when the passengers flock to one side to see an elephant; at least 41 tourists die.

November 1, Near the Cocos Islands, Australia. A boat sinks in open waters in the Indian Ocean; though a merchant ship rescues 17 survivors, it is feared that two dozen people perished.

November 15, Myanmar (Burma). Shortly after leaving the town of Patheingyi, a ferry collides with a barge in the Ngazun River; at least 50 people are believed to have lost their lives.

November 22, Indonesia. A passenger ferry sinks in heavy seas off Sumatra; more than 240 passengers are rescued, but 29 bodies are found and at least 17 people are missing.

November 25, Democratic Republic of the Congo. A logging boat illegally carrying passengers sinks on Lake Mai Ndombe, in the northeastern part of the country; at least 73 passengers die, and many more are missing.

November 27, Bangladesh. An overloaded triple-deck ferry carrying passengers from Dhaka to Nazir Hat capsizes in the Tetulia River as it approaches the dock; at least 77 people perish.

December 4, Bangladesh. A ferry sinks on the Dairia River; at least 46 passengers, most of them women and children, drown.

December 17, Off Lebanon. A cargo ship carrying livestock sinks; the bodies of nine crew members are recovered, and 35 more of those aboard are reported missing.



Soldiers pass the 2,300-year-old Danok pagoda in Yangon (Rangoon), the former capital of Myanmar (Burma), on May 31, the day after it collapsed during renovations, reportedly killing at least 20 people.

Khin Maung Win/AP

Mining and Construction

February 22, Shanxi province, China. An unusually deadly coal mine accident takes place in the Tunlan coal mine in Gujiao when a gas explosion kills at least 74 miners, with a further 114 hospitalized with carbon monoxide poisoning.

May 30, Myanmar (Burma). The 2,300-year-old Danok pagoda in Yangon (Rangoon), while undergoing the final stages of renovation, collapses, reportedly killing at least 20 people.

June 1, Near Welkom, S.Af. The Harmony Gold Mining Co. in South Africa reports that at least 36 illegal miners were killed in an underground fire in a closed shaft; eventually at least 76 bodies are found.

June 5, China. A landslide buries the Jiwei Mountain iron ore mine and several homes and buildings in Wulong county; at least 26 people, 19 of them miners, are killed, but 27 miners are believed to have survived.

July 23, Sichuan province, China. A landslide caused by heavy rains destroys a dam project at a hydropower plant in Kangding county; at least 4 construction workers are killed, with some 50 more missing.

August 4, Northern China. An unfinished iron casting factory building in Shijiazhuang collapses in a thunderstorm; at least 17 people, among them construction workers, lose their lives.

August 10, Slovakia. An explosion in a coal mine in Handlova kills 20 miners.

September 8, Henan province, China. An explosion at a coal mine in Pingdingshan leaves 35 miners dead and a further 44 workers trapped.

September 23, Chhattisgarh state, India. In Korba a chimney being built at a power plant collapses into the building's cafeteria; at least 40 people are crushed to death, with dozens more believed to have been trapped in the rubble.

October 8, Hunan province, China. An accident in a tin ore mine in Lengshuijiang kills 26 miners.

November 21, Heilongjiang province, China. A gas explosion at the state-owned Xinxing coal mine kills at least 104 miners and leaves a further 4 people trapped.

December 10, Western Turkey. A gas explosion collapses a shaft and starts a fire in a coal mine in Devicikoni; 19 miners are killed.

December 24, Rajasthan state, India. A 50-m (164-ft) section of a 1,100-m (3,609-ft) cable-stayed bridge that is being built some 50 m (164 ft) above the Chambal River collapses, killing at least 45 people, with many more missing.

Natural

January 4, Northern Guatemala. Part of a mountain collapses, creating a large landslide that leaves at least 37 people,

mostly coffee plantation workers, dead and a further 50 missing.

January 8, Costa Rica. A magnitude-6.1 earthquake with its epicentre about 32 km (20 mi) north-northwest of San José creates devastation and leaves at least 34 people dead, with more than 60 others missing.

January 14, Fiji. After several days of severe flooding, the country's sugar farms have been decimated, 9,000 people have been evacuated, and at least 11 people have died.

January 24, Spain and France. Feroocious winds cause the collapse of the roof of a sports centre in Sant Boi de Llobregat, Spain, killing four children, which brings the death toll from the windstorm in France and Spain over the past two days to at least 15; another casualty of the storm is a weeping beech tree that was planted at Versailles in France in 1786 as a gift to Queen Marie Antoinette.

January 28, U.S. A winter storm that began the previous day causes power failures and traffic accidents in Texas, Arkansas, Kentucky, Indiana, and Ohio; at least 23 deaths are attributed to the weather system.

February 8, Victoria state, Australia. Wildfires, some of which may have been deliberately set, burn for a second day; two towns and 750 homes are destroyed, and 173 people lose their lives.

February 9, Solomon Islands. Flash flooding on the island of Guadalcanal leaves at least 13 people dead and 7 missing.

March 2, Huanchumay, Peru. A landslide precipitated by heavy rainfall sweeps through a gold-mining camp, leaving at least 13 people dead and 22 others missing.

March 17, Namibia. Pres. Hifikepunye Pohamba declares a state of emergency in the northern and north-eastern areas of the country, where massive flooding over the past few weeks has left at least 92 people dead and devastated agriculture.

March 27, Cireundeu, Indon. Heavy rains cause an earthen dam impounding Setu Gintung lake to collapse, sending a wall of water into the town; at least 100 people drown, and some 500 homes are swept away or submerged.

April 15, Kyrgyzstan. A landslide destroys five houses in a mountain village, leaving at least 16 people dead.

April 17, Afghanistan. Two earthquakes, of magnitudes 5.5 and 5.1, in Nangarhar province cause the collapse of houses in four villages and leave at least 21 people dead.

May 1, India. Officials report that a heat wave that has brought temperatures as high as 48 °C (118 °F) has left at least 18 people dead.

May 10, Northern Brazil. Floodwaters fed by two months of heavy rains begin to recede; at least 40 people have died, and some 300,000 have been left homeless.

May 25, Bangladesh and eastern India. Cyclone Aila makes landfall, displacing half a million people in Bangladesh and leaving some 200 people, most in Bangladesh, dead.

June 5, China. A landslide buries the Jiwei Mountain iron ore mine and several homes and buildings in Wulong county; at least 26 people, 19 of them miners, are killed, and some 72 people aboveground are missing.

June 29, India. Monsoon rains in Uttar Pradesh, Rajasthan, and Jharkhand leave at least 15 people dead.

July 4, Myanmar (Burma). Landslides reportedly caused by the blockage of a river by debris from jade mines kill some 30 people in the Phakant region.

July 6, Northern Vietnam. Authorities report that recent mountain storms have caused the death of at least 22 people.

July 6, Southern China. A week of heavy rains causes catastrophic flooding that leaves at least 75 people dead and forces hundreds of thousands of people to evacuate; some 300 students are stranded in a school in Guangxi.

July 12, Peru. It is reported that since March some 246 children have perished in mountainous areas as a result of extreme cold.

July 23, Sichuan province, China. A landslide caused by heavy rains destroys a dam project at a hydropower plant in Kangding; at least 4 construction workers are killed, with some 50 more reported missing.

July 24, Novito, Colom. A landslide sweeps away some 30 prospectors who are panning for gold in a river; five bodies are recovered, while the rest remain missing.

August 8, Taiwan. Typhoon Morakot inundates the island with several days of exceptionally heavy rainfall, leading to massive landslides and mud slides that leave more than 600 people dead, nearly 500 of them in the village of Hsiao-lin; earlier the typhoon killed 22 people in the Philippines.

August 8, Uttarakhand state, India. A cloudburst causes a landslide that obliterates three villages, leaving 18 people dead and 48 people missing.

August 9, China. Typhoon Morakot levels more than 6,000 homes in Fujian and Zhejiang provinces, and it is reported that Tropical Storm Goni, which carved a path through southern China beginning on August 4, left 3 mariners dead and at least 26 more missing.

September 9, Istanbul. Unusually heavy rains lead to flash flooding that inundates homes, offices, and highways; at least 31 people in the area drown.

September 15, North Sumatra province, Indon. Flash flooding submerges homes and sweeps away bridges and roads in Mandailing Natal district; at least 38 people perish, and several more are reported missing.

The landscape in the township of Kinglake, Vic., is left ravaged after wildfires swept through the Australian state in February.



Rick Rycroft/AP

September 26, Philippines. Typhoon Ketsana makes landfall on the main island, Luzon, and inundates much of Manila; at least 464 people lose their lives, while some 380,000 are left homeless.

September 29, South Pacific Ocean. A magnitude-8.0 earthquake some 18 km (11 mi) under the seabed causes a tsunami that hits Samoa, American Samoa, and Tonga; at least 190 people, most of them in Samoa, perish.

September 29, Vietnam. Typhoon Ketsana roars through the country, leaving behind rising floods; at least 99 people expire.

September 30, Padang, Indon. A magnitude-7.6 undersea earthquake collapses hundreds of buildings and leaves the large city without power or communications; at least 1,100 people are killed.

October 2, Sicily. Near Messina, Italy, mud slides cause the collapse of dozens of buildings, leaving at least 23 people dead and a further 35 people missing.

October 3, India. Several days of exceptionally heavy monsoon rains leave at least 221 people dead in Karnataka and 63 people dead in Andhra Pradesh.

October 3, Philippines. Typhoon Parma brushes the northeastern area, causing landslides and flooding that leave at least 16 people dead.

October 5, Southern India. After four days of heavy rains, more than 240 people have perished.

Egyptians rush to rescue the victims of a train crash outside Cairo on October 24 in which 18 passengers perished.



Charles Dharapak/AP



Officials work to clear the tracks near Washington, D.C., after a Metro transit train crashed into the back of a stopped Metro train on June 22 in an accident that killed nine people.

October 8, Philippines. At least 193 people die in Benguet and Mountain Province in landslides caused by Typhoon Parma as well as by intentional dam releases that were an attempt to limit flooding.

October 13, Nepal. Flooding and landslides in the western part of the country are reported to have killed 143 people.

November 8, El Salvador. Pres. Mauricio Funes declares a state of emergency as flooding and landslides that were initially believed to have been caused by Hurricane Ida but were later found

to have been the result of a weaker storm have left at least 157 people dead and more than 12,000 homeless.

November 10, Tamil Nadu state, India. Officials report that at least 38 people have died in landslides following heavy rains over the past two days.

November 14, North-central China. Chinese officials say that waves of snowstorms that began on November 9 have left at least 40 people dead and more than 9,000 buildings collapsed.

November 25, Saudi Arabia. Rare heavy rain causes flash flooding; some 116 people in Jiddah lose their lives, and at least 4 people die in Mecca.

December 21, Europe. Three days of unusually severe winter weather have left at least 42 people in Poland and 27 people in Ukraine dead from the cold.

December 31, Brazil. Flooding and landslides in the area of Rio de Janeiro after heavy rains result in the deaths of at least 18 people.

Railroad

February 13, Orissa state, India. The Coromandel Express train, traveling from Haora to Chennai (Madras), derailed, and three cars are crushed; at least 9 people are killed, and some 40 people are critically injured.

June 22, Outside Washington, D.C. A Metro public transit train slams into the back of a stopped train so hard that the first car rides up on top of the last car of the stopped train; nine people are killed.

June 29, Viareggio, Italy. Fires caused by the derailment and explosion of a freight train carrying liquefied petroleum gas lead to the collapse of buildings and the deaths of at least 22 residents.

October 21, Mathura, India. A Delhi-bound express train slams into a stopped train, crumpling several cars and killing at least 22 passengers and railroad employees.

October 24, Egypt. Just outside Cairo, a southbound passenger train slams into a second passenger train that had unexpectedly stopped on the tracks; at least 18 passengers are said to have died in the incident.

Traffic

January 10, Northern Peru. A bus traveling over wet roads in the Cajamarca region slips off the road and

Tarek Ali/AP

AP



Ashes and bones are all that remains after a bus was engulfed in flames as a result of a collision with a fuel tanker truck in western Peru on April 13 that claimed the lives of at least 20 bus passengers.

slides into a ravine; at least 32 passengers are killed.

March 31, Punjab state, India. The driver of a truck carrying Hindu and Sikh pilgrims to a temple in the foothills of the Himalayas loses control of his vehicle, and it overturns; at least 20 passengers perish.

April 13, Western Peru. A bus carrying 30 passengers crashes into a fuel tanker truck; the ensuing explosion incinerates at least 20 of the bus passengers.

April 19, The Sudan. A passenger bus collides head-on with a truck not far from Khartoum; 21 bus passengers perish.

July 24, Southern Russia. A tanker truck carrying gasoline collides head-on with a passenger bus near Samarskoye; at least 21 people are killed.

August 13, Panama. On the outskirts of Panama City, a truck trying to overtake another vehicle while crossing a bridge hits a bus head-on; at least 24 bus passengers die.

October 9, Southern Nigeria. A fuel tanker on a highway riven with potholes falls over and is then hit by a car, causing an explosion that engulfs six commuter buses; some 70 people are thought to have been killed.

November 6, Himachal Pradesh state, India. Near the town of Haripur, a crowded bus rolls into a gorge; at least 34 passengers perish.

December 6, Bangladesh. A head-on collision between two crowded buses in the Faridpur district kills 20 or more people.

December 24, Southern Peru. A passenger bus in the Andes goes off the road and falls into a ravine; 40 passengers die.

Miscellaneous

February 6, Nigeria. The Ministry of Health reports that at least 84 children in the country have died after ingesting teething medication produced by Barewa Pharmaceuticals that contained the industrial solvent diethylene glycol.

March 29, Abidjan, Côte d'Ivoire. At a World Cup association football (soccer) qualifying match between the home country's team and Malawi, a stampede results as crowds try to force their way into the stadium before the start of the game (survivors report that police fired tear gas into the crowd, adding to the

panic); at least 22 people are crushed to death.

April 4, Pakistan. A shipping container being trucked from Afghanistan to Iran through Pakistan is stopped by Pakistani police; it is found to be packed with would-be migrants from Afghanistan, at least 62 of whom have expired.

May 24, Rabat, Mor. At the close of the Mawazine music festival, a stampede erupts in the departing crowd; at least 11 concertgoers perish.

July 3, Eastern Cape, S.Af. Officials report that the death toll among teenage boys so far this year from ritual circumcisions has reached 31.

July 5, Ahmadabad, India. Hundreds of slum dwellers imbibe illegally brewed alcohol that is poisonous; by July 10, 112 of them have died, and 225 remain hospitalized.

July 31, Karachi. A five-story building, evidently undermined by monsoon rains, collapses, crushing to death 23 people, mostly women and children.

August 17, Southern Siberia. At the aging Sayano-Shushenskaya hydroelectric power plant, the largest such facility in Russia, a water conduit bursts, unleashing flooding that leaves 75 workers dead; the cause of the disaster is unclear.

September 14, Karachi. At a location where food is being distributed to the poor, as is traditional during Ramadan, at least 19 women are crushed to death in a stampede to be first in line.

An injured spectator is carried out of a stadium in Abidjan, Côte d'Ivoire, after a stampede at a World Cup association football (soccer) qualifying match between the host team and Malawi on March 29 in which at least 22 people died.



AP



People of 2009



Brazilians gathered on Copacabana beach on October 2 celebrate following the announcement by the International Olympic Committee that Rio de Janeiro has been selected to host the 2016 Olympic Games.

Sergio Moraes—Reuters/Landov

Nobel Prizes

Nobels in 2009 were **AWARDED** to eight men and a **RECORD-SETTING** five women; recipients included a sitting U.S. **PRESIDENT** for strengthening **INTERNATIONAL DIPLOMACY**, a Romanian-born novelist for her depictions of the **DISPOSSESSED**, two scholars for research in **ECONOMIC GOVERNANCE**, and scientists for deciphering **RIBOSOME STRUCTURE**, inventing fibre-optics communication and **DIGITAL IMAGING** technologies, and revealing how **CHROMOSOMES** are protected.

PRIZE FOR PEACE

The Nobel Prize for Peace for 2009 was awarded to U.S. Pres. Barack Obama in recognition of “his extraordinary efforts to strengthen international diplomacy and cooperation between peoples.” The announcement by the Norwegian Nobel Committee cited a number of the president’s initiatives—arms control, multinational diplomacy through the United Nations and other international institutions, and support for efforts to combat climate change. Obama became the third sitting U.S. president to receive the prize, after Theodore Roosevelt in 1906 and Woodrow Wilson in 1919. In addition, former president Jimmy Carter received the prize in 2002, two decades after he had left office.

Barack Hussein Obama, Jr., was born on Aug. 4, 1961, in Honolulu. His father, a black African from Kenya, and his mother, a white woman from Kansas, met and married while they were students at the University of Hawaii. They subsequently divorced (1964), and for several years the boy lived with his mother and stepfather in Indonesia and then with his maternal grandparents in Hawaii. He received a B.A. degree (1983) from Columbia University, New York City, and a J.D. degree (1991) from Harvard Law School, where he was the first African American editor of the *Harvard Law Review*. In 1992 he began teaching constitutional law at the University of Chicago. Obama was elected

to the Illinois Senate in 1996 and to the U.S. Senate in 2004. In 2008 he won the Democratic nomination for the presidency, the first African American to be chosen by a major party, and he won a decisive victory in the general election.

The Nobel Prize, which came less than nine months after Obama’s inauguration as president, was a surprise, and many people were puzzled, even shocked, by the committee’s decision, given that not enough time had elapsed for the president’s major policies to come to fruition. While coping with a severe financial and economic crisis at home, he had nonetheless made a number of dramatic shifts in foreign policy from his immediate predecessor, Pres. George W. Bush. Obama indicated that the U.S. would rejoin international efforts against climate change, reached an agreement with Russia to reduce nuclear weapons, attempted to restart peace talks between Israelis and Palestinians, and showed a willingness to engage in diplomatic discussions with Iran and other previously ostracized countries. Some observers saw the award as a recognition of this new atmosphere that Obama had created. As German Chancellor Angela Merkel said, “In a short time he has been able to set a new tone throughout the world and to create a readiness for dialogue.”

Obama indicated that he did not consider himself “to be in the company of so many of the transformative figures who have been honored by this prize.”

He agreed to accept the prize, however, “as a call to action, a call for all nations to confront the challenges of the 21st century.” (ROBERT RAUCH)

PRIZE FOR ECONOMICS

The Nobel Memorial Prize in Economic Sciences was awarded in 2009 to Americans Elinor Ostrom and Oliver E. Williamson, who, through their understanding of human behaviour and transactions not covered by detailed contracts or law, established economic governance as a field of research. This extended the traditional focus of the theory of the market and market prices. The results of Ostrom’s work challenged conventional thinking that those common natural resources where use by one person reduces the amount available to others—such as water and fisheries—are badly managed unless regulated by a central authority or privatized. Williamson’s work offered a new theory to explain why firms exist and why some transactions are kept within firms rather than opened to the marketplace.

In her work Ostrom challenged the conventional theory “tragedy of the commons,” which dictates that under common ownership vital national

Elinor Ostrom



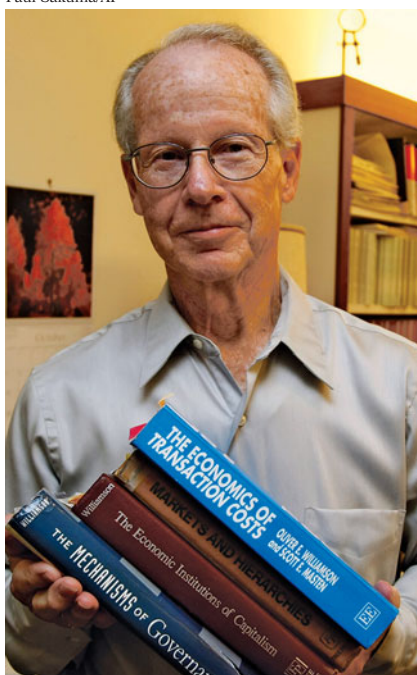
Indiana University/Getty Images

natural resources to which many have access are polluted and depleted because individual users do not recognize the effect of their actions on others. She found that societies and people often devised sophisticated methods of governance to ensure that shared natural resources are not overexploited and that these methods were often more appropriate and effective than rules imposed by a less-well-informed government. In her seminal book *Governing the Commons: The Evolution of Institutions for Collective Action* (1990), Ostrom used case studies to show that private associations often avoided the “tragedy of commons” by developing the efficient use of resources. She found that a flaw in the “tragedy” was its failure to take account of the often repeated interaction of people sharing a resource, which made credible use of a range of punishments.

Williamson received his share of the award for his analysis of economic governance, especially the boundaries of the firm, which broadened understanding of why large companies evolve in some industries and explained the conditions under which it is more efficient to carry out some transactions associated with buying and selling inside a firm rather than outside by another competing firm or individuals. This advanced the 1937 theory of British-born economist Ronald Coase, who won the Nobel Prize in 1991 for his work in institutional economics. Williamson realized that it did not necessarily cost more for a firm with adequate administrative infrastructure in place to expand its boundaries to bring more of its business activities inside the firm. In papers and books beginning in 1971, notably *Markets and Hierarchies* (1975), Williamson argued that where transactions were complex, negotiating in the market was more difficult, given the greater scope for haggling and disagreement. In such cases the high cost of writing and enforcing contracts would make it more competitive to integrate the activity into the firm, where conflicts could be resolved via the use of rules and hierarchy. The greater the mutual dependence of the two parties, the stronger the likelihood of integration, so a firm with several suppliers in close proximity might opt for the market but would choose greater integration if there was only one.

Ostrom, the first woman to receive the Nobel Prize for Economic Science, was born in Los Angeles on Aug. 7,

Paul Sakuma/AP



Oliver E. Williamson

1933, and studied political science at the University of California, Los Angeles (B.A., 1954; M.A., 1962; Ph.D., 1965). Almost her entire academic career was spent at Indiana University, where she held professorships in the departments of government (1965–69) and political science (1969–91) and in the School of Public and Environmental Affairs. At the time she was awarded the Nobel Prize, Ostrom was Arthur F. Bentley Professor of Political Science and remained a co-director of the Workshop in Political Theory and Policy Analysis, which she had co-founded (1973) with her husband and fellow political science professor, Vincent Ostrom.

Williamson was born in Superior, Wis., on Sept. 27, 1932, and was educated at the Massachusetts Institute of Technology (S.B., 1955), Stanford University (M.B.A., 1960), and Carnegie Mellon University, Pittsburgh (Ph.D., 1963). He began his academic career in economics at the University of California, Berkeley (1963–65), and then became an economics professor at the University of Pennsylvania (1965–83) and Yale University (1983–88). In 1988 he returned to the faculty in Berkeley, where in 2004 he was named Edgar F. Kaiser Professor Emeritus of Business, Economics and Law. Williamson's other books include *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting* (1985).

(JANET H. CLARK)

PRIZE FOR LITERATURE

The 2009 Nobel Prize for Literature was awarded to Romanian-born German author Herta Müller, a distinct and compelling voice of opposition against political oppression and the anguish of human existence defined by intimidation, fear, and persecution. Known primarily as a novelist, Müller was also prolific as a short-story writer, poet, and essayist whose works portrayed the harsh reality of life in Romania under the repressive dictatorship of Nicolae Ceausescu as well as the ambiguity and disjuncture of emigration and exile. Although she was highly regarded by those who read her, Müller for much of her career was limited to a German-speaking audience. She was the 12th woman to receive the literature prize and the first German writer to win since 1999, when the award was presented to Günter Grass. Outspoken in her criticism of all forms of totalitarian rule, she was drawn to those victimized by the abuse of authority, in particular the plight of women traumatized by emotional and sexual exploitation. One of the preeminent literary figures of her generation, Müller was cited by the Swedish Academy as a writer “who, with the concentration of poetry and the frankness of prose, depicts the landscape of the dispossessed.”

Müller was born on Aug. 17, 1953, in the village of Nitchidorf in the German-dominated Banat region of Romania. Her parents belonged to Romania's German-speaking minority. Her father served in the Waffen SS during World War II; her mother, like members of other ethnic minorities in postwar Romania, was deported to the Soviet Union and spent five years in a labour camp in present-day Ukraine. From 1973 to 1976 Müller studied German and Romanian literature at the West University of Timisoara, where she was associated with Aktionsgruppe Banat, a group of German-language authors seeking freedom of expression under the Ceausescu regime. She then worked as a translator of trade materials, and after being dismissed for refusing to cooperate with the Securitate, the Romanian secret police, she found employment as a kindergarten teacher and private tutor. In 1982 she published her first book, *Niederungen*, a collection of stories that depicted ethnic intolerance and the hypocrisy of village life governed by corruption and exclusion. Originally published in a redacted version, the uncensored manuscript was

published in 1984 in West Germany and later released in a bilingual German-English edition as *Nadirs* (1999). As a result of her public condemnation of the Ceausescu dictatorship, Müller was prohibited from publishing in her native Romania.

Risking reprisal, she continued to publish in the West; her novel *Der Mensch ist ein grosser Fasan auf der Welt* appeared in 1986, the first of her works translated into English (*The Passport*, 1989). In 1987, when Müller was permitted to leave Romania, she immigrated to West Germany. In her next novel, *Reisende auf einem Bein* (1989; *Traveling on One Leg*, 1998), Müller explored the condition of exile and the difficulties of assimilation. In 1994 she published *Herztier*, translated as *The Land of Green Plums* (1996) by Michael Hofmann, with whom she shared the International IMPAC Dublin Literary Award (1998). Acknowledged as one of Müller's most distinctive works, the semiautobiographical novel is narrated by a female protagonist who escapes the brutality and harassment encountered in Romania by starting a new life as an émigré in Germany. In her next novel, *Heute wär ich mir lieber nicht begegnet* (1997; *The Appointment*, 2001), Müller explored the humiliation and indignity suffered by another female narrator deemed by the state as subversive and parasitic. Subjected to degrading interrogation, the narrator laments, "I don't want to think about anything at all, there's nothing to think about, because I myself am nothing, apart from being summoned."

Müller was the recipient of numerous literary awards. In 2009 she published her novel *Atemschaudel*, a work set against the backdrop of the ethnic deportation to the Soviet Union and inspired in part by the experience of her mother. Her works of nonfiction include *Der Teufel sitzt im Spiegel* (1991), *Eine warme Kartoffel ist ein warmes Bett* (1992), *Hunger und Seide* (1995), and *Der König verneigt sich und tötet* (2003). For Müller the act of writing was born of a sense of duty both to preserve the past and to reconcile the present, a means to "be certain that I am still myself, that I exist."

(STEVEN R. SERAFIN)

PRIZE FOR CHEMISTRY

The 2009 Nobel Prize for Chemistry was awarded to Venkatraman Ramakrishnan of the Medical Research Council Laboratory of Molecular Biol-

Alastair Grant/AP



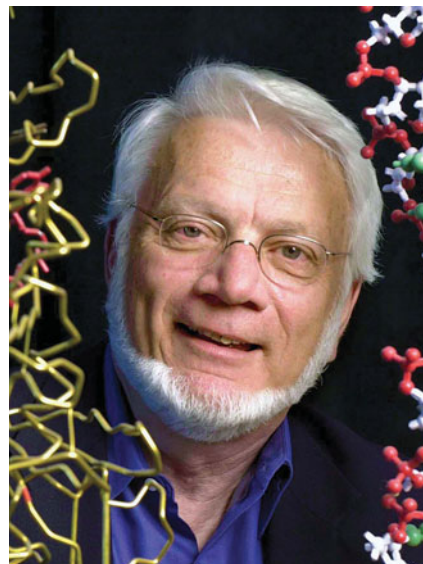
Venkatraman Ramakrishnan

ogy, Cambridge, Eng., Thomas A. Steitz of Yale University, New Haven, Conn., and Ada E. Yonath, of the Weizmann Institute of Science, Rehovot, Israel. The selection and contribution of these three individuals illustrated vividly how the traditional lines between the sciences had blurred and virtually disappeared. Their research elucidated the structure and function of the ribosome—the biological engine that reads the genetic information stored in DNA and builds the corresponding proteins from amino acids.

The process of building proteins requires cells to translate DNA into an RNA molecule that moves from the cell nucleus to the cytoplasm, where it acts as a messenger (and hence is called mRNA, or messenger RNA), carrying the genetic information to the ribosome. A second kind of RNA, called transfer RNA (tRNA) retrieves and carries the amino acids needed to build the specific protein to which the mRNA corresponds. The process of matching the sequence carried from the DNA to mRNA and thence to tRNA is the job of the ribosome.

The first big step toward achieving this understanding was uncovering the structure of the ribosome. It consists of two subunits. The small subunit is made of one large RNA molecule and roughly 32 proteins. The large subunit is made of three RNA molecules and about 46 proteins. Determining the structure of these pieces is accomplished by passing X-rays through a very nearly perfect crystal composed of the ribosome units. The pattern formed by the scattering of the X-rays when

UPI/Landov



Thomas A. Steitz

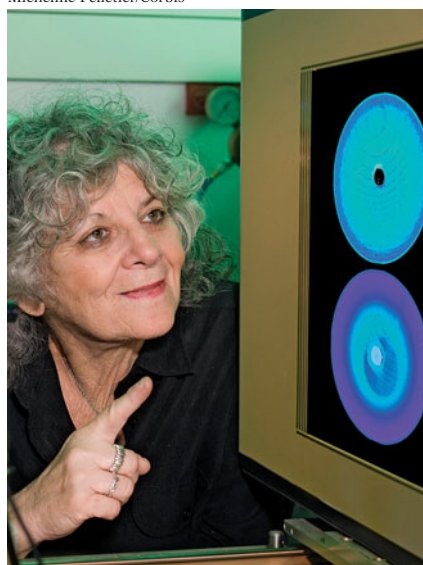
they travel through the ribosome crystal produces an image that contains information about where every atom in the entire structure lies. This process is known as X-ray crystallography. Generating a nearly perfect crystal, however, is by no means an easy task.

Ada E. Yonath was born on June 22, 1939, in Jerusalem. She received a Ph.D. in 1968 from the Weizmann Institute. After taking a position as a postdoctoral scientist at the Massachusetts Institute of Technology in the late 1960s, she became interested in deciphering the atomic structure of ribosomes by using X-ray crystallography. This seemed to many people, however, to be an impossibly complex task. Still, working with ribosomes from a bacterium that survives at high temperatures, she was able to produce her first crystals of the large ribosomal subunit in 1980, and by 2000 she had achieved her goal.

Thomas A. Steitz was born on Aug. 23, 1940, in Milwaukee, Wis. He earned a Ph.D. (1966) in molecular biology and biochemistry from Harvard University, and in 1970 he joined the faculty of Yale University as a professor of chemistry. In 1998, using high-resolution X-ray crystallography techniques, Steitz revealed the location of the RNA molecules in the large ribosomal subunit. This still did not show the locations of individual atoms, though. Finally achieving higher resolution, Steitz determined the full structure of the large subunit in 2000.

Venkatraman Ramakrishnan was born in 1952 in Chidambaram, India. He earned a doctorate degree in

Micheline Pelletier/Corbis



Ada E. Yonath

physics from Ohio University in 1976 and later studied biology at the University of California, San Diego. Ramakrishnan's background in physics and biology enabled him to study ribosome structure in *Escherichia coli*, using a technique called neutron scattering. He later also used X-ray crystallography to elucidate the structure of several different cellular components, including ribosomes. He succeeded in showing how the pairing of mRNA with tRNA avoids errors and even how there can be some tolerance regarding the identity of the third base in certain three-base coding units of mRNA.

The researchers' elucidation of ribosomal structure helped them to make their subsequent discoveries about ribosome function: the mRNA, acting via the ribosome, selects the small tRNA that then fetches precisely the correct amino acid and takes it back to the ribosome, whose large subunit puts it into position to be attached to the growing protein. Steitz's ability to crystallize and determine structures of the large subunit in intermediate stages revealed the pathway for protein growth. The work of all three scientists also provided insight into the atomic structure of antibiotics and how these agents bind to ribosomes, opening the way to the design of new antibiotics.

(R. STEPHEN BERRY)

PRIZE FOR PHYSICS

The 2009 Nobel Prize for Physics was awarded to three physicists who in separate ways made possible the world-

wide information explosion. Half of the prize money went to Charles K. Kao for groundbreaking work on the use of optical fibres for information transmission; the other half went jointly to Willard S. Boyle and George E. Smith for the invention of the charge-coupled device (CCD), a vital element in digital photography.

Charles K. Kao was born on Nov. 4, 1933, in Shanghai. After graduating (1957) with a degree in electrical engineering from Woolwich Polytechnic (now University of Greenwich), London, Kao worked as an engineer for Standard Telecommunication Laboratories (STL [later part of Nortel Networks]), Harlow, Eng. He was awarded a Ph.D. (1965) by the University of London. After leaving STL, he joined ITT Corp. as director of research, served as vice chancellor of the Chinese University of Hong Kong, and then became CEO of Transtech Optical Communication Ltd. He was awarded the Charles Stark Draper Prize of the U.S. National Academy of Engineering in 1999. In 2000 he became chairman and chief executive officer of ITX Services.

In the 1960s Kao led a small research group at STL. With his collaborator George Hockham, he studied the properties of optical fibres (thin glass filaments). At that time, existing telephone cables based on copper wires were reaching the limit of the speed at which they could transfer data. Systems using light in the visible or near-infrared region of the spectrum would enable data transfer at much higher rates. At the time, it was generally believed that the intrinsic attenuation losses in optical fibres made it impossible for them to replace copper. In 1966 Kao and Hockham published a paper demonstrating that these losses were far smaller than expected and that the main sources of loss were impurities in the glass itself. Presciently, Kao predicted that such fibres could be made into optical waveguides for communications purposes. Within a few years fibres of ultrapure silica were being produced that confirmed his analysis. The first fibre-optic telephone cables were installed in 1975, and the first transatlantic fibre-optic cable was laid in 1988. Modern-day global communication is based primarily on fibre-optic transmission systems.

Willard S. Boyle was born on Aug. 19, 1924, in Amherst, N.S. He served in the Royal Canadian Navy in World War II and then gained a B.S. (1947) and a

Ph.D. (1950) from McGill University, Montreal. In 1953 he joined Bell Labs, Murray Hill, N.J. In 1962 he became director of Space Science and Exploratory Studies at the Bell Labs subsidiary Bellcomm, but he returned to Bell Labs in 1964 and was executive director of research from 1975 until his retirement in 1979.

George E. Smith was born on May 10, 1930, in White Plains, N.Y. He served in the U.S. Navy and then earned a B.S. (1955) at the University of Pennsylvania and a Ph.D. (1959) from the University of Chicago. He worked at Bell Labs from 1959 until his retirement in 1986.

Smith and Boyle jointly received the Franklin Institute's Stuart Ballantine Medal in 1973 and the IEEE Morris N. Liebmann Memorial Award in 1974. The two were also awarded the Charles Stark Draper Prize in 2006.

Smith and Boyle played a significant part in the revolution in electronic technology that occurred over the past 50 years. The first solid-state transistors of the 1950s were soon joined up into "integrated circuits," but the major advance came with very large-scale integration (VLSI) when thousands of transistors could be manufactured together on a small sheet of silicon and then connected to make circuits. An individual transistor comprises a dot of metal on an insulating layer of silicon oxide deposited on a silicon substrate. In 1969 Smith and Boyle realized that such devices could be used for light detection. Light incident on the surface induces charges that can be transported and "read" at the edge of the device (hence the name charge-coupled device). A detector is composed of a matrix of such CCD cells (known as "pixels"), and the intensity of light falling on each cell is recorded and stored. The number of pixels defines the resolution of the detector. Multi-megapixel detectors became ubiquitous. Their use revolutionized the storage and transmission of photographic images.

(DAVID G.C. JONES)

PRIZE FOR PHYSIOLOGY OR MEDICINE

The 2009 Nobel Prize for Physiology or Medicine was awarded to three American scientists for their discovery of the enzyme telomerase and of how chromosomes are protected by telomeres. Telomeres are structures at the ends of chromosomes that help control when cells divide. Sharing the prize

Paul Sakuma/AP



Elizabeth H. Blackburn

equally were Elizabeth H. Blackburn, professor of biology and physiology at the University of California, San Francisco, Carol W. Greider, professor of molecular biology and genetics at the Johns Hopkins University School of Medicine, Baltimore, Md., and Jack W. Szostak, professor of genetics at Harvard Medical School. The three researchers had previously shared the 2006 Albert Lasker Basic Medical Research Award for their research into telomeres and telomerase.

Blackburn's interest in telomeres began with her postdoctoral research at Yale University, where she studied the chromosomes of *Tetrahymena*, a protozoal organism. She determined the DNA sequence of *Tetrahymena* and found that telomeres consist of short, repetitive segments of DNA. After joining (1978) the biology faculty at the University of California, Berkeley, Blackburn began to focus on telomere function.

Szostak was independently studying telomeres when he met Blackburn at a conference in 1980. They began a collaborative investigation of telomere function in yeast and *Tetrahymena*. In 1983 Greider joined Blackburn's lab as a graduate student, and Greider and Blackburn jointly discovered telomerase, an enzyme that appeared to control telomere behaviour.

Several of the repeated DNA segments of telomeres are lost each time a cell divides, shortening telomere length. When telomeres are shortened to a particular length, the cell dies. In this way telomeres play an important

role in determining cell life span. Szostak's later work connected the loss of telomerase activity and cell death. This provided the initial link between telomeres and the aging process of cells. Greider and Blackburn subsequently also confirmed that telomerase was the key to stopping telomeres from overshortening.

Greider suspected that abnormal telomerase regulation contributed to tumour development. Since telomerase adds DNA to telomeres, the cell never gets short enough to "turn off." Cells continue to divide and grow, forming a tumour. Greider found that blocking telomerase activity in cancer cells forces telomeres to shorten. This process stops cells from surviving indefinitely and slows tumour growth. These findings brought a surge of new interest in developing anticancer drugs that target telomerase.

Elizabeth H. Blackburn was born on Nov. 26, 1948, in Hobart, Tasmania, Australia, and later obtained U.S. citizenship. She received a Ph.D. (1975) in molecular biology from the University of Cambridge and did postdoctoral research (1975–77) at Yale University. She continued her research and taught molecular biology at the University of California, Berkeley (1978–90). In 1990 she became a professor of biochemistry and biophysics and of microbiology and immunology at the University of California, San Francisco, and she became chair of the microbiology and

Carol W. Greider



UPI/Landov

Susan Merrell—UPI/Landov



Jack W. Szostak

immunology department in 1993. Blackburn became a fellow of the Royal Society of London in 1992 and a foreign associate of the National Academy of Sciences in 1993. She received the 1999 Lewis S. Rosenstiel Award for distinguished work in basic medical science, which she shared with Greider.

Carol W. Greider was born on April 15, 1961, in San Diego, Calif. She earned a Ph.D. (1987) in molecular biology from the University of California, Berkeley. After completing a fellowship at Cold Spring Harbor (N.Y.) Laboratory, she remained there as an investigator (1990–97). In 1997 she joined the faculty of Johns Hopkins University School of Medicine in Baltimore, and in 2003 she was made director of the department of molecular biology and genetics. In 2003 Greider became a member of the National Academy of Sciences. She shared the 2006 Wiley Prize in biomedical sciences with Blackburn.

Jack W. Szostak was born on Nov. 9, 1952, in London and later obtained U.S. citizenship. He received a Ph.D. (1977) in biochemistry from Cornell University, Ithaca, N.Y., where he completed his postdoctoral research (1977–79). He joined the faculty of Harvard Medical School in 1979 as an assistant professor of biological chemistry and gradually advanced to professor of genetics in 1988. He became a Howard Hughes Medical Institute investigator and a member of the National Academy of Sciences in 1998.

(LINDA BERRIS)

Biographies

The **SUBJECTS** of these biographies are the people who in the editors' opinions captured the **IMAGINATION** of the world in 2009—the most **INTERESTING** and/or **IMPORTANT PERSONALITIES** of the year.

Abrams, J.J.

(b. June 27, 1966, New York, N.Y.)

In 2009, J.J. Abrams, the brains behind the cult-sensation television show *Lost*, wowed his fans again with one of the biggest summer blockbusters of the year: *Star Trek*, the 11th film of the franchise inspired by the 1960s science-fiction TV show that many thought had run its course in the 23 years since its last bona-fide hit installment, *Star Trek IV: The Voyage Home* (1986). The key to *Star Trek*'s revitalization was the decision to hand the reins of the franchise over to Abrams, the new film's 42-year-old director, who had already earned a reputation as the "it boy" among the "geek set" for his intelligent and stylish television shows.

Jeffrey Jacob Abrams's father was a producer of made-for-television movies, and the younger Abrams followed him into the entertainment industry at an early age by making short Super-8 movies as a boy. He got his first job in the film industry at age 16, when he scored the low-budget sci-fi film *Nightbeast* (1982). Soon after graduating (1988) from Sarah Lawrence College, Bronxville, N.Y., he co-wrote (with Jill Mazursky) the screenplay for the comedy *Taking Care of Business* (1990). While the movie was not a success, Abrams nevertheless had his foot in the filmmaking door, and he penned the script for the 1991 drama *Regarding Henry* (for which he also received co-producer credit). He then wrote the screenplay *Forever Young* (1992), which he followed by co-writing two critically lambasted movies: *Gone Fishin'* (1997) and *Armageddon* (1998).

In 1998 Abrams turned to television and co-created the series *Felicity* (1998–2002), which followed the trials and tribulations of a college student in New York City. Even though it lasted only 4 seasons, *Felicity* was a hit, and Abrams's newfound clout allowed him to get another series creation of his

made: *Alias* (2001–06), a fast-paced modern spy drama. The well-reviewed program was a testament to creator-executive producer (and even theme song composer) Abrams's drive, but he felt frustrated by the network over the series' frequent time-slot moves, which he believed contributed to its relatively poor ratings and eventual cancellation.

Abrams's next venture proved to be the project that catapulted him to stardom: *Lost*, the story of a group of plane-crash survivors marooned on a mysterious island, which premiered in September 2004. The show's byzantine plots and unique supernatural mythology quickly drew fans in—it averaged more than 15 million viewers per week in its first two seasons—and made it arguably the single-most-discussed television show of its time. Abrams was then chosen by actor Tom Cruise to direct *Mission: Impossible III* (2006). Although the film was not as large a box-office hit as the franchise's first two installments, many reviewers praised Abrams's direction. In 2008 he saw his fourth TV series creation, *Fringe*, begin airing.

(ADAM AUGUSTYN)

Agassi, Shai

(b. April 19, 1968, Ramat Gan, Israel) In May 2009 in Yokohama, Japan, Israeli entrepreneur Shai Agassi unveiled the prototype for a robot that could quickly remove the depleted battery from an electric car and replace it with a freshly charged battery. Developed by his start-up company, Better Place, the automated device was designed for battery-exchange stations, a key component in Agassi's sweeping plan for an infrastructure that would spur the public to adopt more-efficient all-electric vehicles in place of gasoline-powered cars. Such stations would allow the driver of an electric car to travel long distances without waiting to recharge the battery along the way. Another key element of his plan was to set up a network of

ubiquitous recharging spots in parking lots and other places for recharging electric cars whenever they were not being driven. Agassi's business plan positioned Better Place as a service company to provide drivers of electric cars with batteries and an electric-charging infrastructure on a subscription basis.

Agassi graduated (1990) from Technion (the Israel Institute of Technology) with a degree in computer science. In 1992 he founded TopTier Software, an information-portal provider. He also started several other businesses, including software companies Quicksoft (as cofounder) and TopManage. In 2001 TopTier was bought by SAP, a leading German software company, for \$400 million. Agassi served on the SAP executive board (2002–07) and became president of SAP's Products and Technology Group. *Time* magazine named him one of the most influential businesspeople in the world in 2003, and he was considered to be in line for the company's CEO position.

Auto innovator Shai Agassi



David Silverman/Getty Images

In 2005 Agassi was invited to join the Forum of Young Global Leaders, organized by the World Economic Forum (Davos, Switz.). Following an induction meeting in which the participants were entreated to find ways to make the world a better place, Agassi looked into climate change, especially in the area of transportation. He outlined his ideas for creating an electric-car infrastructure in a 2006 speech at the Saban Center for Middle East Policy, Washington, D.C. Former Israeli prime minister Shimon Peres, who had been present for the speech, subsequently encouraged him to take action on his vision, and in a surprise move Agassi left SAP and in 2007 launched Better Place (originally named Project Better Place). Known as a persuasive visionary with a command of the facts, he soon had more than \$200 million lined up from investors. By 2009 he had also reached governmental agreements to establish Better Place's open recharging system in a number of countries, including Denmark and the U.S. (Hawaii and California), and French automaker Renault had begun development on a mass-production electric vehicle that would be suitable for the system. Israel became the first country to agree to implement Agassi's electric-car infrastructure, and plans were under way to have 150,000 recharging spots and 100 battery-exchange stations installed throughout Israel by 2011.

(DAVID C. HAYES)

Akasaki, Isamu

(b. Jan. 30, 1929, Chiran, Japan)

Japanese materials scientist Isamu Akasaki was chosen as the 2009 recipient of the \$500,000 Kyoto Prize for lifetime achievement in advanced technology for his pioneering work conducted during the 1980s in the development of blue-light-emitting diodes (LEDs). Prior to that time scientists had produced LEDs that emitted red or green light, but blue LEDs had been considered impossible or impractical to make. Once blue LEDs became available commercially in 1993, they achieved importance in a range of applications, including electronic displays and indicators, outdoor signage and traffic signals, and vehicle lamps. Further work led to the development of blue semiconductor lasers, which proved useful for high-capacity optical-media devices, such as Blu-ray disc players. In addition, the availability of blue LEDs made possible the development of white LED lighting—which combined light from red, green, and blue LEDs—

as a promising form of high-efficiency general-purpose lighting.

Akasaki and colleagues succeeded in finding techniques for producing blue LEDs through many years of research on the semiconductor gallium nitride (GaN). (LEDs are semiconductor diodes that contain an interface between two types of semiconductor materials—n-type and p-type materials—which are formed by doping [introducing] different impurities into each.) A major breakthrough was the team's discovery, reported in 1986, that a materials-forming technique called metalorganic vapour phase epitaxial growth could be used to create high-quality GaN crystals on a sapphire substrate. A second breakthrough in Akasaki's work in developing blue LEDs, reported in 1989, was the discovery that p-type GaN could be formed by doping GaN crystals with magnesium atoms and then irradiating them with electron beams. This p-type material was then used with existing n-type material to form GaN diodes. Akasaki continued research into GaN materials through the 1990s and early 2000s, which helped lead to the development of blue semiconductor lasers and other electronics applications.

After Akasaki received a B.S. (1952) from Kyoto University, he worked for Kobe Kogyo Corp. (later named Fujitsu) until 1959. He then attended Nagoya University, where he held several teaching positions while he obtained a doctorate in engineering (1964). He subsequently served as the head of a basic research laboratory at the Matsushita Research Institute Tokyo, Inc., until he returned (1981) to Nagoya University as a professor. In 1992, when Akasaki left Nagoya University, he was made professor emeritus; he then joined the faculty of Meijo University in Nagoya. Nagoya University gave Akasaki the title of university professor in 2004 and named the Akasaki Research Center, completed in 2006, in his honour. Akasaki was a fellow of the IEEE (formerly the Institute of Electrical and Electronics Engineers), an honorary member of the Institute of Electronics, Information and Communication Engineers, and a foreign associate to the U.S. National Academy of Engineering.

(DAVID C. HAYES)

Amano, Yukiya

(b. May 9, 1947, Kanagawa, Japan)

In July 2009 Japanese veteran diplomat Yukiya Amano was elected the director



Japanese diplomat Yukiya Amano

general of the International Atomic Energy Agency (IAEA), an intergovernmental organization headquartered in Vienna whose role as the United Nations watchdog to safeguard against nuclear proliferation had gained prominence with concerns that Iran might be developing nuclear weapons. These concerns were heightened by the disclosure in September 2009 that Iran was operating a clandestine nuclear facility. Amano, an expert in nuclear disarmament and nonproliferation, had worked for more than 36 years in the Japanese foreign service, notably as Japan's envoy (2005–09) to the IAEA and member of the IAEA board of governors, the organization's policy-making body.

Amano was elected director general on the sixth round of voting with the support of 23 member countries of the board of governors—the minimum two-thirds majority required. The vote was divided between Amano and South Africa's IAEA envoy, Abdul Samad Minty. Amano was largely perceived as the preferred candidate of Western industrialized countries and Minty as the favoured candidate of less-developed countries (LDCs). The split reflected the multiple mandates of the IAEA, with Western industrialized countries being more concerned about nuclear proliferation and LDCs generally giving higher priority to the sharing of nuclear technology among all countries for the generation of nuclear energy for economic development. Amano said that he was “resolute in opposing the spread of nuclear arms because I am from a country that experienced Hiroshima and Nagasaki” and that he supported the IAEA's

mandate of helping countries make safe use of nuclear energy and technology. On December 1 Amano formally succeeded Mohamed ElBaradei, an Egyptian lawyer who had held the position of director general for three four-year terms, and some observers believed that under Amano's leadership the organization would be less politicized than it had been under ElBaradei.

Amano graduated from Tokyo University's law faculty in 1972, and he joined Japan's Foreign Ministry in the same year. In 1988 he was appointed director for research coordination and senior research fellow of the Japan Institute of International Affairs (Tokyo). He was subsequently appointed director (1990) of the publications and information centre of the Organisation for Economic Co-operation and Development in Tokyo and director (1993) of the nuclear energy division of the Japanese Foreign Ministry. As Amano's expertise on international issues concerning nuclear weapons grew, he participated in arms-control talks that led to the 1995 extension of the Nuclear Non-proliferation Treaty and the 1996 Comprehensive Test Ban Treaty. He then held positions in Japan's Foreign Ministry as director general (2002) for arms control and scientific affairs and director general (2004) of the disarmament, nonproliferation, and science department. During his career, Amano also held posts in the Japanese embassies in Brussels; Vientiane, Laos; and Washington, D.C. In 2005 the IAEA and its then director general ElBaradei were jointly awarded the Nobel Prize for Peace. As chairman (2005–06) of the board of governors at the time, Amano accepted the IAEA's share of the Nobel Prize on behalf of the organization. (DAVID C. HAYES)

Ashton, Baroness

(CATHERINE MARGARET ASHTON, BARONESS ASHTON OF UPHOLLAND, OF ST. ALBANS IN THE COUNTY OF HERTFORDSHIRE) (b. March 20, 1956, Upholland, Lancashire, Eng.) On Dec. 1, 2009, British politician Baroness Ashton, who had previously served as leader of the House of Lords (2007–08) and as European Union trade commissioner (2008–09), took office as the EU's high representative for foreign affairs and security policy. On assuming her new position, Ashton became one of the most powerful women in the world, acting as the voice of the EU in all matters of foreign policy.

Ashton studied economics at Bedford College (later part of Royal Holloway,

University of London) and earned a bachelor's degree in sociology in 1977. Upon graduating, she worked as a secretary for the Campaign for Nuclear Disarmament before taking a job in management consultancy in 1979. From 1983 to 1989 Ashton was a director of Business in the Community, an organization that encouraged corporate responsibility and facilitated partnerships between the public and private sectors. She spent the 1990s working as a policy adviser, and in 1998 she was tapped to head the county of Hertfordshire's health authority. The following year she was awarded a life peerage by Labour Prime Minister Tony Blair, and she entered the House of Lords.

Throughout her parliamentary career, Ashton focused on education and human rights issues. She served (2001–04) as a junior education minister and in 2002 assumed leadership of the early-childhood-development initiative Sure Start. In 2004 Ashton switched portfolios, becoming a junior minister for constitutional affairs. She was admitted to the Privy Council in May 2006, and later that year her efforts to promote equality earned her recognition as Politician of the Year by the gay and lesbian rights group Stonewall. In 2007 Ashton served briefly as a junior justice minister before being promoted to leader of the House of Lords by Prime Minister Gordon Brown. In that role she was instrumental in easing the passage of the EU's Lisbon Treaty through the upper house. The following year she was appointed EC trade commissioner. Although in that post Ashton lacked the name recognition of her predecessor, British politician Peter Mandelson, she earned the admiration of the European Commission president, José Manuel Barroso, for her efficiency.

With the final ratification of the Lisbon Treaty in November 2009, European leaders were faced with the task of filling the newly created roles of president of the European Council and high representative for foreign affairs and security policy. After support for Blair for the presidency flagged in the face of French and German opposition, Belgian Prime Minister Herman Van Rompuy (*q.v.*) emerged as the favourite for the presidency, and Barroso and Brown championed Ashton for the high representative office. Although some members of the European Parliament expressed reservations about Ashton's perceived lack of foreign-policy experience, she responded, "I bring to this role 28 years of experience in negotiat-

ing, building consensus and advocacy and I hope it will be recognized as relevant and pertinent for what is to come." (MICHAEL RAY)

Beck, Glenn

(b. Feb. 10, 1964, Mount Vernon, Wash.) When conservative pundit Glenn Beck debuted his self-titled television talk show on Fox News in January 2009, it was to a ready-made audience of nearly two and a half million viewers. Building upon the popularity of his Cable News Network (CNN) show (2006–08), Beck took his trademark blend of sentimentality, theatrics, and unpredictable, divisive commentary to an audience that felt marginalized by the political shifts reflected in the November 2008 election of U.S. Pres. Barack Obama.

Beck grew up in Mount Vernon, where his father owned a bakery. He developed a fascination with radio at a young age, and he won an hour-long disc-jockey debut on a local station when he was 13. His parents divorced later that year, and he moved with his mother to Puyallup, Wash. His mother, who had battled depression and substance abuse, died in a boating accident in 1979; Beck would later characterize her death as a suicide. Beck returned to live with his father, and by age 15 he had a job at a radio station in Seattle. He later worked at stations in Provo, Utah; Corpus Christi, Texas; and Louisville, Ky. Beck's Louisville show, *Captain Beck and the A-Team*, followed the newly popular "zoo crew" format, which featured wacky hosts and humorous stunts and skits. At that time Beck began politiciz-

Conservative pundit Glenn Beck



Mike Mergen/AP

ing his on-air act, inserting blunt patriotism into a largely lighthearted morning show. He spent 1987–89 in Phoenix, where he employed increasingly outrageous tactics to drum up publicity. In one incident Beck sabotaged a free concert sponsored by a rival station, using it as a platform to call further attention to his own show.

Beck was fired from his radio job in Houston in 1990 and later moved to Connecticut, where he cohosted the *Glenn and Pat Show* with fellow disc jockey Pat Gray. Around this time Beck's dependence on drugs and alcohol, long a factor in his life, increased. He went sober in the mid-1990s with the help of Alcoholics Anonymous, and in 1999 he joined the Mormon church.

The radio show that catapulted Beck to household-name status was *The Glenn Beck Program*, which began airing in Tampa, Fla., in 2000. It was Beck's first foray into talk radio, and it gave him a pulpit from which to air his right-wing political beliefs. Two years later the show went national, and in 2006 Beck was invited to take an evening television slot on CNN's *Headline News*. His flair for the dramatic carried over from radio, and he quickly drew a devoted audience with his showmanship and biting commentary.

Beck's profile only grew with the ascendancy of a Democratic president. Following the election that brought Obama to power, Beck's was among the loudest cries of the alienated right. By late 2009 he was drawing millions of people to his show, podcast, and Web site. The book *Glenn Beck's Common Sense*, released in 2009, quickly became a best seller. Among Beck's other works were *The Real America* (2003) and *An Inconvenient Book* (2007).

(MELISSA ALBERT)

Benjamin, Regina

(b. Oct. 26, 1956, Mobile, Ala.)

In July 2009 Regina M. Benjamin, an American physician who had spent most of her medical career serving poor families in a shrinking village on the Gulf Coast of Alabama, was nominated by U.S. Pres. Barack Obama to be the U.S. surgeon general. She was confirmed unanimously by the Senate in October. Benjamin had achieved distinction for the dedication she had shown in providing health care to her medically underserved community and patients, many of whom were uninsured and unable to pay for their treatment. Benjamin was the only doctor in the village, Bayou La Batre, and she

persevered in running the community's health clinic despite having had to rebuild it three times—in 1998 after it was flooded by Hurricane Georges, in 2005 after it was destroyed by Hurricane Katrina, and again in 2006 after it was extensively damaged by fire. She mortgaged her house to help finance the clinic's reconstruction after Hurricane Katrina, and while the clinic was being rebuilt, she made house calls to see her patients. Benjamin's new high-profile post would give her the opportunity to champion health care for those unable to afford it. She promised that she would "communicate directly with the American people, to help guide them through whatever changes may come with health care reform," and make certain that "no one falls through the cracks."

Benjamin received a B.S. (1979) from Xavier University of Louisiana. After first attending (1980–82) the Morehouse School of Medicine, Atlanta, Benjamin obtained an M.D. (1984) from the University of Alabama and completed (1987) a residency in family practice at the Medical Center of Central Georgia. Benjamin attended medical school with the aid of funding from the National Health Service Corps, a U.S. federal program that paid medical-school tuition in exchange for a commitment to work for a defined period in an area with few or no doctors. In 1990 Benjamin founded the Bayou La Batre Rural Health Clinic, and the following year she obtained an MBA from Tulane University, New Orleans.

Throughout her career Benjamin was active in medical organizations and advisory groups. She served (1986–87) on the American Medical Association's (AMA's) Women in Medicine Panel, and in 1995 she became the first African American woman and the first person below the age of 40 to be elected to the AMA's board of trustees. As president (2002–03) of the Medical Association of the State of Alabama, she was also the first African American woman to preside as president of a state medical society. She served (1996–2002) on the board of Physicians for Human Rights, and in 1998 she received the Nelson Mandela Award for Health and Human Rights. Benjamin also worked with the University of South Alabama's College of Medicine, and from 2000 to 2001 she was in charge of the university's telemedicine distance-learning program, which offered medical education and health care to clinicians and patients in rural areas through a telecommunications network.

In 2008 Benjamin was awarded a John D. and Catherine T. MacArthur Foundation fellowship. (DAVID C. HAYES)

Bird, Andrew

(b. July 11, 1973, Chicago, Ill.)

After years of playing music in relative obscurity, the eclectic American pop songwriter and multi-instrumentalist Andrew Bird appeared poised to break out in 2009. His latest solo recording, *Noble Beast*, debuted in January at number 12 on the *Billboard* album chart (a career high), and he performed to increasingly larger audiences, selling out shows at New York City's Carnegie Hall and Chicago's Civic Opera House. A darling of the indie-rock set, Bird was known to fans for his virtuosic skill on the violin, which he often sampled and looped onstage, and for his meticulously crafted songs that combine wistful melodies with hyperliterate lyrics.

Andrew H. Walker/Getty Images



Multifaceted American musician Andrew Bird

Bird was immersed in music from early childhood. He began taking Suzuki-method violin lessons at age four and later earned a degree in violin performance (1996) from Northwestern University, Evanston, Ill. He chafed at the rigid expectations of the classical-music world, however, and after graduation supported himself by playing his instrument everywhere from weddings to Renaissance fairs. Having developed an interest in vintage jazz, he soon fell in with the popular swing-revival band the Squirrel Nut Zippers, appearing on

three of their albums in the late 1990s. In the meantime, he landed a recording contract of his own.

Andrew Bird's Bowl of Fire, as his new Chicago-based band became known, won critical notice for its impressive command and fusion of early 20th-century musical idioms, drawing on traditions as varied as swing-era jazz, calypso, German cabaret, and Central European folk songs over the course of three full-length albums, *Thrills* (1998), *Oh! The Grandeur* (1999), and *The Swimming Hour* (2001). The band failed to catch on among audiences, though, and Bird consequently decided to strike out on his own.

After testing the waters with a series of solo gigs, Bird recorded *Weather Systems* (2003) at his family's rural Illinois farm. The album marked a turning point in his songwriting; the idiosyncratic pre-rock-and-roll touches were now filtered through a sound that owed more to contemporary folk and pop-rock music than his previous pastiche-driven work had. (He also, notably, revealed a knack for whistling.) Bird expanded his fan base by frequently opening for more famous musicians (he called the 30-minute performances "guerrilla attacks"), and widespread praise for his next record, *The Mysterious Production of Eggs* (2005), brought him further attention. The success continued with the sprawling *Armchair Apocrypha* (2007), which sold more than 100,000 copies—a considerable number for an independent release.

Bird remained in the public eye the following year by contributing to a *New York Times* blog in which he chronicled the process of writing and recording *Noble Beast*. He was expected to tour in support of the album through 2010.

(JOHN M. CUNNINGHAM)

Bouteflika, Abdelaziz

(b. March 2, 1937, Oujda, Mor.)

On April 9, 2009, Moroccan-born Algerian politician Abdelaziz Bouteflika was reelected president of Algeria by a landslide margin; according to the official tally, he garnered 90.2% of the vote, and turnout was reported to have been 74.5%. The election, however, was harshly criticized by opposition groups, who claimed that the poll was marred by widespread fraud and voter intimidation. Many observers believed that the president had collected only about half of the vote total and estimated that the actual turnout was closer to 30%. Bouteflika had served as Algeria's president since 1999.

Bouteflika's family was from Tlemcen, Alg., and he spent much of his early life living in Algeria. In 1957, three years into the Algerian war for independence (1954–62), he joined the National Liberation Front (FLN) in its fight against French rule. He became an officer in the National Liberation Army in 1960. After Algerian independence in 1962, Bouteflika was appointed minister for youth, sports, and tourism, and a year later he was made foreign minister.

Bouteflika participated in the 1965 coup, led by Houari Boumedienne, that removed Algerian Pres. Ahmed Ben Bella from power and installed Boumedienne. Bouteflika continued to serve as foreign minister in the new government, and by the time of Boumedienne's death in 1978, Bouteflika seemed well positioned to replace him in the presidency. Nevertheless, the army instead appointed Defense Minister Chadli Bendjedid, and soon afterward Bouteflika lost his position as foreign minister. In 1981 corruption charges drove him into self-imposed exile.

On his return to Algeria in 1987, Bouteflika again became a member of the FLN. Although he won the presidency in 1999, the election was marred by claims of rigging and the subsequent withdrawal of the other candidates. As president, Bouteflika focused on rebuilding the country and strengthening Algeria's international reputation. He also granted wide-ranging amnesty to militant Islamist groups within the country in an effort to resolve a long-standing civil conflict.

Bouteflika won reelection in 2004. Though his previous efforts to reduce the country's rebel activity and its attendant violence were somewhat successful, during his second term insurgents re-formed as an arm of al-Qaeda and were responsible for a number of suicide bombings. In 2005 Bouteflika experienced health problems, which led to continued speculation about his physical well-being. In November 2008 the Algerian parliament approved a constitutional amendment abolishing presidential term limits. The arrangement gave Bouteflika the opportunity to run for his third consecutive term.

(EDITOR)

Boyle, Danny

(b. Oct. 20, 1956, Manchester, Eng.)

At the 2009 Academy Awards ceremony, Danny Boyle was named best director for *Slumdog Millionaire* (2008), his unconventional romance that had become an unlikely international sensation. The film—a modern take on Charles Dickens's *Oliver Twist* set in India with elements of Bollywood—earned seven other Oscars, including best picture. *Slumdog* had almost failed to receive a theatrical release after its initial distributor folded. It eventually landed at Fox Searchlight, but many questioned whether audiences would see a movie that contained scenes of extreme child abuse and torture, featured extensive dialogue in Hindi with English subtitles, and cast first-time performers who actually lived in Mumbai (Bombay) slums. Such doubts proved unfounded, however, as Boyle crafted an energetic and ultimately optimistic film that connected with both moviegoers and critics. In addition to winning the Oscars, he and his film also received BAFTAs, Golden Globes, and a host of other awards.

Before stepping behind the camera, Boyle worked in the theatre. He served as the artistic director (1982–85) at the Royal Court Theatre Upstairs and as deputy director (1985–87) at the Royal Court Theatre. In 1987 he made his directorial debut with the television movie *Scout*. He directed various other TV projects before helming his first feature film, *Shallow Grave* (1994). The crime thriller was noted for its bold visual imagery, which became a trademark of Boyle's work, and was written by John Hodge, who became a frequent

Oscar-winning director Danny Boyle



Giles Keyte—Mission Pictures/20th Century Fox/The Kobal Collection

collaborator. In 1996 the director scored his big breakthrough with *Trainspotting*. The darkly humorous look at heroin addicts, written by Hodge and featuring *Shallow Grave* star Ewan MacGregor, became an international hit and one of the U.K.'s highest-grossing films. MacGregor reteamed with Boyle on the romantic comedy *A Life Less Ordinary* (1997), but it failed to match the success of their previous efforts. Boyle next directed his first big-budget Hollywood film, *The Beach* (2000), which featured a screenplay by Hodge based on Alex Garland's popular novel about a seemingly utopian community on a remote Thai island. Despite starring Leonardo DiCaprio, it earned mixed reviews and failed to find an audience. In 2002 Boyle had a sleeper hit with the postapocalyptic zombie film *28 Days Later*. He continued to show his versatility with *Millions* (2004), a heart-warming story about a motherless boy who finds the proceeds of a bank robbery. After directing the science-fiction thriller *Sunshine* (2007), Boyle received the greatest accolades of his career for *Slumdog*. The film, however, was not without controversy. Some charged that it romanticized poverty, and others complained that the child actors were exploited, especially when it was revealed that two of the young stars continued to live in the Mumbai slums. Boyle (with the film's producer) subsequently purchased homes for the children's families and donated over \$750,000 to a fund to help other Mumbai children. (AMY TIKKANEN)

Boyle, Susan

(b. June 15, 1961, Blackburn, West Lothian, Scot.) On April 11, 2009, the virtually unknown Scottish singer Susan Boyle appeared as a contestant on an episode of the British television talent show *Britain's Got Talent*. Boyle's unconventional appearance belied her stunning singing voice, and her rendition of the song "I Dreamed a Dream" from the musical *Les Misérables* immediately silenced the cynicism of both the judges and the audience, earning her a standing ovation and quickly transforming her into an international media sensation.

Boyle grew up in Blackburn, a small Scottish industrial town, as the youngest of nine children born to two middle-class Irish immigrants. Owing to complications during her birth, she was briefly deprived of oxygen, which left her with mild brain damage; in school



Scottish singer Susan Boyle

she was diagnosed with learning disabilities, for which she was frequently teased and bullied. Boyle was drawn to music and singing as a young child, however, and at age 12 began participating in musical productions at school. Her talent was quickly recognized by her teachers, who encouraged her to persist.

After high school, Boyle worked briefly as a cook trainee at West Lothian College before beginning studies at the Edinburgh Acting School. She continued to cultivate her voice, singing in her church choir, at local karaoke bars, and at the Edinburgh Festival Fringe, the largest arts festival in the world.

In 1995 Boyle unsuccessfully auditioned for the British TV talent show *My Kind of People*. Four years later her rendition of "Cry Me a River," which had been featured on a local charity CD, received positive reviews. She consequently exhausted her monetary savings to record a professional demo tape, which she mailed to record companies, radio and TV networks, and various talent competitions. Boyle's career ambitions were put on hold in 2000 after her sister died. She resumed with professional singing lessons in 2002 and subsequently produced several recordings for local performances and benefits.

Devastated by the death of her mother in 2007, Boyle completely withdrew from singing for nearly two years. In late 2008, however, she applied to audition for *Britain's Got Talent* to honour the memory of her mother, who had been a fan of the show and had encouraged her to become a contestant. Videos

of Boyle's debut on the show (and a later appearance as a semifinalist) were viewed on the Internet by an estimated 100 million people worldwide and made her an international phenomenon. She placed second in the final competition and then briefly disappeared from the limelight during a period of exhaustion. Boyle performed during the show's talent stage tour in June and sang on the finale of its counterpart in the U.S., *America's Got Talent*, in September. Her first studio album, *I Dreamed a Dream*, debuted at number one on the *Billboard* charts in late November and was the second-best-selling album of 2009 with more than 3.1 million copies sold.

(JEANNETTE L. NOLEN)

Brodeur, Martin

(b. May 6, 1972, Montreal, Que.)

On March 17, 2009, French Canadian ice hockey player Martin Brodeur became the all-time winningest goaltender in the National Hockey League (NHL) when he passed the great Patrick Roy with his 552nd victory: a 3–2 triumph over the Chicago Blackhawks. Despite having missed 16 weeks of the 2008–09 season because of surgery on a damaged tendon in his arm, Brodeur finished the season with 557 career wins (including 101 shutouts) and 299 losses in 999 games played. Early in the 2009–10 season, he racked up the 1,000th game of his professional career, the only goalie other than Roy (with 1,029) to have achieved that milestone.

As a boy Brodeur traveled with his father, Denis Brodeur, a member of Canada's 1956 bronze-medal-winning Olympic team and a longtime photographer for the NHL Montreal Canadiens. The younger Brodeur was a first-round choice of the 1990 NHL entry draft and signed with the New Jersey Devils. In 1993–94 he won the Calder Memorial Trophy as the league's top rookie, having recorded a 2.40 goals against average (GAA) for the season and a 1.95 GAA during the 17 play-off games.

In 1994–95 Brodeur helped his team win the Stanley Cup championship, compiling a record of 19 wins, 11 losses, and 6 ties. After that season he became a fixture in goal for the Devils and in the NHL's All-Star Game; between the 1997–98 and 2007–08 seasons, he played in at least 70 regular-season games each year. An excellent stickhandler, Brodeur in 1997 became the second goaltender in NHL history to have scored a goal in a play-off game. He also led the Devils

to Stanley Cup victories in 2000 and 2003 and won the Vezina Trophy for the league's most outstanding goaltender four times (2002–03, 2003–04, 2006–07, and 2007–08). By 2009 he held the NHL record for 40-win seasons (7) and was tied with Roy for the most consecutive 30-win seasons (12).

Brodeur was a member of Team Canada in the Olympic Winter Games of 1998, 2002, and 2006, and in 2002 he played a significant role in the team's gold-medal win. He also represented his home country at the 1996 and 2005 International Ice Hockey Federation world championships, with Canada taking the silver both times. In 2004 Brodeur helped Team Canada win the World Cup championship. (EDITOR)

Bryce, Quentin

(b. Dec. 23, 1942, Brisbane, Australia) In 2009 Quentin Bryce enjoyed a lively first full year as Australia's governor-general. A former governor of the state of Queensland and a noted lawyer, educator, and human rights activist, Bryce was appointed governor-general by Prime Minister Kevin Rudd, and upon being sworn in on Sept. 5, 2008, she became the first woman ever to hold the high-profile post of Queen Elizabeth II's viceregal representative in Australia. Bryce's historic appointment was hailed by numerous Australian media outlets, as well as by many government officials. In announcing his selection, Rudd cited her long record of public service and praised her as some-

one who "captures the spirit of modern Australia." Bryce was to serve a five-year term, during which time she intended to devote much of her attention to human rights issues; she indicated that she would place "special emphasis" on promoting and protecting the rights of the country's indigenous peoples.

Bryce was born Quentin Strachan. She grew up in Ilfracombe, which she described as "a little bush town in western Queensland of two hundred people," and earned bachelor of arts and bachelor of laws degrees from the University of Queensland. She married architect and graphic designer Michael Bryce in 1964 (the couple eventually had five children) and was admitted to the Queensland bar the following year. She served (1968–83) as a lecturer in law at the University of Queensland and in 1984 was named the first director of the Queensland Women's Information Service. In the late 1980s and early 1990s, she worked for the Australian Human Rights and Equal Opportunity Commission, first as the commission's Queensland director and then as the organization's federal sex discrimination commissioner.

In 1993 Bryce became the founding chairperson and CEO of the National Childcare Accreditation Council, in which position she led efforts to ensure and improve the quality of child-care services in Australia. She later served (1997–2003) as the principal and CEO of the Women's College at the University of Sydney. Bryce was appointed governor of Queensland in 2003, the same year that she was made a Companion of the Order of Australia. Her five-year appointment as Queensland's governor was extended for an additional two years in January 2008, but it was only three months later that Rudd announced his selection of Bryce for the governor-general's post.

In her new position, Bryce maintained a busy travel schedule, visiting Australian troops in Afghanistan, addressing the World Future Energy Summit in Abu Dhabi, U.A.E., and undertaking a diplomatic trip to nine African countries in March and April. After the deadliest bushfires in Australia's history ravaged much of the state of Victoria early in the year and heavy flooding also occurred across northern Queensland, Bryce toured both states and made a national televised address on February 10, urging her fellow Australians to "do whatever needs to be done" to help survivors of the disasters. (SHERMAN HOLLAR)

Burnett, T Bone

(b. Jan. 14, 1948, St. Louis, Mo.)

T Bone Burnett, one of popular music's most prolific and successful producers, began 2009 with an impressive showing at the Grammy Awards, where he was honoured three times for his work on the Alison Krauss and Robert Plant album *Raising Sand* and once for B.B. King's *One Kind Favor*. Although *Raising Sand* boasted impressive sales and near-universal critical acclaim, Burnett was unimpressed with the sound quality of the final recording. In an era in which many producers were mixing music to be louder and denser for the low-fidelity iPod and ringtone markets, Burnett returned to the basics of audio engineering with his XOΔE (rendered in English as "CODE") technology. CODE offered a listening experience that replicated the original studio master recording as faithfully as possible, with no additional cost to the consumer—CODE audio DVDs were included in the standard CD package, and listeners could thus compare the two formats side-by-side. CODE was further refined for the 2009 debut album from the psychedelic rock supergroup Moonalice.

Joseph Henry Burnett spent his childhood in Fort Worth, Texas, and it was there that he acquired the nickname "T Bone" and became involved in the local music scene, initially as a guitarist with local blues bands and later as the founder of his own recording studio. He moved to Los Angeles in the early 1970s and recorded his debut solo album, *The B-52 Band & the Fabulous Skylarks* (1972), a straightforward collection of bluesy rock tunes. In 1975 he received his major break into the industry, touring as a guitarist on Bob Dylan's Rolling Thunder Revue tour. His second solo album, *Truth Decay* (1980), showed Burnett's maturation as an artist, but he found greater success in the production booth than he did as a performer. He produced the critically acclaimed major label debut from Los Lobos, *How Will the Wolf Survive?* (1984), and worked with Elvis Costello, whose *King of America* (1986) and *Spike* (1989) featured Burnett as both producer and performer. Burnett continued to record solo material, with the Grammy-nominated *The Criminal Under My Own Hat* (1992) providing an excellent window into Burnett's evolving lyrical sensibilities, but he remained outside the mainstream of popular music. That changed dramatically when he selected and composed the music for the film *O Brother, Where Art Thou?* (2000). Burnett earned

Quentin Bryce, Australia's first female governor-general



Alan Porritt/AP

Kevin Winter/Getty Images



Record producer and guitarist **T Bone Burnett**

four Grammy Awards and was thrust into the public spotlight. He earned two more Grammys, the first for the Tony Bennett and k.d. lang duet *A Wonderful World* (2002) and the second for the sound track of the Johnny Cash film biography *Walk the Line* (2005). Although he spent most of the 1990s and early 2000s involved in producing, Burnett returned to performing with *True False Identity* (2006) and *Tooth of Crime* (2008).

(MICHAEL RAY)

Buzek, Jerzy

(b. July 3, 1940, Smilowice, Silesia, Pol. [now in Czech Republic]) The election of Polish politician Jerzy Buzek to the presidency of the European Parliament in July 2009 marked the first time that a major European Union institution had been headed by a representative of a former communist country. Buzek, the European People's Party candidate and a five-year parliament veteran, garnered 555 of the 644 valid votes cast, while his opponent, Swedish Green Party candidate Eva-Britt Svenson, won 89. The centre-right Buzek would relinquish power to a socialist candidate halfway through the five-year term in a power-sharing compromise between the conservative and liberal contingents. While the post was primarily ceremonial, Buzek's victory was considered a positive, if symbolic, indication that stigmatization of former Soviet bloc countries was on the wane.

Jerzy Karol Buzek was raised in an area of southern Poland ceded to Czechoslovakia after World War II. His family moved to Chorzow, where his father worked as an engineer. Buzek attended the Silesian University of Technology in Gliwice, earning (1963) a degree in chemical engineering. He conducted research at the Institute of Chemical Engineering of the Polish Academy of Sciences in Gliwice and spent a year (1971–72) at the University of Cambridge on a research grant.

In 1980 Buzek joined the newly formed trade union Solidarity. He ascended to power rapidly, chairing the union's first National Congress the following year. Beginning in 1989, having emerged from Solidarity's underground years unscathed by communist persecution, Buzek presided over three additional congresses as the union worked to secure political legitimacy. Continuing his work at the Polish Academy of Sciences, where until 1997 he served as director, Buzek was also appointed (1992) representative to the International Energy Agency's Greenhouse Gas R&D Programme.

Buzek was approached in 1997 by Solidarity Electoral Action (AWS), the political wing of Solidarity, to be a candidate for the Sejm (the lower house of parliament). Soon after, he was appointed prime minister by the controlling AWS, presiding over a coalition with the free-market Freedom Union (UW). Though Buzek, a Protestant, was greeted skeptically in predominately Roman Catholic Poland, he successfully initiated discussions for accession to the EU in 1997 and negotiated Poland's NATO membership in 1999. His economic reforms, however, enacted in part to facilitate EU and NATO acceptance, entailed rapid downsizing and privatization and proved to be unpopular as the cost in jobs became apparent. Compounding matters, in 2000 the UW dissolved the coalition, leaving Buzek with a minority government for the remainder of his term, which ended in 2001. He served (2002–04) as vice-rector of Polonia University in Czestochowa, where he founded the Polonia School of Diplomacy. When Poland formally joined the EU in 2004, Buzek was elected to the European Parliament, where he became vice president of the European Energy Forum.

(RICHARD T. PALLARDY)

Castroneves, Helio

(b. May 10, 1975, São Paulo, Braz.) In May 2009 Brazilian race-car driver Helio Castroneves capped a personally

tumultuous year in triumphant fashion by winning the premier auto race in the U.S., the Indianapolis 500, for the third time. His victory came little more than five weeks after a U.S. federal jury had acquitted him on six counts of income-tax evasion—charges that could have netted him six years in prison—and just two days after prosecutors had dropped a remaining conspiracy charge against him. Finally able to put his monthslong legal battle behind him, the 34-year-old Castroneves turned in a stirring performance before some 300,000 fans at the Indianapolis Motor Speedway. Starting on the pole, he surrendered the lead after seven laps but rallied late to beat the second-place finisher, Englishman Dan Wheldon, by 1.98 seconds and thus became only the ninth driver in Indy 500 history to take the checkered flag three times.

Castroneves was involved in motor sports from a young age with the support of his father, an auto dealer in São Paulo who owned a stock-car-racing team. As a teenager, Castroneves won a national go-kart-racing title in Brazil before advancing in 1994 to Formula Three auto racing in Europe. He attracted the attention of Brazilian racing great Emerson Fittipaldi, who helped him to get started on the Championship Auto Racing Teams IndyCar circuit in 1998. After signing in 2000 with Penske Racing, one of the powerhouse teams in the IndyCar Series, Castroneves quickly became one of the team's dominant drivers. In 2001 he collected his first Indy 500 title, edging Penske teammate and fellow Brazilian Gil de Ferran by 1.74 seconds for the win.

Castroneves repeated as Indy 500 champion in 2002—the first driver since American racing legend Al Unser in 1970–71 to win the race in consecutive years. He was also the youngest driver ever to accomplish the back-to-back feat and the first to win the classic race in each of his two initial attempts. Castroneves took second place in the Indy 500 in 2003 and finished third in 2007. By this time the immensely affable Brazilian had become one of the Indy Racing League's most popular drivers. In 2007 he broadened his fan base by appearing on the hit American television show *Dancing with the Stars*, winning the competition with his professional dance partner, Julianne Hough.

A federal indictment handed down in 2008 alleged that he had helped to create a Panama-based shell company with the intention of avoiding paying taxes on some \$5 million in income.

Castroneves, however, steadfastly maintained his innocence. Following his acquittal, he tearfully expressed his relief at being able to return to racing. With his third Indy 500 win, Castroneves was one step closer to matching the only four-time winners of the race—Americans A.J. Foyt, Rick Mears, and Unser.

(SHERMAN HOLLAR)

Cave, Nick

(b. Feb. 4, 1959, Jefferson City, Mo.)

In 2009 the extravagant objects known as *Soundsuits*, the creations of artist Nick Cave, traveled from coast to coast in the U.S., having enjoyed exhibits at the Jack Shainman Gallery in New York City and the Yerba Buena Center for the Arts in San Francisco. Since the early 1990s, Cave had been immersed in fashioning the *Soundsuits* that qualified as fashion, sculpture, and performance art. These wearable mixed-media constructions, named for the sounds made when worn by performers, were fabricated through a complex layering of found materials, ranging from manufactured castoffs (such as fabrics, buttons, and old toys) to natu-

ral objects (such as twigs and hair). Equally reminiscent of African religious ceremonial costumes and high fashion garments, these hybrid objects referenced Cave's ongoing interest in the construction and concealment of identity. Simultaneously acting as ornate art objects and as instruments for sound and movement, the *Soundsuits* had an interdisciplinary and transformative nature that won Cave numerous awards, including the Joan Mitchell Foundation Award in 2008.

Cave began exploring fibre arts and fashion during his studies at the Kansas City (Mo.) Art Institute (B.F.A.; 1982). During his time there he also studied with Alvin Ailey's modern dance company, initiating his active interest in constructing a bridge between dance, fashion, and art. He earned a master's in fine arts (1989) at the Cranbrook Academy of Art, Bloomfield Hills, Mich., and later became chairman of the Fashion Design program at the School of the Art Institute of Chicago. Throughout his career, Cave made use of found and ready-made materials to reference cultural, political, and autobiographical issues. He made his first *Soundsuit* out of twigs in the early 1990s by wiring cut and drilled sticks to a handmade cotton undergarment, realizing its performative potential only once it had been completed. He later employed a myriad of techniques and traditions to create the *Soundsuits*, which range from formfitting bodysuits composed of intricately sewn fabrics and beads complete with ceramic head-dresses to amorphous suits made of woven hair in vibrant colours. When worn, the *Soundsuits* simultaneously conceal and transform the identity, race, and gender of their wearer, encouraging movement and creating sounds that correspond to their chosen materials and construction.

The *Soundsuits'* meanings shift and multiply with each exhibition and performance, set in places as varied as the theatre stage, fashion runway, and city street. Cave used these contexts to emphasize his reliance on community to activate his work—whether the skilled professionals and friends he recruited to assist him in the creation of the suits, the models and trained dancers that performed in them, or the audience that interpreted the combination of form and movement. Echoing his ongoing exploration of issues relating to identity and politics, Cave also used recycled materials in a series of sculptures and installations that equally cited crafts

and rituals. With these objects and his *Soundsuits*, Cave continued to borrow from a wide range of disciplines and cultures in an effort to examine and challenge notions of personal and cultural identity. (MICHAL RAZ-RUSSO)

Chaudhry, Iftikhar Muhammad

(b. Dec. 12, 1948, Quetta, Balochistan, Pak.) In March 2009, Iftikhar Muhammad Chaudhry resumed his duties as chief justice of the Pakistan Supreme Court more than a year after he was dismissed by Pakistani Pres. Gen. Pervez Musharraf. Although demands for Chaudhry's reinstatement served as the focal point of sustained efforts by Pakistan's legal community to pressure Musharraf into vacating his role as head of the Pakistan government, the chief justice's entire tenure on the court had been filled with drama and event-defining moments.

Chaudhry received his early education in Balochistan before moving to Sind province, where he studied law at Hyderabad University, receiving an LL.B with special concentration in constitutional law, criminal law, and tax and revenue law. He established a legal practice as an advocate in 1974 and became an advocate for the Balochistan High Court in 1976. In 1985 he enrolled as an advocate before the Pakistan Supreme Court. Chaudhry was then named (1989) advocate general of the Balochistan High Court, was designated (1990) additional judge of the Balochistan High Court, and held several other judiciary positions. While serving simultaneously as chairman of the Balochistan Local Council Election Authority, he was twice presiding officer of the Balochistan Local Council Bodies Authority. After being appointed (1999) chief justice of the Balochistan High Court, Chaudhry played a key role in the establishment of the Circuit Bench of the Balochistan High Court at Sibi.

He was named to the Pakistan Supreme Court in 2000 and was elevated to chief justice in 2005. Never one to avoid controversy, Chaudhry presided over the court during much of the military dictatorship headed by Musharraf, who seized power in 1999. Removed from his post as chief justice in late 2007, ostensibly because he appeared to threaten Musharraf's political authority, Chaudhry became the lightning rod for sustained efforts by Pakistan's legal community not only to seek his reinstatement but also to drive Musharraf out of office. Musharraf resigned in August 2008, and after elec-

Artist Nick Cave unveils one of his *Soundsuits*.



Drew Kelly—New York Times/Redux



Pakistani jurist Iftikhar Muhammad Chaudhry

Aamir Qureshi—AFP/Getty Images

tions were held, a new central government emerged under Pres. Asif Ali Zardari, widower of slain former prime minister Benazir Bhutto.

After more than a year of unrelenting demonstrations following Chaudhry's dismissal—culminating in the declaration of a “Long March” arranged by the country's lawyer community but joined by political leaders led by former prime minister Nawaz Sharif, who also had been deposed by Musharraf—in March 2009 the court ordered that the chief justice be reinstated. Zardari's hesitation in returning Chaudhry to the court caused a rift between himself and Sharif until Zardari finally relented and restored Chaudhry to office. In May 2009 the court, again led by Chief Justice Chaudhry, lifted the ban on Sharif's ability to run for political office, which appeared to lay the groundwork for yet another confrontation between Sharif and Zardari. The decision, however, also reinforced Chaudhry's authority and the role of the Supreme Court in sustaining an independent Pakistani judiciary. (LAWRENCE ZIRING)

Contador, Alberto

(b. Dec. 6, 1982, Madrid, Spain)

Spanish cyclist Alberto Contador firmly established himself as the greatest stage racer in the world in 2009 as he claimed the second Tour de France victory of his young career on July 26 in Paris at the culmination of the 23-day, 3,460-km (2,150-mi) race. Contador, who won the race in 2007, dominated

the 2009 Tour's overall standings, finishing 4 minutes 11 seconds ahead of runner-up Andy Schleck of Luxembourg and 5 minutes 24 seconds ahead of former champion Lance Armstrong of the U.S., who placed third. Although Contador was just 26 years old, the win was his fourth victory at a major national, or grand, tour; he had also captured both the Tour of Italy (Giro d'Italia) and the Tour of Spain (Vuelta a España) in 2008. Followers of cycling marveled at the Spaniard's versatility, regarding him as a “complete rider”—a peerless climber who was also a formidable competitor in individual time trials—and many believed he had the potential to challenge Armstrong's record of seven Tour de France titles.

Contador competed as an amateur from his mid-teens and made his professional debut in 2003. He showed early promise, winning a time trial that year at the Tour of Poland, but in 2004 his future was left in doubt after he suffered a fall during a race and subsequently underwent brain surgery to remove a blood clot. He made a remarkable recovery, however, and resumed racing in 2005, winning a stage of the Tour Down Under in Australia and earning his first overall victory as a professional rider at the Catalan Cycling Week.

His emergence as one of the elite figures of road cycling came in 2007, but at the close of that season, his Discovery Channel team disbanded. Although Contador was the defending champion, he was unable to participate in the 2008 Tour de France because his new team, Astana, was excluded from the race for prior doping offenses. During the 2009 Tour, reports surfaced of a rift between Contador and his teammate Armstrong over the leadership of Astana. Any doubt as to who was the stronger rider vanished on stage 15, however, when the Spaniard produced the fastest climb in Tour history, making the final ascent to the Alpine village of Verbier, Switz., at an estimated rate of more than 1,850 m (6,070 ft) per hour. Contador seized the leader's yellow jersey on that stage and never relinquished it. Armstrong left Astana at the end of the Tour, vowing to assemble his own team in 2010. Contador, meanwhile, celebrated his victory and fielded offers from several other teams eager for his services. (SHERMAN HOLLAR)

Cruz, Penélope

(b. April 28, 1974, Madrid, Spain)

Spanish actress Penélope Cruz solidified her international stardom in 2009,

earning rave reviews for her performance as an ill-fated aspiring actress in *Los abrazos rotos* (*Broken Embraces*), directed by Pedro Almodóvar. Cruz, who was known for her classic beauty and her sultry roles, also appeared in the musical film *Nine*, in which she portrayed the mistress of a movie director played by British actor Daniel Day-Lewis. In February, Cruz won her first Academy Award—for best supporting actress, for her work in Woody Allen's *Vicky Cristina Barcelona* (2008), in which she starred alongside Scarlett Johansson and Javier Bardem.

Cruz grew up outside Madrid, where she studied ballet for nine years at Spain's National Conservatory; she also received intensive training in classical and jazz dance and studied theatre in New York City. At age 15 she won a modeling agency competition and began appearing in music videos and on Spanish television. Her first film roles were in *El laberinto griego* (although the film was completed in 1991, its release was delayed until 1993) and *Jamón, jamón* (1992). She came to international attention with *Belle époque* (1992), a film about an army deserter taken in by an elderly man and his four enchanting daughters. It won an Academy Award for best foreign film. Cruz first collaborated with Almodóvar in his *Carne trémula* (1997; *Live Flesh*) and teamed with the director again in *Todo sobre mi madre* (1999; *All About My Mother*).

Cruz's first English-language role came in *Talk of Angels* (1998). She then appeared in the contemporary western *The Hi-Lo Country* (1998). Cruz quickly established herself as a prominent actress in Hollywood. She starred alongside Matt Damon in *All the Pretty Horses* (2000), a film adaptation of Cormac McCarthy's novel of the same name, and opposite Johnny Depp in *Blow* (2001), a film based on the life of George Jung, the most prolific cocaine dealer in the U.S. during the 1970s. In 2001 Cruz also appeared in *Vanilla Sky*—a remake of a successful film in which she had earlier starred, *Abre los ojos* (1997; *Open Your Eyes*)—and afterward was involved in a highly publicized relationship with costar Tom Cruise.

In the early 21st century, Cruz continued to act in both English- and Spanish-language productions. After performing in *Head in the Clouds* (2004), she appeared as an unhappily married mother in Almodóvar's critically acclaimed *Volver* (2006; *To Return*), for which she received an Academy Award nomination. Cruz played a

Carlos Alvarez/Getty Images



Actress Penélope Cruz

woman dreamed of by a man undergoing a midlife crisis in *The Good Night* (2007) and portrayed the young lover of an aging college professor in *Elegy* (2008), a Spanish-language film adaptation of the Philip Roth novel *The Dying Animal* (2001). (EDITOR)

Daldry, Stephen

(b. May 2, 1961, Dorset, Eng.)

British film and theatre director Stephen Daldry's hybrid talent was on full display in 2009 as he propelled both a film, *The Reader* (2008), and a stage musical, *Billy Elliot* (opened Nov. 13, 2008), to their respective zeniths of professional acclaim, the 2009 Academy and Tony awards. *The Reader*, which was adapted by playwright David Hare from German author Bernhard Schlink's novel, peers at the spectre of the Holocaust in post-World War II Germany through the lens of an affair between an illiterate woman, played by British actress Kate Winslet, and a teenage boy who, as an adult, agonizes over the revelation that his lover was previously a concentration camp guard. The film earned 2009 Academy Award nominations for best picture and for Daldry's direction, as well as an Oscar for Winslet. Meanwhile, *Billy Elliot, the Musical*, adapted from Daldry's 2000 film *Billy Elliot*, about a boy who finds refuge in ballet, duplicated on Broadway the success of his earlier London stage production, garnering the Tony Award for best musical and securing best director honours for Daldry. Though his screen adaptation of Michael Chabon's Pulitzer Prize-winning novel *The Amazing Adventures of Kavalier and Clay* was still stalled as

2009 came to a close, Daldry maintained that the project would prevail.

Daldry's father—a bank manager who died when Daldry was 15—discouraged his interest in theatre. Abetted by his cabaret singer mother, however, Daldry joined a theatre troop in Taunton and by age 15 had resolved to direct. He attended the University of Sheffield on a Royal Air Force scholarship, earning a bachelor's degree (1982) in English. At Sheffield he directed the university theatre company and cultivated his radical bona fides with forays into socialism and a penchant for wearing pillbox hats.

Daldry then further flouted convention as an apprentice clown in Italy. Upon returning to England, he became artistic director of the Metro Theatre (1984–86) and apprenticed at the Crucible Theatre in Sheffield (1986–88). While presiding over London's Gate Theatre (1989–92), he championed obscure works by international writers, an ethos equally apparent during his tenure as artistic director of the Royal Court Theatre (1992–98). Daldry's direction of J.B. Priestley's *An Inspector Calls* (1992) for the National Theatre earned him a Laurence Olivier Award and, when the production traveled to Broadway (1994), a Tony. He returned to Broadway in 1999 as the director of David Hare's one-man show *Via Dolorosa*.

Daldry—at the time credited with one short film—was then unexpectedly tapped to direct *Billy Elliot*. The film was nominated for several Academy Awards, including best director. Daldry then helmed *The Hours* (2002), Hare's adaptation of Michael Cunningham's Pulitzer Prize-winning novel. A series of three meditations on Virginia Woolf's *Mrs. Dalloway*, the film starred Julianne Moore, Meryl Streep, and—as Woolf—Nicole Kidman. Daldry again received an Oscar nomination for best director, and Kidman claimed best actress honours. Daldry was created CBE in 2004. (RICHARD T. PALLARDY)

Daniels, David

(b. March 12, 1966, Spartanburg, S.C.) Critics' enthusiasm for the work of American opera singer David Daniels continued undiminished 15 years after Daniels's stage debut at Glimmerglass Opera in Cooperstown, N.Y., and his performing schedule remained full. The planned 2009–10 season included European recitals with his longtime collaborator, pianist Martin Katz; opera productions in Atlanta and Houston; a holiday-season tour of Canada and the U.S. with Les Violons

du Roy; and his debut with the Chicago Symphony Orchestra performing Bach's *St. John Passion*.

As the preeminent countertenor of his generation, Daniels was best known for his lead roles in Handel's operas, including *Giulio Cesare*, *Rinaldo*, and *Radamisto*. These and similar parts had been written for the 18th century's wildly popular *castrati*, men who had been castrated as boys in order to maintain their soprano voices as they grew. (The practice died out after its cruelty was acknowledged.) When the Baroque operas of Handel and others were revived in the 20th century, female mezzo-sopranos played the male roles. Daniels and other modern countertenors sang the roles by using their trained falsetto voices.

Singing was Daniels's passion from an early age. The son of two voice teachers, he became an accomplished boy soprano, and he attended performances by a number of acclaimed singers. By age 17 he was studying voice as a tenor, and in his senior year of high school he won a major voice competition. He won a full scholarship to the University of Cincinnati (Ohio) College-Conservatory of Music, where he received a bachelor's degree; he completed a master's degree at the University of Michigan, where he studied with George Shirley. Meanwhile, although he was formally a tenor, he continued to be happiest singing in his higher range. Nearly at the end of his studies, at age 25 he made the switch to the higher voice. He studied with countertenor Drew Minter and immersed himself in the performance of 17th- and 18th-century music. Within a few years he made his debut (1994) at Glimmerglass Opera and was launched onto the world stage.

In addition to the Handel roles that were the mainstay of his repertoire, Daniels performed regularly in operas by Claudio Monteverdi, Christoph Willibald Gluck, Mozart, and Benjamin Britten. On the concert stage he sang Bach, Handel, and Hector Berlioz, among others, and in recitals he stretched the countertenor repertoire to sing, with pronouns unchanged, mezzo-soprano works by Maurice Ravel, Ralph Vaughn Williams, and other 19th- and 20th-century composers.

Daniels won the 1997 Richard Tucker Award, conferred by the Richard Tucker Music Foundation to an emerging American opera singer, and was named Vocalist of the Year (1998) by *Musical America* magazine. Daniels was praised by music critics and fans alike

for his solid acting and commanding stage presence, as well as for his “luminous,” “flexible and true,” and “impeccably controlled” voice.

(NOLA HEALY LYNCH)

The Decemberists

The American indie-rock band the Decemberists scored an unexpected hit when in March 2009 a new album, the uninterrupted hour-long rock opera *The Hazards of Love*, debuted at number 14 on the *Billboard* album charts. Though some questioned the Decemberists’ decision to produce their second record on a major label as a concept album—especially one with a story line featuring a fair maiden, her shape-shifting lover, a forest queen, and a nefarious man called only “the Rake”—the album was viewed by the Decemberists’ numerous fans as simply a logical step in the quirky band’s musical progression.

The band—lead singer and guitarist Colin Meloy (b. Oct. 5, 1974, Helena, Mont.), keyboardist and accordionist Jenny Conlee (b. Dec. 12, 1971, Seattle, Wash.), guitarist Chris Funk (b. Nov. 28, 1971, Valparaiso, Ind.), drummer John Moen (b. Aug. 23, 1968, Brainerd, Minn.), and bassist Nate Query (b. Sept. 5, 1973, Bellevue, Wash.)—had gained a reputation earlier in the decade for its highly stylized, literate songs. Formed in 2000 in Portland, Ore., the Decemberists (with drummers Ezra Holbrook to 2002 and Rachel Blumberg from 2002 to 2005) initially hewed to a primarily folk-pop sound built around acoustic guitar melodies.

Their first album, however, *Castaways and Cutouts* (2002), featured the baroque instrumentation and narrative song structures (as well as Meloy’s idiosyncratically nasal voice) that would become the band’s hallmarks.

In 2003 the group released *Her Majesty the Decemberists*, which built on the first album’s sound to include prominent horn and string sections. Their EP (a format intermediate in length between a single and an album) *The Tain* (2004) consisted of a single song broken into multiple movements and foreshadowed the Decemberists’ future direction. As the band grew more successful, its live shows developed a distinct theatrical bent, replete with elaborate stage designs and props, and the Decemberists became one of indie rock’s most popular concert draws. Their third full record, *Picaresque* (2005), featured a wide-ranging set of songs that tell the stories of a diverse cast of characters, including a widowed peddler, spies who tragically fall in love, a pair of homeless runaways, and two men trapped inside the belly of a whale. The latter track, “The Mariner’s Revenge Song,” was an eight-minute epic in the style of a sea shanty, which, when played live in concert with a massive papier-mâché whale, became one of the band’s signature numbers.

After the Decemberists signed in 2005 with major-label Capitol Records, some observers speculated that the band might be required to make artistic compromises for the mainstream label. However, the group’s first album with

Capitol, *The Crane Wife* (2006), assuaged those fears. It featured elegant ballads about a man falling in love with and marrying a wounded crane alongside sprawling prog-rock-infused jams. *The Crane Wife* cracked the *Billboard* top 50 and was atop many critics’ lists of the year’s best albums.

(ADAM AUGUSTYN)

Dennard, Robert

(b. Sept. 5, 1932, Terrell, Texas)

In recognition of his key contributions to the microelectronics industry, American engineer Robert H. Dennard was awarded both the 2009 Medal of Honor from the IEEE (formerly the Institute of Electrical and Electronics Engineers) and the National Academy of Engineering’s 2009 Charles Stark Draper Prize, one of the top honours for engineering achievement. Dennard was credited with the invention in the late 1960s of the one-transistor cell for dynamic random-access memory (DRAM) and with pioneering in the early 1970s the set of consistent scaling principles that underlie the improved performance of increasingly miniaturized integrated circuits, two pivotal innovations that helped spur more than three decades of growth in the computer industry. DRAM consists of an array of semiconductor memory cells that are integrated on a silicon chip. The type of memory cell invented by Dennard used a single metal-oxide-semiconductor (MOS) transistor to store and read binary data as an electrical charge on a MOS capacitor, and the high-density memory made possible by this design resulted in relatively low production costs and power requirements for DRAM. Following its introduction as a commercial product in the 1970s, one-transistor-cell DRAM was extensively used in computers and other electronic devices. With miniaturization, it was possible to develop DRAM chips that contain billions of memory cells.

Dennard, who attended a one-room schoolhouse as a child, received a B.S. (1954) and an M.S. (1956) in electrical engineering from Southern Methodist University, Dallas, and a Ph.D. (1958) from Carnegie Institute of Technology (now Carnegie Mellon University), Pittsburgh. He joined IBM Research in 1958 as a staff engineer and first worked on memory and logic circuits and the development of data communication techniques. In the early 1960s he began focusing on microelectronics. His design for one-transistor-cell DRAM improved upon other types of

The Decemberists: (left to right) John Moen, Chris Funk, Colin Meloy, Jenny Conlee, and Nate Query



Autumn de Wilde—HO/AP

computer memory that were then in development (including a memory system consisting of wire mesh and magnetic rings), and in 1968 Dennard was granted a patent for the design. It was one of more than four dozen patents that he was eventually issued. Dennard was given the title of IBM fellow in 1979, and he held several positions over the length of his career of more than 50 years with the company.

Dennard was elected to the U.S. National Academy of Engineering in 1984 and was inducted into the U.S. National Inventors Hall of Fame in 1997. Among the other awards and honours that Dennard garnered were the U.S. National Medal of Technology, which he received (1988) from Pres. Ronald Reagan, and the 2005 Lemelson-MIT (Massachusetts Institute of Technology) Lifetime Achievement Award.

(DAVID C. HAYES)

Dodson, Mick

(b. April 10, 1950, Katherine, N.Terr., Australia) On Jan. 25, 2009, on the lawn of the Parliament House in Canberra, Australian Prime Minister Kevin Rudd presented the Australian of the Year Award to Mick Dodson, an Aboriginal political activist and scholar, in recognition of Dodson's work to help better the lives of the country's indigenous peoples and to promote reconciliation between Australia's indigenous and nonindigenous residents. Through his Aboriginal mother, Dodson was a member of the Yawuru people of the Broome region of Western Australia, and since 2005 he had served as the director of the National Centre for Indigenous Studies at the Australian National University (ANU). He was also a moving force behind the organization Reconciliation Australia, which had pushed for the historic formal apology that Rudd delivered in February 2008 for wrongs committed by past governments against generations of Aborigines. In addition, Dodson, who had long campaigned for the establishment of a national indigenous representative body, was appointed at the end of 2008 to be a key adviser to the federal government on the formation of such a body.

Michael James Dodson studied at Monash University in Melbourne, where he earned Bachelor of Jurisprudence and Bachelor of Laws degrees before joining (1976) the Victorian Aboriginal Legal Service. He later directed the Northern Land Council and, from 1988 to 1990, served as counsel to the Royal Commission into Aboriginal

National Australia Day Council



Aboriginal activist Mick Dodson, the 2009 Australian of the Year

Deaths in Custody. In 1993 he was appointed the country's first Aboriginal and Torres Strait Islander social justice commissioner, a post he held until 1998. In 2003 he became the first indigenous Australian to be named a law professor at the ANU College of Law.

Aside from his work on behalf of Australian Aborigines, Dodson was also involved in advocating for the rights of other indigenous peoples around the world. Since 2005 he had been a member on the UN Permanent Forum on Indigenous Issues, and he had previously served on the board of trustees of the UN Voluntary Fund for Indigenous Populations. Dodson assisted in drafting the Declaration on the Rights of Indigenous Peoples that was adopted by the UN General Assembly in September 2007.

In accepting the Australian of the Year Award, Dodson spoke eloquently of his wish "to build our understanding of what it means to protect the rights and human dignity of all Australians" and emphasized the importance of "taking the idea of fairness seriously." He welcomed the greater public visibility that the award afforded him and hoped to use it to raise awareness of problems facing both indigenous and nonindigenous Australians. He was particularly concerned with the lack of access to quality education in many communities and embarked on a national schools tour in mid-2009 as part of his stated goal of having every Australian child enrolled and adequately equipped for the beginning of the 2010 school year. (SHERMAN HOLLAR)

Dorsey, Jack; Stone, Christopher Isaac ("Biz"); and Williams, Evan

(b. Nov. 19, 1976, St. Louis, Mo.), (b. March 10, 1974, Boston, Mass.), and (b. March 31, 1972, near Clarks, Neb.) Twitter—the online messaging service cofounded by social-media entrepreneur Evan Williams, social-networking expert Christopher Isaac ("Biz") Stone, and messaging-software engineer Jack Dorsey—found itself in the media spotlight in 2009 when the application received a Webby Award for Breakout of the Year and moved toward becoming a mainstream means of communication adopted and endorsed by celebrities, news outlets, and corporations. Although Twitter did not charge a fee for its service and had no discernible income, it was flush with new venture capital, and Williams, Stone, and Dorsey said that the company would eventually introduce a financial plan to generate revenue. In the meantime, the trio sought to expand and improve the service.

Williams grew up on a farm but had aspirations of starting his own business, and he left the University of Nebraska at Lincoln without graduating. In the mid-1990s he briefly ran a company that he and his father set up to provide instructional material about the World Wide Web. He then worked as a Web developer for several California-based computer companies before cofounding (1999) Pyra Labs to make project-management software. Williams developed a side project at the company into a software tool for publishing personal commentary on the Web. The software, which he called Blogger, formed the basis of the wave of Web logs, or blogs, that soon swelled over the Internet. The new company that Williams had formed, Blogger.com, was bought in 2003 by Google. Williams left Google in 2004 and became a cofounder of Odeo, a podcasting company. His interest soon turned to an Odeo side project—Twitter, which was launched in 2006. He formed a new parent company, Obvious, that acquired Odeo and then spun off Twitter, Inc., as a separate entity in 2007. Williams was initially chairman of the board of Twitter, but he moved to the role of CEO in late 2008.

Stone attended two universities in Boston (Northeastern University and the University of Massachusetts) for one year each and then worked as a designer at Little, Brown and Co. He was creative director (1999–2001) at Xanga, a Web-log community that he had helped

form. Williams invited him to take a role in developing Blogger, and Stone joined new owner Google in 2003 but then left (2005) to join Williams in shaping Odeo. After cofounding Twitter, he served as creative director for the company. Stone wrote two books on blogging: *Blogging: Genius Strategies for Instant Web Content* (2002) and *Who Let the Blogs Out?: A Hyperconnected Peek at the World of Weblogs* (2004). He also served as an adviser to several other Web-site companies.

As a teenager Dorsey created taxi-dispatching software that was adopted by taxicab companies. He attended New York University before moving (1999) to San Francisco, where he set up a company that used the Internet to handle the dispatching of couriers and emergency vehicles as well as taxis. In 2006 he approached Williams and Stone with the idea of using text messaging and instant messaging (based on the principles of dispatch software) as a way of keeping in touch with friends. Together they developed a prototype of what would become the Twitter platform. Dorsey served as CEO of the new company until October 2008, when he became chairman of the board. In late 2009 he began beta testing Square, an iPhone device for accepting credit-card payments.

(DAVID C. HAYES)

Duffy, Carol Ann

(b. Dec. 23, 1955, Glasgow, Scot.)

In 2009 poet Carol Ann Duffy achieved what prodigious talents such as Christina Rossetti and Elizabeth Barrett Browning did not: she became Britain's first-ever female poet laureate since the post was established in 1668. Duffy, who was passed over for the laureateship in 1999, allegedly because she was bisexual, accepted the post "purely because they hadn't had a woman," remarking, "I look on it as recognition of the great women poets we now have writing."

Duffy's father was a trade unionist, and her mother was a gifted storyteller, known for her rhymes. Duffy described her Staffordshire upbringing as "left wing, Catholic, working class." By age 10, encouraged by teachers, she was filling notebooks with poetry. While reading philosophy at Liverpool University, where she graduated in 1977, she was involved with poet and painter Adrian Henri, who initiated her into poetry circles. Duffy's verse appeared in pamphlets until 1983, when she won the National Poetry Competition and landed a publishing deal. She was soon winning

major poetry awards and fellowships. Duffy also became an acclaimed playwright (*Take My Husband* [1982] and *Little Women, Big Boys* [1986]), children's author (*Underwater Farmyard* [2002] and *The Tear Thief* [2007]), broadcaster, and reviewer, and in the 1990s her poetry was incorporated into school curricula. She moved in 1996 from London to a Manchester suburb and began lecturing at the Writing School at Manchester Metropolitan University.

Duffy's at times radical feminism and the occasional controversy her poetry inspired did little to impede her ascent to the ranks of Britain's best-loved poets. While her rhymes and everyday language made her a favourite with the public, her literariness and range of styles impressed critics. Famous for her "voicings" or dramatic monologues of characters from Mrs. Faust to a potential killer, she also excelled in using traditional sonnet and ballad forms as vehicles for postmodern themes. The 1999 publication of *The World's Wife*—which won less critical acclaim than some of her earlier volumes—brought her mass appeal and challenged the dominance of men in written history by retelling events from an irreverent female perspective. The birth of Duffy's daughter in 1995 broadened her poetry, influencing explorations of motherhood in *Feminine Gospels* (2002). Duffy's volume *Rapture* (2005), a sequence of poems narrating a love affair from its beginning through its demise, meanwhile, was widely celebrated for its emotive power and extraordinary craftsmanship.

Duffy's list of prizes includes the Somerset Maugham Award for *Selling Manhattan* (1987), the Cholmondeley Award (1992), the Dylan Thomas Award (1989), the Whitbread Poetry Award and the Forward Poetry Prize (Best Poetry Collection of the Year) for *Mean Time* (1993), and the 2005 T.S. Eliot Prize for *Rapture*. Duffy was made OBE in 1995 and CBE in 2002. (CAROL PEAKER)

Eggers, Dave

(b. March 12, 1970, Boston, Mass.)

In 2009 the long-awaited film version of Maurice Sendak's *Where the Wild Things Are* was released concurrently with writer Dave Eggers's novelization of the screenplay, which he had co-written with director Spike Jonze. The movie and book were loose adaptations of Sendak's original, inspired as much by its wistful beauty and loving approach to the child mind as by its story.

In 2009 the prolific Eggers also saw the film *Away We Go*—which he co-

wrote with his wife, Vendela Vida—appear on the big screen. His nonfiction book *Zeitoun*, an account of a Syrian American man and his experiences in New Orleans following Hurricane Katrina, was also released in 2009.

Eggers grew up in Boston and in Illinois, and for a time he studied journalism at the University of Illinois. When he was 21, however, the death of both of his parents within a very brief period led him to drop his studies in order to help raise his 8-year-old brother, Christopher (Toph). The two moved to California, where Eggers cofounded the short-lived satiric *Might* magazine. Eggers was an editor at Salon.com and a writer for a number of publications, including *Esquire* magazine, before releasing *A Heartbreaking Work of Staggering Genius* (2000). The memoir, which was enriched with postmodern writing techniques and fictionalized encounters, detailed Eggers's experiences raising Toph. The work earned Eggers instant acclaim and literary stardom, as well as a Pulitzer Prize nomination.

Daide Lanzilao—Contrasto/Redux



American writer Dave Eggers

In an effort to create a platform for other young writers, Eggers founded McSweeney's publishing house, which started with the 1998 launch of the literary magazine *Timothy McSweeney's Quarterly Concern*. In 2003 it was joined by fellow publication *The Believer*, a journal of literary reviews and interviews and other, often esoteric, pop-culture musings. McSweeney's also served as a book imprint and in 2005 originated the DVD "magazine" *Wholphin*, featuring new or underexposed short films.

The creation in 2002 of Eggers's non-profit organization 826 Valencia, based in San Francisco, was a further foray into literary advocacy. It was a volunteer-based writing laboratory devoted to developing kids' creativity and love of books through programs that included free tutoring and writing workshops. Soon after, branches of 826 Valencia opened in other major cities, including Chicago, Seattle, and New York, and the organization became known as 826 National.

A number of fiction books followed Eggers's memoir, but none received the praise awarded to his 2006 work *What Is the What: The Autobiography of Valentino Achak Deng*. The book, which chronicled the story of a Sudanese man who had survived the destruction of his family's village during The Sudan's civil war and made his way to the U.S., was a finalist for the National Book Critics Circle award. In 2007 the Heinz Family Foundation made Eggers the youngest-ever recipient of its arts and humanities award, noting his contributions not only to literature but also to the writing community. (MELISSA ALBERT)

Espagnat, Bernard d'

(b. Aug. 22, 1921, Fourmagnac, France) In March 2009 French physicist and philosopher of science Bernard d'Espagnat was awarded the Templeton Prize, which is given annually to the "living person who has made an exceptional contribution to affirming life's spiritual dimension." The Templeton Foundation saw such a contribution in d'Espagnat's notion of a "veiled reality" (*réel voilé*) beyond the reach of science. D'Espagnat's research into the philosophical foundations of quantum physics addressed the conflict between the realist and instrumentalist views of the results of quantum mechanics—that is, whether they reflect underlying physical reality or are merely rules for predicting the outcomes of experiments. D'Espagnat's work on Bell's theorem (which indicates that the realist interpretation is not viable and which appears to have received experimental confirmation) led him to reject conventional realism, but the fact that scientific theories remain falsifiable by experiment steered him to the idea that a veiled reality underlies the phenomena of physics.

D'Espagnat was educated at the Lycée Condorcet and the École Polytechnique in Paris. In 1950 he received a doctorate in physics, under the direction of Louis de Broglie, from the University of Paris. After a year as a research assis-

tant to Enrico Fermi at the University of Chicago, d'Espagnat worked at CERN (European Organization for Nuclear Research). In 1959 he was appointed to the faculty of what later became the University of Paris-Sud in Orsay; he was made a full professor in 1967 and professor emeritus in 1987. He was also director of the Laboratory of Theoretical Physics and Elementary Particles at Paris-Sud. D'Espagnat's more important publications include *Conceptions de la physique contemporaine* (1965), which was awarded the Prix Lecomte du Noüy; *Conceptual Foundations of Quantum Mechanics* (1971); *À la recherche du réel: le regard d'un physicien* (1979; *In Search of Reality*, 1983); "The Quantum Theory and Reality" (*Scientific American*, November 1979); *Un Atome de sagesse: propos d'un physicien sur le réel voilé* (1982), which was awarded the Prix Robert Blanché; *Penser la science ou les enjeux du savoir* (1990); *Le Réel voilé, analyse des concepts quantiques* (1994; *Veiled Reality: An Analysis of Present-Day Quantum Mechanical Concepts*, 1995); and *Traité de physique et de philosophie* (2002; *On Physics and Philosophy*, 2006). D'Espagnat was elected to the International Academy of Philosophy of Science in 1975 and to the Académie des Sciences Morales et Politiques in 1996. (MARTIN L. WHITE)

Fosso, Samuel

(b. 1962, Kumba, Cameroon)

In his photographic series "African Spirits," an exhibit held from October 2008 to April 2009 at the Jean Marc Patras/Galerie in Paris, Cameroonian photographer Samuel Fosso presented what appeared to be portraits of black leaders, politicians, and cultural icons, ranging from former South African president Nelson Mandela to American boxer Muhammad Ali to American activist and academic Angela Davis. In fact, these 14 images were "autoportraits," as Fosso transformed himself into people and characters drawn from popular culture and politics. His work incited comparisons to traditional African studio photographers (such as Seydou Keita of Mali) and Western photographers who utilized self-portraiture (such as American Cindy Sherman), but Fosso operated in relative isolation in his studio in Bangui, C.A.R. Yet by 2009 Fosso's work was regularly featured in solo and group exhibitions around the world, including the 2008 edition of the "Festival des rencontres de la photographie d'Arles" in France.

Fosso lived in Nigeria as a child, but in the early 1970s the Biafran war forced his family to flee to Bangui, where he ultimately settled after the war destroyed their Nigerian home. He discovered photography in his early teens while working as a shoemaker, and by 1975, after a brief apprenticeship with a local photographer, he had opened his own studio. He lived and worked at the studio, creating portraits of the local residents by using studio lights fashioned from pots and backgrounds made from traditional African fabrics or hand painted by friends. At the day's end he would often step in front of the camera to finish a roll of film. While Fosso used these images to communicate his well-being to his grandmother in Nigeria, the staged self-portraits also became agents of transformation and expression for the young artist, who was acutely aware of shifting cultural and political climates. In many of his early images, Fosso borrowed elements from popular culture that he admired, even having local tailors replicate outfits worn by celebrities. In 1993 these images were discovered by French photographer Bernard Deschamps, who was looking for photographers to be included in the first edition of "Rencontres de la photographie africaine" in Bamako, Mali. That 1994 exhibition launched Fosso's career as an artist, and he later went on to win the Afrique en Création award in 1995 and the prestigious Prince Claus Award in 2001.

Fosso evolved and expanded the scope of his autoportraits, using these constructed images to critically narrate and reference cultural and political events. In the Tati series, commissioned by the Parisian department store Tati in 1997, Fosso depicted himself as characters ranging from an African chief draped in gold jewelry and leopard skins to a glamorous African American woman. Regardless of his international success, Fosso continued to live and operate his photography studio in Bangui, where the local community remained largely unaware of his achievements as an artist. (MICHAEL RAZ-RUSSO)

Franken, Al

(b. May 21, 1951, New York, N.Y.)

When on Jan. 5, 2009, U.S. Senate candidate Al Franken of the Democratic-Farmer-Labor Party was declared the winner of Minnesota's Senate seat with a lead of only 225 votes, the resultant controversy over his slim victory did not seem to faze Franken, a onetime comedian and longtime acid-tongued

opponent of the right. Though initially he had been narrowly beaten in the November 2008 election by the incumbent senator, Republican Norm Coleman, Franken came out ahead in the mandatory recount of the 2.9 million undisputed ballots (along with thousands of other disputed and absentee ballots). Coleman contested the result, but on April 13, 2009, Franken was again declared the winner. Coleman then took his fight to court. After a statewide recount ended with Franken ahead by 312 votes, Coleman again appealed, but on June 30 the Minnesota Supreme Court dismissed the challenge and ruled that Franken was entitled to be certified the winner. Because Coleman's term had expired on January 3, Minnesota's Senate seat was left vacant for six months while the matter played out in the courts. Franken's Senate campaign was an unexpected move for the comic-turned-politician, who previously had been best known for playing self-help guru Stuart Smalley on NBC television's *Saturday Night Live* (SNL) and for penning such satiric books as *Rush Limbaugh Is a Big Fat Idiot and Other Observations* (1999), *Lies and the Lying Liars Who Tell Them: A Fair and Balanced Look at the Right* (2004), and *The Truth (with Jokes)* (2005).

When Alan Stuart Franken was four years old, his family moved from New York City to Minnesota, where his father ran a factory. Franken earned a bachelor's degree (1973) in political science at Harvard University, but after graduation he returned to Minnesota to perform in Minneapolis's Brave New Workshop comedy troupe, which in 1975 led to a job with SNL. Franken worked for that show as a writer and performer until 1980, again during 1985–95, and briefly in 2008. He shared four Emmy Awards for writing on the show and an additional nine nominations. He also did some acting, wrote and starred in a 1995 film featuring his Stuart Smalley character, and penned the screenplay for the dramatic film *When a Man Loves a Woman* (1994).

After leaving SNL in 1995, Franken became an outspoken political satirist for the left, publishing a number of books. He was also, from 2004 to 2007, the host of the Air America radio program *The Al Franken Show* (originally called *The O'Franken Factor*). Conceived by Franken as a weapon in the fight to get Pres. George W. Bush "unelected," the program used interviews and commentary to advance Franken's progressive political views. The show's final

episode, on Feb. 14, 2007, ended with a bang when Franken announced his candidacy for the Minnesota Senate seat.

It would have been easy to mistake the announcement for a joke in line with comedian Stephen Colbert's later 2008 presidential bid. Franken, however, gained respect—if grudging from some quarters—for his tireless campaigning and emerged as a real threat to incumbent Coleman. When Franken took office on July 7, the Senate Democrats (supported by the two independents with seats) held a filibuster-proof 60–40 majority. (MELISSA ALBERT)

Funes, Mauricio

(b. Oct. 18, 1959, San Salvador, El Sal.) On March 15, 2009, Mauricio Funes was elected president of El Salvador, with a five-year term to begin on June 1. As the candidate of the Farabundo Martí Front for National Liberation (FMLN), Funes defeated National Republican Alliance (ARENA) candidate Rodrigo Ávila by 51.3–48.7%.

Carlos Mauricio Funes Cartagena, the son of an accountant and a secretary, was educated in Roman Catholic elementary and secondary schools before majoring in communications at the Jesuit Central American University of José Simeón Cañas (UCA). There he was greatly influenced by sociology professor Francis Miguel ("Hato") Hasbún, a leftist activist. The violent death of his older brother, who was killed by police during a student protest in August 1980, induced Funes to leave the university before completing his degree. Despite leftist leanings, he did not join a political party or participate in the ongoing guerrilla warfare. Instead he taught literature in Catholic schools, where he emphasized audiovisual methods of communication.

In 1986 Funes became a reporter for the state educational channel, launching a highly successful career in television journalism. In 1987 he moved to Channel 12, where he became popular for his analytic coverage of Salvadoran politics, which reflected leftist and working-class interests. He interviewed leaders of the FMLN and other leftist parties, as well as leftist leaders from abroad. In 1991 Funes assisted Hasbún in developing an audiovisual centre and radio station at the UCA. He also was a longtime correspondent for CNN TV's Spanish-language telecasts.

Funes's investigative reporting on Channel 12 won him several awards, including the prestigious Maria Moors Cabot Prize in inter-American journal-

ism in 1994. He was promoted to news director at Channel 12 in 1997, but his harsh criticism of the ARENA government led to censorship and death threats, and in 2005 Channel 12 fired him and several other journalists. Funes continued to appear on other channels, however, and remained a national celebrity among leftists. With Hasbún as his adviser, Funes exploited his popularity to become the FMLN candidate for the presidency in September 2007, the first FMLN presidential candidate who had not been a guerrilla fighter in the 1980s.

In the long electoral campaign, Funes criticized ARENA for doing nothing for the Salvadoran people in its nearly 20-year reign. He promised social justice, economic reform, improved standards of living, universal health care, and better access to education, housing, and pensions, as well as policies to stem the rising crime and gang violence. Once elected, he took a pragmatic and conciliatory tone toward the opposition. He emphasized that he was not a Marxist, or even a socialist; promised that he had no interest in imposing such ideologies as systems of government in El Salvador; and pledged not to align the country's foreign relations too closely with either Venezuela or the U.S. Shortly after his inauguration, however, Funes signed a document that provided for the reestablishment of diplomatic relations with Cuba, which had been severed 50 years earlier.

(RALPH LEE WOODWARD, JR.)

Geithner, Timothy

(b. Aug. 18, 1961, New York, N.Y.) Having been nominated to serve as secretary of the U.S. Department of the Treasury in the administration of Pres. Barack Obama, Timothy Geithner was confirmed by the Senate in a 60–34 vote on Jan. 26, 2009. Geithner had formerly served (2003–09) as president of the Federal Reserve Bank of New York. As treasury secretary, he was tasked with leading the administration's efforts toward financial recovery amid the ongoing global economic crisis. In March he laid out a comprehensive plan to help free banks from bad housing loans and mortgage-related securities—a move that ignited a stock-market rally. On December 9, Geithner announced that the \$700 billion financial bailout program that Congress had approved in the fall of 2008 would be extended until October 2010. Although critics had argued for the program to be shut down, Geithner defended the

extension as necessary in order to assist homeowners and small businesses and to ensure that the federal government would be able to respond effectively if financial conditions worsened.

Geithner, whose father was a consultant on international development, attended high school in Thailand, and in 1983 he earned a bachelor's degree in government and Asian studies from Dartmouth College, Hanover, N.H. Two years later he received a master's degree in international economics and East Asian studies from Johns Hopkins University, Baltimore, Md.

After having completed his education, Geithner took a job as a research assistant at Kissinger Associates, an international consulting firm founded by former U.S. secretary of state Henry Kissinger. Geithner joined the Treasury Department in 1988, and he held a number of positions within the agency's international affairs division. While there he worked closely with Lawrence H. Summers, who identified Geithner as a gifted official with a deft political touch. In 1999 Geithner was promoted to undersecretary for international affairs, and he represented the Treasury Department at meetings of the Group of Eight.

In 2001 Geithner left the Treasury Department, and later that year he was named director of policy development and review at the IMF. He remained in that role until 2003, when the Federal Reserve Bank of New York's board of directors nominated him to serve as its president and CEO. While not formally trained as an economist, Geithner brought to the position extensive experience with international monetary policy, and he became an advocate for greater transparency and increased government oversight within the financial industry. As the federal government's unofficial liaison to Wall Street, Geithner was a key participant in the response to the credit crisis that began in 2007. He personally oversaw JPMorgan Chase's federally backed takeover of the failed investment bank Bear Stearns in March 2008, and he spent the rest of the year helping to craft the Federal Reserve's response to a series of corporate meltdowns within the banking and insurance industries. (MICHAEL RAY)

Ghosh, Amitav

(b. July 11, 1956, Calcutta [now Kolkata], India) In 2009, a year after its publication, Amitav Ghosh's epic novel *Sea of Poppies* continued to draw accolades. It was a finalist for the Man

Katja Lenz—AFP/Getty Images



Best-selling author Amitav Ghosh

Booker Prize in 2008, and in July 2009 it was co-winner of the Vodafone-Crossword Award, a prominent Indian prize awarded to a book written in English by an author of Indian origin. Among the books against which Ghosh's novel was competing was *The Enchantress of Florence* by Salman Rushdie, another Indian-born writer to whose work Ghosh's had often been compared.

As a child, Ghosh, whose father was a diplomat, lived in India, Bangladesh, Sri Lanka, and Iran. He received a B.A. (1976) and an M.A. (1978) from the University of Delhi; at about the same time, he also worked as a newspaper reporter and editor. He subsequently attended the University of Oxford, where he received a Ph.D. (1982) in social anthropology. Ghosh went on to teach at the University of Delhi, the American University in Cairo, Columbia University, New York City, and Queens College of the City University of New York, among other institutions. After a stint at Harvard University that began in 2004, Ghosh turned to writing full time and split his time between the United States and India.

Ghosh's ambitious novels use complex narrative strategies to probe the nature of national and personal identity, particularly of the people of India and Southeast Asia. His first novel, *The Circle of Reason* (1986), follows an Indian protagonist who, suspected of being a terrorist, leaves India for northern Africa and the Middle East. Blending elements of fable and picaresque fiction, it is distinctly postcolonial in its marginalization of Europe and post-

modern in its nonlinear structure and thick intertextuality. *The Shadow Lines* (1988) is a sweeping history of two families (one Indian and the other English) that are deeply shaped by events following the departure of the British from India in 1947. *The Circle of Reason* and *The Shadow Lines*, both written in English, were widely translated and gained Ghosh an international readership.

The Calcutta Chromosome: A Novel of Fevers, Delirium, and Discovery (1995) represented his foray into science fiction and earned him the Arthur C. Clarke Award; this densely layered novel offers an alternate history of the discovery of the parasite that causes malaria. Ghosh's subsequent novels include *The Glass Palace* (2000), a familial history centred on Burma in the late 19th and early 20th centuries, and *The Hungry Tide* (2004), set in Bengal and featuring American and Indian characters. *Sea of Poppies* shows Ghosh turning away from his earlier novels' formal experimentation and toward a more traditional form of storytelling. The first book of a projected trilogy, this novel describes individuals who are on a ship in Southeast Asia carrying coolies (indentured labourers) and opium.

Ghosh also wrote *In an Antique Land* (1992), a book that straddles several genres—travel writing, autobiography, memoir—and also blurs fiction and nonfiction. His nonfiction works include *Dancing in Cambodia, at Large in Burma* (1998), *The Imam and the Indian* (2002), and *Incendiary Circumstances: A Chronicle of the Turmoil of Our Times* (2005). (J.E. LUEBERING)

Gilbert, Alan

(b. Feb. 23, 1967, New York, N.Y.)

On Sept. 16, 2009, American conductor Alan Gilbert opened the 2009–10 season of the New York Philharmonic Orchestra as its new music director. At the age of 42, he was one of the youngest music directors in the orchestra's history, and he was the first native New Yorker to hold the position. Known for programming contemporary music along with the traditional repertoire and for his ability to communicate with and engage audiences, he promised to bring new energy to one of the most prominent orchestras in the U.S. The appointment was also a kind of homecoming for Gilbert, the son of longtime Philharmonic violinists Michael Gilbert, who retired in 2001, and Yoko Takebe, who would now perform under her son's direction.

Jennifer Taylor—The New York Times/Redux



American conductor Alan Gilbert

Gilbert received his early music education, including lessons on the violin and viola, from his parents. He graduated from Harvard University in 1989 and received (1994) a master's degree in music from the Juilliard School, New York City; he also studied at the Curtis Institute of Music. He was assistant conductor (1995–97) of the Cleveland Orchestra and in 1997 won the Seaver/National Endowment for the Arts Conductor Award. In 2000 Gilbert became the chief conductor and artistic adviser of the Royal Stockholm Philharmonic Orchestra, a post he held until 2008. It was in Stockholm that he developed a reputation for venturesome programming, which included festivals devoted to such living composers as Henri Dutilleux, Hans Werner Henze, and John Adams. In addition, with that orchestra he recorded music by Daniel Börtz and Christopher Rouse. In 2004 Gilbert became the principal guest conductor of the NDR Symphony Orchestra of Hamburg. During this period he also conducted a number of other major orchestras, including the Berlin Philharmonic, the Royal Concertgebouw of Amsterdam, the Chicago Symphony Orchestra, the Los Angeles Philharmonic, and orchestras in Japan and China. At the same time, Gilbert worked in opera, first at the Santa Fe (N.M.) Opera, where in 2003 he became the company's first music director, and later at such major houses as the Zürich Opera, the Vienna State Opera, and the Metropolitan Opera in New York City.

Gilbert conducted the New York Philharmonic on many occasions before his appointment in June 2007 as the 25th music director. His debut took place in 2001, when he led the orchestra in music of Charles Ives, part of a festival devoted to the composer. In 2008 he con-

ducted a concert in Carnegie Hall honoring Leonard Bernstein. In early 2009 the Juilliard School appointed Gilbert the first holder of the newly created William Schuman Chair in Musical Studies; he was to undertake a number of teaching duties and to serve as guest conductor of the Juilliard Orchestra.

(ROBERT RAUCH)

Gladwell, Malcolm

(b. Sept. 3, 1963, London, Eng.)

Popular-culture journalist Malcolm Gladwell coasted into 2009 on the zeitgeistian torrent generated by the previous year's release of his third book, *Outliers: The Story of Success*, which hovered persistently near the top of the *New York Times* best-seller list. In *Outliers*, a series of concisely encapsulated theories purporting to explain the dynamics of success, Gladwell employed his trademark blend of sociological anecdotes, pop culture, and snappy vocabulary, a style so distinctive that it had already spawned a new adjective—"Gladwellian." The book cites paragons of success such as the Beatles—who often played eight-hour sets at a Hamburg bar before they achieved international fame—in support of the assertion that ascendancy of the pop star sort is due more to extraordinary circumstance and effort than to extraordinary talent. Gladwell's critics dismissed some of his conclusions (for example, that Asian students are good at math because they come from agricultural societies emphasizing hard work) as spurious and found his simplistic rhetorical style patronizing. A raft of panegyric articles deemed Glad-

well a guru, however, and while the staying power of his ideas remained to be seen, he had already proved himself adept at treading the delicate boundary between popularizer and intellectual.

Gladwell's family moved in 1969 from the U.K. to Elmira, Ont., where his father taught at the nearby University of Waterloo and his Jamaican mother practiced psychotherapy. Gladwell's mixed ethnicity made him unique in the agrarian surroundings of Elmira, a largely Mennonite area, and he later cited the singular perspective afforded by his heritage as a motivating factor in what he called his intellectual adventuring. As a teen he immersed himself in conservative politics: he idolized American pundit William F. Buckley, and during his time at Trinity College, University of Ontario, he displayed a poster of U.S. Pres. Ronald Reagan on his wall. (Gladwell later became more liberal, however, and lamented that he could not vote for Barack Obama in the 2008 presidential election, as he lacked U.S. citizenship.)

Having graduated in 1984 with a degree in history, Gladwell moved to the U.S. and obtained a position at the conservative magazine *The American Spectator*. After being fired in 1985, he worked for a conservative think tank in Washington, D.C., while freelancing for several periodicals. He was hired (1987) as a business and science writer for the *Washington Post* newspaper and then served (1993–96) as the *Post's* New York bureau chief before catching the eye of *The New Yorker* editor Tina Brown, who in 1996 offered him a position as a staff writer for that magazine.

In 2000 Gladwell released his first book, *The Tipping Point: How Little Things Can Make a Big Difference*, which contends that social epidemics result from a combination of seemingly arbitrary contextual details and the actions of a few key types of people. It became a best seller, as did its successor, *Blink: The Power of Thinking Without Thinking* (2005), which extols the untold virtues of snap judgment. He also compiled some of his best *New Yorker* columns, including his award-winning profile of inventor Ron Popeil, into the collection *What the Dog Saw and Other Adventures* (2009). (RICHARD T. PALLARDY)

Popular-culture journalist Malcolm Gladwell



Joe Tabacca/AP

Graham, Dan

(b. March 31, 1942, Urbana, Ill.)

Dan Graham: Beyond, the first American retrospective of the career and works of contemporary artist Dan Graham, opened on Feb. 15, 2009, at the

Museum of Contemporary Art, Los Angeles, in collaboration with the Whitney Museum of American Art in New York, where the show ran from June 25 to October 11. The retrospective spanned more than 40 years of Graham's works, including films, videos, installations (often utilizing objects such as mirrors and partitions), photography, writing, and architecture designed to defamiliarize spectators via juxtapositions.

Graham grew up in Westfield, N.J. As a teenager he was an avid reader and was heavily influenced by the writings of French *nouveau roman* ("new novel") writers, including Alain Robbe-Grillet and Michel Butor. Graham moved to New York City in 1963 and initially began a career as a writer; he addressed a wide variety of topics, including art, architecture, television, music, and self-awareness. The following year he cofounded and directed the John Daniels Gallery, which exhibited the works of new conceptual and minimalist artists, such as Sol LeWitt, Robert Smithson, and Donald Judd. Graham closed the gallery in 1965 owing to insolvency and began instead to create his own artworks, which not surprisingly showed heavy literary influence. Graham explored systematic repetition in the conceptual works *March 31, 1966* (1966) and *Schema (March 1966)* (1966–67) and again in his magazine piece on suburban American housing, *Homes for America* (1966–67).

During the 1970s Graham delved into film and video performances featuring actors, including himself, in what he termed *pavilions*—steel, essentially roomlike architectural structures featuring two-way reflective-glass mirrors intended to allow individuals to view themselves as others viewed them—a technique that created a new form of art. He often reflected on these performances, such as *Opposing Mirrors and Video Monitors on Time Delay* (1974; 1993)—which used videos, wall mirrors, and partitions to confuse the spacial sense of the observer—and *Performer/Audience/Mirror* (1977), in various essays, including *Video-Architecture-Television* (1979).

In the 1980s Graham began to explore art in its social context. His examination of modern art themes and popular culture—as evidenced in his video documentary *Rock My Religion* (1982–84), which focused on rock-and-roll music and culture—gained him somewhat of a cult following among younger artists.

Graham's works were featured in several important exhibitions, including

Public/Private (1994), which opened at the Moore College of Art and Design in Philadelphia. He also published several collections of essays, including *Rock My Religion: Writings and Projects 1965–1990* (1993) and *Two-Way Mirror Power: Selected Writings by Dan Graham on His Art* (1999).

Dan Graham, Works 1965–2000, a major retrospective, opened in 2001 at the Museu Serralves in Porto, Port. The following year he completed the commissioned *Yin/Yang Pavilion* at the Massachusetts Institute of Technology. In 2004 Graham collaborated with the rock-music group Japanther and the artists Laurent P. Berger, Rodney Graham, Bruce Odland, and Tony Oursler on the puppet rock opera *Don't Trust Anyone over Thirty: Entertainment by Dan Graham with Tony Oursler and Other Collaborators*, which featured puppets, live music, sound recordings, and video projections. He continued to create pavilions into the 21st century and in 2009 completed *Crazy Spheroid: Two Entrances*. (JEANNETTE NOLEN)

Gromov, Mikhail Leonidovich

(b. Dec. 23, 1943, Boksitogorsk, Russia, U.S.S.R.) In a formal ceremony in Oslo on May 19, 2009, the 2009 Abel Prize (awarded by the Norwegian Academy of Science and Letters for "outstanding scientific work in the field of mathematics") was bestowed on Soviet-born French mathematician Mikhail Gromov for his "revolutionary contributions to geometry." Gromov's work in Riemannian geometry, global symplectic geometry, and geometric group theory was cited by the academy.

Among Gromov's principal results were Gromov's compactness theorem, the Gromov-Hausdorff convergence, the theorem of almost flat manifolds, Gromov's Betti number theorem, and the Bishop-Gromov inequality in Riemannian geometry; the theory of pseudoholomorphic (or *J*-holomorphic) curves, the Gromov-Witten invariants, and the Gromov nonsqueezing theorem in symplectic geometry; Gromov's theorem on groups of polynomial growth and Gromov hyperbolic groups in geometric group theory; and the h-principle and the theory of complex integration in the theory of partial differential equations. Gromov's work had applications not only in mathematics but also in physics (for example, the measurement of black holes and heavy stars) and biology (for example, pattern recognition, which was a research interest of Gromov's).

Gromov received master's (1965), Ph.D. (1969), and D.Sc. (1973) degrees from Leningrad State University (now St. Petersburg State University), where he served as an assistant professor (1967–74). He taught at the State University of New York at Stony Brook (1974–81) before moving to France (becoming a citizen in 1992), where he taught at the University of Paris VI, now Pierre and Marie Curie University (1981–82), and the Institut des Hautes Études Scientifiques (from 1982). He also continued to teach part of each academic year in the United States, first at the University of Maryland (1991–96) and then at New York University (from 1996), where he was Jay Gould Professor of Mathematics in the Courant Institute for Mathematical Sciences. Gromov was elected to the American Academy of Arts and Sciences (1989) and the French Académie des Sciences (1997). In addition to the Abel Prize, Gromov was the recipient of the Élie Cartan (1984), Wolf (1993), Steele (1997), Lobatchewski (1997), Balzan (1999), and Kyoto (2002) prizes.

(MARTIN L. WHITE)

Grybauskaite, Dalia

(b. March 1, 1956, Vilnius, U.S.S.R. [now Vilnius, Lith.]) On July 12, 2009, former EU budget commissioner Dalia Grybauskaite was inaugurated as the president of Lithuania, becoming the first woman to serve as chief of state of the Baltic country. Following violent protests in the Lithuanian capital of Vilnius in January as the global economic crisis deepened, Grybauskaite announced her decision to leave her EU post to run as an independent candidate in Lithuania's May 17 presidential election. Touting her extensive experience in finance and economics, she swept to an overwhelming victory, capturing more than 69% of the vote to just under 12% for her nearest rival—the largest-ever margin of victory for a Lithuanian presidential candidate.

Grybauskaite studied at Zdanov University, Leningrad (now St. Petersburg) and earned (1988) a doctorate in economics from the Moscow Academy of Public Sciences. From 1983 to 1990 she was a lecturer at the Communist Party's training college in Vilnius, and after Lithuania gained full independence in 1991, she held posts in the country's Ministry of International Economic Relations and Ministry of Foreign Affairs. After serving (1996–99) as the plenipotentiary minister at the Lithuanian embassy in the U.S., she returned to Vil-



Lithuanian Pres. Dalia Grybauskaitė

nius to assume the office of deputy finance minister and became Lithuania's chief negotiator with the IMF and the World Bank.

In 2000 Grybauskaitė was appointed deputy foreign affairs minister and took a leadership role within the delegation responsible for negotiating Lithuania's accession to the EU. She was named (2001) finance minister, in which position she strongly supported privatization and liberalization efforts, among other reform measures. She also developed a reputation for toughness and blunt talk; numerous media outlets began calling her Lithuania's "Iron Lady," a reference to former British prime minister Margaret Thatcher, for whom Grybauskaitė had publicly expressed admiration. In 2004 Grybauskaitė was tapped to serve in Brussels as the European commissioner responsible for financial programming and budget; her stellar performance in this role was recognized when she was selected as the 2005 EU Commissioner of the Year.

As president of Lithuania, Grybauskaitė aimed to lift the country's economic fortunes in part by stimulating exports, cutting public expenditures, working to efficiently implement EU aid, and offering tax relief to owners of small businesses. On the foreign policy front, she was expected to pursue improved economic relations with Russia as well as to strengthen the country's alliances with other EU member states.

Grybauskaitė also appeared to be eager for Lithuania to take a more visible role on the international stage. Addressing the UN General Assembly in September, she declared that large and small countries shared equal responsibilities toward global society and pledged Lithuania's help in promoting UN values and objectives. (SHERMAN HOLLAR)

Hanna, Jack

(b. Jan. 2, 1947, Knoxville, Tenn.)

American zoologist and television personality Jack Hanna continued to exhibit his passion for wildlife and his inexhaustible energy in 2009 as he made personal appearances across the United States with his diverse assortment of animal ambassadors. Meanwhile, his Emmy Award-winning (2008) television series *Jack Hanna's Into the Wild* entered its third season, and his newest book, *Jungle Jack's Wackiest, Wildest, Weirdest Animals in the World* (2009), was published.

Jack Bushnell Hanna was raised on a farm in Tennessee and showed an early interest in pursuing a career with animals, volunteering to work for his family's veterinarian at the age of 11. After he earned (1969) a bachelor's degree from Muskingum College, New Concord, Ohio, Hanna and his wife opened a pet shop in Knoxville. He began his zoological career in Florida as director (1973–75) of the Central Florida Zoo in Sanford, Fla.

In 1978 Hanna became director of the Columbus (Ohio) Zoo, which he transformed from a small run-down facility into a nationally acclaimed zoological park. His first order of business was to raise zoo attendance by offering nu-

merous educational programs and hosting events that also provided entertainment. In addition, he networked with local business leaders to raise funds to develop larger, more natural habitats to replace the zoo's antiquated cagelike animal enclosures. To increase public awareness of the zoo after the birth of twin gorillas there in 1983, he accepted an invitation to appear on the television program *Good Morning America*. This engagement led to numerous other TV opportunities for Hanna, including regular visits with his critters on *Late Night with David Letterman* and *Larry King Live* and a stint as wildlife correspondent for FOX News, CNN, and other news programs. Hanna's likable, easy-going character and the fun and entertaining way in which he showed off the zoo's animals made him extremely popular. In 1992 he was named director emeritus of the Columbus Zoo so that he could dedicate more time to his media obligations.

Hanna then launched his own series of television shows, *Jack Hanna's Animal Adventures* (debuted 1992), *ZooLife with Jack Hanna* (1992–94), and *Jack Hanna's Into the Wild* (debuted 2007). He also authored several books, including *Monkeys on the Interstate* (1989), *Jungle Jack Hanna's What Zookeepers Do* (1998), and *Jungle Jack: My Wild Life* (2008).

With the addition of a manatee exhibit in 1999, the Columbus Zoo changed its name to the Columbus Zoo and Aquarium; other expansions include the Zoombezi Bay water park, Jungle Jack's Landing amusement park, and the Safari Golf Club. In 2008 Hanna was honoured with the Association of Zoos and Aquariums' R. Marlin Perkins Award for Professional Excellence, and in February 2009 the *USA Travel Guide* named the Columbus Zoo and Aquarium the country's number one zoo.

(BARBARA A. SCHREIBER)

"Jungle" Jack Hanna poses with a spectacled bear cub.



Courtesy of Rick A. Prebeg of World Class Images

Hariri, Saad al-

(b. April 18, 1970, Riyadh, Saudi Arabia) In June 2009 Saudi-born businessman and politician Saad al-Hariri, the son of former Lebanese prime minister Rafiq al-Hariri, was named prime minister of Lebanon. With relatively little political experience, the younger Hariri, who had entered politics following his father's assassination in February 2005, was faced with the task of forming a unity government in

one of the world's most complex political environments.

Hariri received his elementary education at the school of Frères Maristes in Rmaila (al-Rumaylah), Leb. (near Sidon), and completed his secondary education in France and Saudi Arabia. After receiving a degree (1992) in international business from Georgetown University, Washington, D.C., Hariri worked at Saudi Oger, a large Saudi Arabia-based firm owned by his father, where he oversaw construction work and served as a maintenance contractor for the Saudi royal palaces. After he gained the position of general manager at age 26, Hariri also worked to extend the business into the telecommunications sector and helped orchestrate Saudi Oger's acquisition of Turk Telekom. (The deal, completed in 2006, was at that time the largest private business deal in Turkey's history.)

After his father's assassination in a Beirut car bombing, Hariri was selected by his family to follow in his father's political footsteps. Although initially hesitant, Hariri soon took charge of his father's political party, Future Movement (Tayyar al-Mustaqbal). A powerful Sunni bloc, the Future Movement was the largest contingent within the March 14 coalition (named to commemorate the date, in 2005, of massive anti-Syrian protests in Beirut), which opposed Syrian influence in Lebanon's affairs. Although the coalition won a clear majority in the 2005 parliamentary elections, Hariri did not consider himself politically mature enough to serve as prime minister; instead, he supported Fouad Siniora, a former finance minister and close ally of his father, for the position.

During the next four years, Hariri worked to forge and refine his own political identity. Significant political successes included those in January 2007, when his lobbying helped to secure a sizable financial aid package from the United States to assist in Lebanese reconstruction, and in late May 2007, when the United Nations Security Council approved the establishment of a special court in which to try suspects linked to his father's assassination. In May 2008—with Lebanon in the midst of a dangerous political stalemate that had followed the departure of Pres. Émile Lahoud from office in November 2007—Hariri helped to negotiate a unity government and navigate the country away from violent confrontation.

In elections in June 2009, Hariri again led the March 14 coalition to victory.

Shortly thereafter he was named prime minister and was asked by Pres. Michel Suleiman to take on the complex task of forming a new government. Despite setbacks that threatened to derail the negotiations, in early November Hariri announced that a unity government had been successfully formed. He was formally sworn in on November 9.

(LAURA ETHEREDGE)

Hatoyama, Yukio

(b. Feb. 11, 1947, Tokyo, Japan)

On Aug. 30, 2009, Japanese politician Yukio Hatoyama led the main opposition Democratic Party of Japan (DPJ) to a historic triumph over the ruling Liberal-Democratic Party (LDP) in Japan's general election. Although the LDP had dominated political life in the country since the mid-1950s for all but a brief period in the 1990s, its public standing had faltered since the popular Junichiro Koizumi stepped down as prime minister in 2006. By July 2009, when Prime Minister Taro Aso announced the date on which the general election was to be held, it had become clear that the LDP was in trouble. As the DPJ candidate, Hatoyama promised to end wasteful spending and move toward government decentralization. Predictions of a landslide DPJ victory came true as scores of LDP lawmakers were swept from office. The DPJ secured 308 of the 480 seats in the lower house of the Diet (parliament), while the LDP was left with just 119 seats. Hatoyama succeeded Aso as prime minister on September 16.

Hatoyama hailed from a Japanese political dynasty. His great-grandfather Kazuo Hatoyama served in the Imperial Diet in the 1890s. His grandfather Ichiro Hatoyama founded the LDP and served (1954–56) as the prime minister. In addition, Hatoyama's maternal grandfather, Shojiro Ishibashi, was the founder of the tire manufacturer Bridgestone Corp.

Hatoyama was educated as an engineer, earning a bachelor's degree (1969) from the University of Tokyo and a doctorate (1976) from Stanford University. He taught at Senshu University in Tokyo beginning in 1981 and then became private secretary to his father, Ichiro Hatoyama, a member of the upper house of the Diet.

He began his own political career as a member of the LDP, winning election in 1986 to the lower house as a representative from Hokkaido. Hatoyama held his seat in the Diet through consecutive elections thereafter.

In 1993 Hatoyama broke with family tradition and left the LDP; he took a position as deputy chief cabinet secretary in the coalition government of Morihiro Hosokawa, the founder of the reform Japan New Party. Hatoyama served under Hosokawa until the coalition government collapsed in 1994. Over the next few years, Hatoyama became a founding member of the DPJ and rose through the party's ranks. From September 1999 to December 2002, he served as president of the party. He was elected again to that position in May 2009, only days after the resignation of powerful DPJ leader Ichiro Ozawa amid a financial corruption scandal.

(LORRAINE MURRAY)

Henry, Lenny

(b. Aug. 29, 1958, Dudley, West Midlands, Eng.) In February 2009 British comedian Lenny Henry made his stage debut in the lead role of Shakespeare's *Othello* at the West Yorkshire Playhouse in Leeds. His performance won rave reviews (one critic called it "one of the most astonishing debuts in Shakespeare [he had] ever seen"), and the production was transferred to London's celebrated West End theatre district in September.

Lenworth George Henry was the son of Jamaican immigrants. As a teenager, he performed a comedy act in local nightclubs, which led to a successful

British actor-comedian Lenny Henry promotes the charity organization Comic Relief's Red Nose Day.



Suzan—PA Photos/Landov

appearance on the television talent program *New Faces* when he was 16 years old. The national exposure he gained from that show helped to secure him a role in *The Fosters* (1976–77), the first British situation comedy with an all-black cast. He followed this stint with a number of short television appearances that varied from Saturday morning children's shows (*Tiswas*) to surreal alternative sitcoms (*The Young Ones*).

In 1984 Henry married fellow comedian Dawn French. That same year he was given his own series on the BBC, *The Lenny Henry Show*. The program consisted of a mix of stand-up comedy and sketches that featured him playing a number of offbeat, catchphrase-spouting characters, routines that quickly became his comedic calling card. Although his impersonations were mostly crowd-pleasing, they also drew criticism for playing up racial stereotypes, and Henry later lamented that some of his roles were “self-detrimental.” The popular show went through a series of cancellations and relaunches, including a short-lived format change to a pseudositcom during 1987–88. Henry founded his own production company, Crucial Films, in 1991. That same year he attempted to break into Hollywood by starring in the film *True Identity*, which was both a critical and a commercial flop.

Henry rebounded by returning to the BBC to star in the sitcom *Chef!* (1993–96), in which he played against type as the imperious perfectionist chef-restaurateur Gareth Blackstock. He was given the Radio and Television Industry Club Award for BBC Personality of the Year in 1993. He took on purely dramatic roles as a drug dealer in *Alive and Kicking* (1991) and as the head teacher of Hope Park, a down-trodden inner-city school in *Hope and Glory* (1999–2000). Henry's serious performances won many positive notices from critics, and he was encouraged to take on varied small parts in films such as *Harry Potter and the Prisoner of Azkaban* (2004) and *MirrorMask* (2005).

In 1988 Henry began hosting the annual charity telethon Comic Relief, and he soon became one of the most public faces of that organization's annual fundraising Red Nose Day. In 1999 he was made CBE in honour of his entertainment and charity work. After years of part-time study, Henry graduated (2007) from Open University with a degree in English literature, which he cited as the source of his newfound love of theatrical drama.

(ADAM AUGUSTYN)

Holzer, Jenny

(b. July 29, 1950, Gallipolis, Ohio)

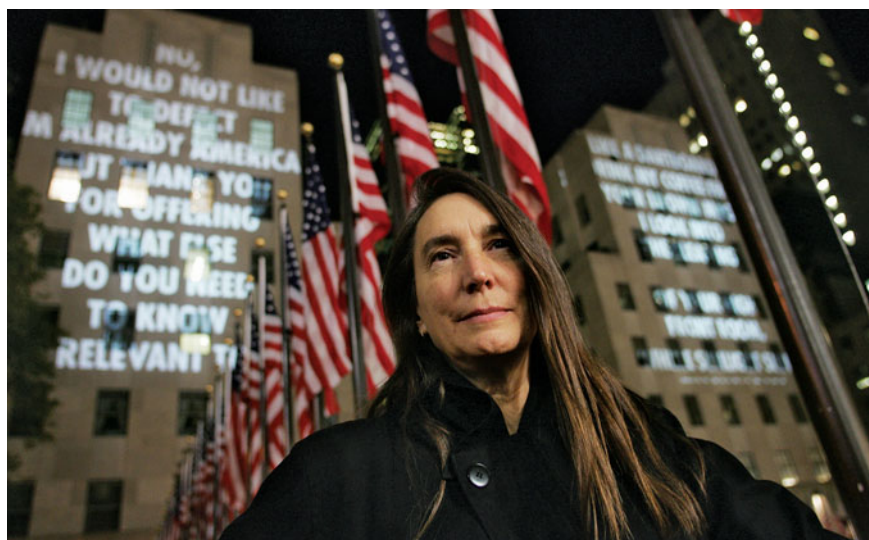
In March 2009 a 15-year survey of the work of American installation and conceptual artist Jenny Holzer traveled from the Museum of Contemporary Art in Chicago (where it had originated in October 2008) to the Whitney Museum of American Art in New York City. The exhibition *Jenny Holzer: Protect Protect* highlighted her ongoing practice of utilizing original and borrowed text as a primary medium to create works that were alternately soothing and unsettling, meditative and confrontational, and seductive and frightening. Holzer emerged in the early 1980s as part of a generation of artists who gained recognition for employing and appropriating various aspects of mass culture in an effort to explore and question contemporary issues. While her critical texts take form as objects ranging from ephemeral posters to stone benches, she is best known for her flashing electronic LED sign sculptures that display carefully composed yet fleeting phrases that act as verbal meditations on power, trauma, knowledge, and hope.

Holzer initially explored abstract painting during her studies at Ohio University and the Rhode Island School of Design before moving to New York City in 1977. That same year she was accepted into the Whitney Museum of American Art's Independent Study Program, where her interest in social and cultural theory culminated in the *Truisms* series (1977–79). The works, composed of seemingly familiar slogans such as “Abuse of power comes as no

surprise,” were originally presented by Holzer as phrases on anonymous posters and later on T-shirts, billboards, and electronic signs. These texts, fraught with cynicism and political implications, were followed by the more structured and complex *Inflammatory Essays* (1979–82), the *Living* series (1981–82), and the *Survival* series (1983–85), which were seamlessly integrated into various urban landscapes as plaques and signs. In the mid-1980s, during a period in which she produced a series of introspective and mournful works, including *Under a Rock* (1986) and *Laments* (1989), Holzer began inscribing her texts on stone benches, sarcophagi, and floor tiles. These accompanied her LED signs in numerous exhibitions and were installed independently as site-specific works. Holzer's installation for the United States Pavilion at the 1990 Venice Biennale, which won the Golden Lion Award, exemplified the tension inherent in her chosen words through the juxtaposition of texts set in austere marble tiles and benches and aggressively flashing across commercial LED signs.

From 1996 Holzer expanded her installations to include large-scale outdoor light projections, choosing public locations that demanded viewer attention. Beginning in 2001 she started incorporating borrowed texts in her work, including poetry, literature, and bureaucratic documents. In 2005 Holzer turned to reportage with the *Redaction* paintings, a series of silk-screened canvases of enlarged declassified and redacted government documents per-

Artist Jenny Holzer appears before her installation For the City, which was featured on buildings at Rockefeller Center in New York City.



Hiroko Masuike/AP

taining to wars past and present. Similar to her original texts, these paintings underscore the impossibility of fixed meaning and the multiple viewpoints always present in her work. With these projects and others, Holzer continued to utilize words to question the relationship between the private and the public.

(MICHAL RAZ-RUSSO)

Huffington, Arianna

(b. July 15, 1950, Athens, Greece)

When *Forbes* magazine named Arianna Huffington to its list of the most influential women in media in 2009, citizen journalism was at its height, as dozens of bloggers and small news outlets contended with the mass of information and misinformation disseminated before and after the 2008 U.S. presidential election. Huffington—editor in chief and cofounder of The Huffington Post, a blog turned respected online news outlet—led the charge, printing posts written by personalities outside the traditional news cycle and opening every article on HuffingtonPost.com to reader comments. In a politically contentious time, Huffington's left-wing Web site served as a forum for discussion and, frequently, vociferous disagreement.

Huffington, the daughter of a Greek newspaper owner, moved at age 16 to England, where she later pursued an economics degree at the University of Cambridge (M.A., 1972). While at Cambridge she served as president of the esteemed debate society, the Cambridge Union, becoming the first foreign-born student to do so. After graduation she lived for a time in London before relocating in 1980 to the U.S.

She started her political and journalistic career as a Republican and a proponent of small government and limited welfare. She contributed to the conservative journal *National Review*, and in her coverage of the 1996 presidential election for the television cable station Comedy Central, she was positioned as a conservative foil to lifelong Democrat Al Franken (*q.v.*). For a time Huffington wrote for the TV show *Politically Incorrect*, and she also tried her hand in front of the camera, as when she took a bit part in the film *Edtv*. She also became a prolific and best-selling author. Her debut work, *The Female Woman* (1974), was followed by biographies of opera diva Maria Callas and artist Pablo Picasso, several inspirational self-help volumes, and a number of political books, such as *How to Overthrow the Government* (2000) and *Right Is Wrong* (2008).

Chester Higgins Jr.—The New York Times/Redux



Online entrepreneur Arianna Huffington

By the early 1990s Huffington was living in California with Republican politician Michael Huffington, whom she had married in 1986. There she presided over frequent salons and hosted the television talk show *Critical Mass*. She also worked on her husband's 1994 campaign for a Senate seat, which he failed to gain. The couple divorced in 1997. Huffington's place on the political spectrum had already begun to shift in the 1990s, starting with her opposition to U.S. intervention in the civil wars in former Yugoslavia. In 2003 she ran in California's gubernatorial race as an independent, but she later withdrew her candidacy.

The Huffington Post Web site was launched in 2005. It was structured as a "group blog," which published the words of hundreds of guest contributors. The next year HuffingtonPost.com received its first Webby Award, for best political blog. In August 2008 the blog's first local outpost, HuffPost Chicago, was introduced, and Huffington announced her intention to roll out city-specific "HuffPosts" all over the United States.

(MELISSA ALBERT)

Jackman, Hugh

(b. Oct. 12, 1968, Sydney, Australia)

As host of the 2009 Academy Awards, Australian actor Hugh Jackman demonstrated that he was far more than just another pretty face. He had been chosen as *People* magazine's Sexiest Man Alive the previous November, but in a ceremony that drew rave reviews, he showcased his skills as a premiere song-and-dance man. The show opened with

an elaborately choreographed musical number that paid tribute to each of the best picture nominees. Filled with sly comments about the state of the global economy and self-deprecating humour about the film industry, the routine closed with Jackman declaring, "I'm Wolverine!"—a reference to his character in the *X-Men* films, the latest of which, *X-Men Origins: Wolverine*, was one of the most hotly anticipated action films of the year.

Hugh Michael Jackman grew up in Sydney, and he made his acting debut as King Arthur in a production of *Camelot* when he was just five years old. After graduating (1991) from the University of Technology, Sydney, with a degree in communications, Jackman began working temporary jobs to pay for classes at the Actors Centre Australia. Though offered a role in the long-running television soap opera *Neighbours*, Jackman chose to further refine his acting skills at the Western Australian Academy of Performing Arts in suburban Perth. Shortly after graduating (1994), he landed a role in the 10-part TV prison drama *Correlli* (1995). Cast as an inmate who begins a dangerous flirtation with his psychologist (played by Deborah-Lee Furness), Jackman won fans as attractive bad boy Kevin Jones. Jackman and Furness continued their relationship offscreen, and the two were married in 1996. That same year he took to the stage, scoring the lead in the Australian premiere of Andrew Lloyd Webber's musical adaptation of Billy Wilder's noir classic *Sunset Boulevard*. That performance led Jackman to London's Royal National Theatre, where he won the role of Curly in a revival of Rodgers and Hammerstein's *Oklahoma!* (1998). The sold-out run set box-office records.

Jackman next turned to film, making his Hollywood debut in *X-Men* (2000), in which his portrayal of the tortured antihero Wolverine established him as a bankable action star. He demonstrated his range with a pair of romantic comedies, *Someone like You* (2001) and *Kate & Leopold* (2001), before once again unsheathing Wolverine's trademark razor claws in *X2* (2003). Jackman made his Broadway debut in 2003 as singer-songwriter Peter Allen in the biographical musical *The Boy from Oz*. For American filmgoers who were unfamiliar with his work in *Oklahoma!*, Jackman's flamboyantly spot-on performance was a revelation, and it won him a Tony Award in 2004. Now an established star both in Hollywood and on Broadway, Jackman returned to the

big screen with the ambitious science-fiction romance *The Fountain* (2006) and the dramatic thriller *The Prestige* (2006), as well as *X-Men: The Last Stand* (2006). In 2008 he starred opposite Nicole Kidman in Baz Luhrmann's lush historical epic *Australia*. While the film itself met with mixed reviews, Jackman's performance was widely praised. (MICHAEL RAY)

James, LeBron Raymone

(b. Dec. 30, 1984, Akron, Ohio)

During the 2008–09 basketball season, LeBron James of the National Basketball Association (NBA) Cleveland Cavaliers piloted his team to a franchise record 66 wins and a place in the play-offs, which helped to earn him the league's Most Valuable Player (MVP) award. He also published a memoir in 2009, *Shooting Stars* (co-written with Buzz Bissinger), that chronicles his years as a high-school standout.

A locally known basketball prodigy in Akron since elementary school, James was named Ohio's high-school player of the year three times while leading his school to three Ohio state championships in four years. He became a national media sensation in his junior year after appearing on the cover of *Sports Illustrated* magazine, which dubbed him "The Chosen One." James was the consensus national high-school Player of the Year in his senior season, and he was selected directly out of high school by the Cavaliers with the first overall selection of the 2003 NBA draft. Additionally, he signed an unprecedented \$90 million endorsement contract with the Nike shoe company before he ever played a professional game.

Despite the pressures brought on by these singular circumstances, James led the Cavaliers in scoring, steals, and minutes played over the course of the 2003–04 season, in the process becoming the youngest player ever to be named the league's Rookie of the Year. A 2.03-m (6-ft 8-in) "point forward" who was as adept at taking the ball down the court as at playing near the basket, James had an unmatched athleticism and well-muscled body that presented a strong challenge to opposing teams. After the season ended, he was a member of the U.S. men's Olympic basketball team that won the bronze medal at the 2004 Athens Games.

James's game progressed over the following years. He was voted one of the starting forwards on the Eastern Conference All-Star team during his second season, and in his third season he led



Basketball star LeBron James in action

Gregory Shamus/Getty Images

the Cavaliers to their first play-off berth in nine years. These accomplishments were exceeded during the 2006–07 season, when he guided Cleveland to the franchise's first berth in the NBA finals; the Cavaliers were swept by the San Antonio Spurs, but James's impressive postseason play led many observers to place him among the very best players in the league.

He led the NBA in scoring during the 2007–08 season and in February 2008 became the youngest player to have scored 10,000 career points. He also earned first team All-NBA honours, but the Cavaliers lost to the eventual-champion Boston Celtics in a dramatic seven-game series in the Eastern Conference semifinals. Before the start of the 2008–09 season, James again joined the U.S. men's Olympic basketball team, which this time won the gold medal at the 2008 Beijing Games.

(ADAM AUGUSTYN)

Johnson, Randy

(b. Sept. 10, 1963, Walnut Creek, Calif.) On June 4, 2009, Randy Johnson recorded the 300th victory in his career as a Major League Baseball (MLB) pitcher. This landmark had been reached by only 23 other big-league pitchers in the more than 120 years of American professional baseball. Johnson's achievement was surrounded by talk that he might be the last pitcher to reach the 300-win plateau, given the modern constraints on pitch counts and the financial in-

centives to lessen the number of a pitcher's annual starts in the era of multimillion-dollar contracts.

Randall David Johnson excelled in basketball as a youth, but he soon began to focus on his first love, baseball. He earned a scholarship to the University of Southern California, where he played from 1983 to 1985. The MLB National League (NL) Montreal Expos drafted him after his junior season, and he made his major league debut on Sept. 15, 1988.

The physically imposing 2.08-m (6-ft 10-in) Johnson quickly built a reputation as the pitcher major leaguers most feared facing. His exceptional height (he was for a time the tallest player in major league history) and low delivery angle only increased the difficulty of hitting his 164-km/hr (102-mph) fastballs and hard-breaking sliders (a pitch that appears to be heading toward a left-handed batter before suddenly veering toward the plate). The novelty of his height at first overshadowed Johnson's work on the mound, but as his pitching improved, the accolades increased. He was named to the first of his 10 All-Star games in 1990 as a member of the American League (AL) Seattle Mariners, who had acquired him from the Expos the previous season. Johnson led the AL in strikeouts for four consecutive years (1992–95), and in 1995 he won the AL Cy Young Award as the league's best pitcher. Johnson and the Mariners management began to have contract disagreements on a regular basis, and he was traded to the Houston Astros at the 1998 trading deadline.

A free agent at the end of the 1998 season, Johnson signed with the NL Arizona Diamondbacks, where he led the NL in earned run average, innings pitched, and strikeouts on his way to the 1999 NL Cy Young. Johnson won Cy Youngs in each of the following three seasons, but his most impressive feat took place at the 2001 World Series, where he tied a record with three wins in a single World Series and earned co-Most Valuable Player honours while guiding the Diamondbacks to their first championship. In 2004 he became the oldest player ever to pitch a perfect game. After pitching for two seasons with the New York Yankees and a second stint with the Diamondbacks, he signed with the San Francisco Giants, where, at 45 years old and with a chronically bad back, he cemented his legacy as one of the greatest pitchers of all time. (ADAM AUGUSTYN)

Kadeer, Rebiya

(b. Nov. 15, 1946, Xinjiang, China)

When ethnic conflict broke out on July 5, 2009, in Urumqi, the capital of the Uygur Autonomous Region of Xinjiang in western China, Chinese authorities blamed exiled Uighur entrepreneur and activist Rebiya Kadeer, a longtime advocate of greater autonomy for Uighurs (a Turkic Muslim population that accounted for a slim majority of the population of Xinjiang), for fomenting the unrest.

Junko Kimura/Getty Images

*Uighur activist Rebiya Kadeer*

Kadeer was born near the Altai Mountains of far northwestern China, where her father worked as a gold miner. She married at the age of 15 and subsequently helped support her growing family by sewing undergarments and shoes and selling them on the black market. When she was 28, her marriage ended in divorce, and, motivated by her separation from her children, Kadeer founded a laundry business out of her home. After several months she closed that thriving business and invested some of her earnings in trading commodities, modestly at first and eventually on a larger and larger scale. In July 1978 she married Sidik Rouzi, an intellectual and activist who had been jailed for leading a Uighur resistance movement against the Chinese authorities in the late 1960s.

Kadeer continued to develop her trading enterprise, and in the 1980s she expanded into real estate. In March 1987 she opened a women's bazaar in Urumqi, and in the 1990s she followed with a department store and an accompanying apartment complex. Soon she had enlarged her operations to in-

clude subsidiaries throughout Central Asia, and by 1993 she had become the wealthiest woman in China. Long concerned with aiding and advancing her people, Kadeer capitalized on her business by employing and mentoring Uighur individuals. She was lauded by the Chinese government as an example of Uighur success and was appointed to influential organizations and committees, including the Chinese People's Political Consultative Conference (CPPCC) and the National People's Congress. In 1995 she served as a delegate to the UN Fourth World Conference on Women, held in Beijing.

Kadeer utilized her increased financial means and social stature to continue campaigning on behalf of the Uighur population. Her actions soon garnered negative attention, however; her passport was confiscated, and in 1998 she was barred from reappointment to the CPPCC. She was detained in August 1999 en route to meeting a congressional delegation from the U.S. and was imprisoned. In March 2000 Kadeer was convicted of endangering national security by furnishing state intelligence abroad (she had sought to forward newspaper clippings to her husband, who had fled to the U.S. in 1996). Although she was sentenced to eight years in prison, pressure from the international community helped to achieve a reduced sentence, and she was freed in March 2005. After her release Kadeer left China for the U.S., where she continued her vocal campaign for human rights and Uighur self-determination at the head of both the World Uyghur Congress and the Uyghur American Association. While imprisoned, Kadeer was awarded the 2004 Rafto Prize by Norway's Rafto Foundation for Human Rights, and she was nominated (2005) for the 2006 Nobel Prize for Peace.

(LAURA ETHEREDGE)

Kim Yu-Na

(b. Sept. 5, 1990, Bucheon, S.Kor.)

In March 2009 at the world figure skating championships in Los Angeles, South Korean figure skater Kim Yu-Na was in a class by herself with a record-setting performance to give her homeland its first senior-level world figure skating title. Kim—known as “Queen Yu-Na” to her fans and already one of the most recognized athletes in her native country—took a big lead in the short program and went on to finish with a record 207.71 points (8.19 better than the previous mark, set in 2006 by her longtime rival Mao Asada of

Japan). Kim was a stunning 16.4 points ahead of silver medalist Joannie Rochette of Canada and nearly 20 points ahead of Asada, the defending champion, who finished fourth behind the 2007 winner, Miki Ando of Japan.

Kim began skating at age six and gained her first international experience six years later, when she won the novice competition at the Triglav Trophy in Jesenice, Slvn. In 2003 she captured her first South Korean national title and won the novice competition at the Golden Bear of Zagreb in Croatia before reaching the age requirement for skating internationally at the junior level the following season.

In the 2004–05 season, Kim won the gold medal at the Junior Grand Prix in Hungary and silvers at the Junior Grand Prix in China and Junior Grand Prix Final, which was won by Asada. At the 2005 junior world championships, Kim completed her first triple-triple combination jump in competition but again finished second to Asada. Kim remained on the Junior Grand Prix circuit in 2005–06 and won events in Slovakia and Bulgaria before taking her second Junior Grand Prix Final. Competing against defending champion Asada in the 2006 world junior championships, Kim won the gold medal.

Kim moved up to the senior level in 2006–07, taking the bronze medal at Skate Canada and winning gold at the Trophée Eric Bompard to qualify for the Grand Prix Final, where she won the overall title and Asada took the silver. At the 2007 world championships, Kim placed third overall. Soon thereafter she began training in Canada under two-time Olympic silver medalist Brian Orser. The following season saw Kim capture both the Cup of China and the Cup of Russia, which gave her a chance to defend her Grand Prix title. She did just that, edging second-place finisher Asada, before securing another bronze medal at the 2008 world championships.

In the 2008–09 season, Kim dominated with victories at Skate America and the Cup of China but failed to win her third straight Grand Prix title, finishing second to Asada. Kim, though, went on to win the Four Continents event in February 2009 before her amazing performance at the world championships. (PAUL DIGIACOMO)

King, Mervyn

(b. March 30, 1948, Chesham, Buckinghamshire, Eng.) By the summer of 2009, the economic strategy pursued by Mervyn King, governor of the Bank of

Oli Scarff/Getty Images



Bank of England governor Mervyn King

England (BOE), seemed to have been vindicated, as evidence was mounting that the U.K. might be the first of the world's major economies to start emerging from the global recession. After he became governor in 2003, King had insisted that his ambition was to make monetary policy boring. In 2007 and 2008, however, as banks collapsed and the world recession started to affect the U.K., this low-profile approach was thwarted, and King, with his wry humour and perfectly formed sentences, became a familiar fixture on British television.

King grew up in modest circumstances, the son of a railway clerk. His intelligence and drive took him via Wolverhampton Grammar School to King's College, Cambridge, where he emerged as one of the brightest economists of his generation. Through the 1970s and '80s, his academic career blossomed on both sides of the Atlantic. King's special area of interest was taxation; he coauthored a lucid and trenchant book on the British tax system, and as professor of economics at the London School of Economics from 1984, he wrote a series of papers that analyzed the system's weaknesses.

His work brought him attention at a time when Prime Minister Margaret Thatcher's Conservative Party government was seeking to simplify the tax system and reduce taxes. In 1990 King was appointed one of the BOE's nonexecutive directors; the following year he became the bank's chief economist. This gave him a platform for preaching in favour of placing the fight against inflation at the heart of economic policy. King's careful avoidance of party politi-

cal controversies meant that the incoming Labour Party government in 1997 embraced him as warmly as the outgoing Conservative administration had done; one of Labour's first policies—to give the BOE the freedom to set interest rates with the aim of controlling inflation—accorded precisely with King's views. Thus, no one was surprised when he became the BOE's deputy governor in 1998 and governor in 2003.

At first the U.K.'s economy grew steadily, and inflation remained under control. In September 2007, however, one of Britain's main mortgage lenders, the Northern Rock Bank, collapsed. Initially, King (and Chancellor of the Exchequer Alistair Darling) seemed to hesitate, and for the first time in more than a century, there was a run on a major British bank as anxious savers formed long lines to withdraw their money. Eventually, the government nationalized the bank. A year later King faced criticism for keeping interest rates too high for too long as the economy started to contract. In response, King and his colleagues on the BOE's Monetary Policy Committee acted boldly, expanding the money supply sharply and cutting interest rates in successive months from 5% in October 2008 to 0.5% by March 2009, by far the lowest in the BOE's 300-year history.

(PETER KELLNER)

Kirill I

(b. Nov. 20, 1946, Leningrad [now St. Petersburg], Russia) Following his election in January 2009, Kirill I was enthroned on February 1 as the Russian Orthodox patriarch of Moscow and all Russia; he became the first head of the Russian Orthodox Church to be elected after the fall of the Soviet Union. He inherited from his predecessor, Aleksey II (reigned 1990–2008), a church that had experienced revitalization and tremendous growth following the end in Russia of official state atheism. Kirill shared with Aleksey an outspoken belief that the church should play a dynamic role in Russian life. A popular figure, Kirill for more than a decade hosted his own weekly television show on religious topics; he also enjoyed a reputation as a modernizer.

Gundyaev took the monastic name Kirill in 1969 while a seminarian. He graduated (1970) from Leningrad Theological Academy, where he served for one year as lecturer in dogmatic theology. In 1971 Kirill was appointed representative of the Russian Orthodox Church to the World Council of Churches in Geneva. Returning to Rus-

sia in 1974, he became rector of Leningrad Theological Academy, a post he held until 1984. He was named archbishop of Smolensk and Kaliningrad in 1988 and was elevated to metropolitan of that province in 1991. Upon assuming the patriarchate, he expressed his long-standing desire for increased dialogue to end the church's millennium-old rift with the Roman Catholic Church.

(MATT STEFON)

Klum, Heidi

(b. June 1, 1973, Bergisch Gladbach, North Rhine-Westphalia, W.Ger.) By 2009 German American model and savvy businesswoman Heidi Klum had become a television megastar as the hostess of the reality programs *Germany's Next Topmodel* (launched in 2006), in which players competed for a chance to win a contract with the IMG Models agency, and *Project Runway*, a design competition between contestants vying for the chance to create their own fashion line, with a top prize of \$100,000. The inaugural 2009 episode of *Project Runway*, for which Klum served as a judge and executive producer, reportedly drew 4.2 million viewers, which represented a 45% increase over the initial show of the 2005 season. In addition, for the 2009 season (the program's sixth), a spin-off premiered: *Models of the Runway*, also

Fashion diva Heidi Klum



Alexander Tamargo/Getty Images

hosted by Klum, profiled the women who donned the designers' creations and offered their behind-the-scenes impressions of the competition.

In 1992, when 18-year-old Klum entered the "Model 92" German beauty contest, she was living near Cologne with her parents Gunther, a cosmetics company executive, and Erna, a hairdresser. She trumped 25,000 contestants to capture the top prize—a \$300,000 contract with New York City's Metropolitan Models. In 1993 Klum moved to South Beach, Fla., but after a brief stay she launched a modeling career in New York City. Her breakthrough came when in 1994 she appeared on the cover of *Mirabella* magazine. In the mid-1990s Klum achieved increased visibility as a cover model for *Vogue*, *ELLE*, and *Marie Claire* magazines, but her star shone even brighter when she graced the Feb. 20, 1998, swimsuit cover of *Sports Illustrated*. She eclipsed that feat in 1999 by achieving global recognition as one of the original "Angels," the troupe of Victoria's Secret lingerie models who appeared in annual televised runway shows and at other promotional activities. Klum continued to work as an Angel and also designed an eponymous lingerie and cosmetics collection for the retailer. According to *Forbes* magazine, she reigned as one of the world's highest-paid models, and Klum increased her wealth by pursuing a host of other lucrative business ventures. She launched her own swimsuit calendars and a signature scent in Europe, which achieved sales totaling €1 million (about \$92,000) in July 2002, its first month of sales. The following month the Caribbean island of Grenada issued a set of six \$1.50 stamps emblazoned with an image of Klum. By the spring of 2003, Klum had simultaneously launched a diamond and coloured gemstone collection with the fine jeweler Mouawad for the TV home shopping network QVC as well as three exotic styles of casual Birkenstock shoes. Klum went on to host an adventure program for the Discovery channel and landed some small film roles as well as spots in video games. The 1.77-m (5-ft 9½-in) blonde, renowned for her sunny disposition, also continued to work as a model.

On May 10, 2005, Klum married British soul singer Seal, with whom she had several children, including one born in October 2009, shortly before Klum legally took Seal's surname, Samuel. Though a daughter resulted from an earlier liaison with an Italian

businessman, Klum considered Seal her father. Klum also took a turn as a singer; in 2007 she recorded with her husband the romantic duet *Wedding Day*. In 2008 she became a U.S. citizen.

(BRONWYN COSGRAVE)

Kumar, Akshay

(b. Sept. 9, 1967, Amritsar, Punjab, India) Akshay Kumar's star in the Bollywood pantheon showed no sign of dimming in 2009, as he was slated to appear in seven films, a feat for even this wildly prolific actor. The year also marked his receipt of one of the Indian government's highest civilian honours, the Padma Shri, in recognition of his contribution to India's cultural life.

Alberto E. Rodriguez/Getty Images



Bollywood actor Akshay Kumar

In a country in which acting often runs in the family, Kumar (born Rajiv Hari Om Bhatia) was the son of a government worker. As a young man he trained extensively in dance and martial arts, and his first movie role, non-speaking and uncredited, was as a martial arts instructor in *Aaj* (1987). Kumar worked at a Bangkok food stall, tried his hand at modeling, and appeared in several films before being offered a starring role in *Deedar* (1992) by director Pramod Chakravarthy. It was in these early stages of his career that he took the professional name Akshay Kumar.

Kumar played in a steady stream of thrillers and fast-paced dramas, including *Khiladi* (1992), which attracted considerable attention to the handsome young newcomer. His athleticism and daredevil nature were well displayed in action films such as *Main khiladi tu anari* (1994), in which Kumar played a

police inspector protecting a star witness. He again portrayed a conflicted policeman in *Mohra*, one of the most popular Indian films of 1994. Despite his success in these high-intensity roles, Kumar's good looks also led him to star in romantic comedies such as *Yeh dilagi* (1994), a loose adaptation of the American film *Sabrina*, and *Dhadkan* (2000), a story of arranged marriage in which Kumar's character must win over his reluctant bride. *Ajnabee* (2001) was a change of pace for the usually charming actor, and his turn as a philandering husband and murderer won him his first Filmfare award, for best villain.

With *Hera pheri* (2000) the versatile actor again took on a new kind of role: that of the comedic lead. *Hera pheri* was a remake of the Indian film *Ramji Rao Speaking* (1989), a kidnapping caper, and it was popular enough to lead to a sequel (2006). This genre gamble paid off. Kumar continued to appear in comedies, and *Garam masala* (2005) garnered him a second Filmfare award, for best actor in a comedic role.

(MELISSA ALBERT)

Lasseter, John

(b. Jan. 12, 1957, Hollywood, Calif.)

With the release of *Up*, a 2009 smash hit at the box office, the Walt Disney Co.'s Pixar Animation Studios, led by executive producer John Lasseter, continued its transformation of the art and business of making animated films. Pixar's pioneering use of computer animation created memorable images for films such as *Toy Story* (1995), *Monsters, Inc.* (2001), and *Finding Nemo* (2003), but perhaps even more remarkable—and indicative of Pixar's success—was a film such as *Up*, which was marketed to a youth-obsessed culture yet featured a septuagenarian as its hero. Lasseter was the driving force behind Pixar's lucrative formula, a combination of cutting-edge computer animation and classic Disney-style storytelling that appealed to children and adults. In October 2009 the Producers Guild of America announced that in recognition of his body of work, Lasseter would receive the 2010 David O. Selznick Achievement Award in Motion Pictures, the first time a producer of animated films had been so honoured.

Lasseter—who was encouraged by his mother, an art teacher—won a drawing contest at the age of five. In high school he read a book about the making of Disney's animated film *Sleeping Beauty* (1938) and was inspired to pursue a career as an animator. He attended col-

Fred Prouser—Reuters/Landov



Up executive producer John Lasseter poses with characters from the film.

lege at the California Institute of the Arts, which had just begun offering animation courses taught by veteran Disney artists. After graduation (1979), he took a job at Disney's animation studio, where he worked on *The Fox and the Hound* (1981) and *Mickey's Christmas Carol* (1983). His growing enthusiasm for nascent computer animation technology put Lasseter at odds with some of his superiors, however, and he was fired in 1983. Later that year Lasseter was hired to work in the computer graphics division at Lucasfilm. His first assignment was to direct an animated short film, *The Adventures of André and Wally B.* (1984), which was the first movie to feature computer-generated characters. In 1986 the division was sold to Apple Computer Inc. cofounder Steve Jobs and became an independent company called Pixar that focused primarily on developing and selling animation software. Disney became its biggest client. Pixar also produced television commercials and short films, with Lasseter serving as director. *Tin Toy* (1988) earned him an Academy Award for best short animated film.

In 1991 Lasseter got a second chance to show Disney executives the value of computerized animation when Pixar struck a deal with the entertainment giant to produce movies. The initial effort, *Toy Story*, was directed by Lasseter and was the first fully computer-animated feature film in history. *Toy Story* was the highest-grossing film of 1995, selling \$362 million in tickets worldwide, and it resulted in a second Academy Award for Lasseter, this time for special achievement. Pixar continued to generate hits for Disney, including *A Bug's Life* (1998)

and *Toy Story 2* (1999), both directed by Lasseter. When Disney purchased Pixar in 2006, Lasseter made a triumphant return to the company that had fired him more than 20 years earlier, becoming chief creative officer of both Pixar's and Disney's animation operations.

(ANTHONY G. CRAINE)

Lieberman, Avigdor

(b. June 5, 1958, Kishinyov, Moldavia, U.S.S.R. [now Chisinau, Moldova]) When the dust settled after the Israeli general election held on Feb. 10, 2009, Avigdor Lieberman's right-wing party, Yisrael Beiteinu, was in third place with 15 seats in the 120-seat Knesset (parliament), and on March 31 Lieberman was sworn in as Israel's deputy prime minister and foreign minister. The next day he renounced the peace process adopted at the Annapolis (Md.) conference in 2007. His prominence in the new government, as well as his often provocative pronouncements, earned Lieberman international attention and a place on *Time* magazine's list of the year's most influential people.

Evet Lvovich Lieberman (or Lieberman) immigrated to Israel with his parents when he was 20, taking the new name Avigdor. He received a degree in international relations and political science at Jerusalem's Hebrew University, where he exhibited the combativeness that would characterize his later career, demanding that Arab students participate in civil guard patrols or forfeit their places in the campus dorms.

In 1988 he moved with his wife to the Jewish West Bank settlement of Nokdim. That same year he allied himself with Benjamin Netanyahu, and in

1993 he masterminded Netanyahu's successful campaign for the Likud party leadership. When Netanyahu first became prime minister three years later, he appointed Lieberman director general of the prime minister's office. After a falling out with Netanyahu, Lieberman left Likud to found (1999) the nationalist party Yisrael Beiteinu. The party, which drew its membership mainly from Russian immigrants, won four Knesset seats in the 1999 national election.

Lieberman served as minister of national infrastructure (2001–02) in Prime Minister Ariel Sharon's first government, and when Sharon was reelected in 2003, he appointed Lieberman minister of transportation (2003–04). In late May 2004 Lieberman outlined his "Populated Area Exchange Plan," under which Israeli Arab towns bordering the West Bank would be ceded to Palestine and West Bank Jewish settlements bordering the 1967 Green Line would be part of Israel. Everyone remaining in Israel, including Arabs, would be required to take a loyalty oath or lose the right to vote.

In October 2006 Prime Minister Ehud Olmert brought Lieberman, whose party had won 11 seats in the March election, into his new coalition as minister for strategic threats, focusing on the Iranian nuclear program. Although Lieberman resigned in January 2008 over the Annapolis process with the Palestinians, his service in a top security portfolio gave him national leadership credibility.

Israeli politician Avigdor Lieberman



Filippo Monteforte—AFP/Getty Images

In the run-up to the 2009 election, Lieberman sharpened his questions about Israel's Arab minority, expressing doubts about their loyalty to the Jewish state and threatening to make their right to citizenship dependent on an oath of allegiance. In May 2009 Yisrael Beiteinu introduced such a citizenship law and other legislation perceived as anti-Arab. Soon after taking over as foreign minister, Lieberman also was interrogated by police on suspicion of money laundering, bribery, and obstructing justice in a scandal that threatened to end his controversial political career. (LESLIE D. SUSSER)

Loeb, Sébastien

(b. Feb. 26, 1974, Haguenau, Bas Rhin, France) French automobile road rally driver Sébastien Loeb continued his remarkable run at the top of his sport in 2009. After finishing 2008 with a record fifth consecutive World Rally Championship (WRC) driver's title, he did not miss a beat in early 2009, winning the first five WRC races to start his push for a sixth world championship. Loeb accomplished his goal in dramatic fashion on October 25, taking first place in the final race of the season, the Wales Rally of Great Britain, to narrowly edge Mikko Hirvonen of Finland for yet another WRC title.

After having won five gold medals at the French national gymnastics championships by the time he was 15, Loeb discovered a new love—auto racing. In 1995 he took up rally driving, and in 1998, with co-driver Daniel Elena of Monaco, he started racing in the French Citroën Saxo Trophy Series, winning twice that season before taking the title the following year. In 2000 Loeb won the two-wheel drive-class French gravel championship and in 2001 the Junior Super 1600 class of the WRC.

The 2002 season was Loeb's first as a WRC driver with the Citroën Total World Rally Team, and he was runner-up in his first race and won his second, the Rally of Germany. During his first full season in 2003, he captured three events to finish just one point behind Subaru's Petter Solberg of Norway. That served as the springboard to Loeb's pre-eminence in the sport. He won the first of his five straight world driver's championships in 2004 by tying the WRC season record with six victories, which enabled him to easily beat Solberg for the title. The next season proved to be even more dominant, as Loeb had a record-setting run to the title. He posted 10 victories—becoming the first driver

to win 6 in a row—and took the title by 56 points to break a 25-year-old record.

In 2006 Loeb raced for the private team Citroën Xsara WRC and beat the record of 26 career victories set by Carlos Sainz of Spain, scoring 8 more wins to register 28 in his career. He took a third consecutive drivers' title, despite missing the last four rounds of the championship owing to a broken shoulder that he suffered in a biking accident. Loeb returned to Citroën Sport and drove the new C4 WRC in 2007, but learning to handle a new car did not prevent him from winning eight events and his fourth consecutive crown.

Loeb—with Elena still at his side after a decade's partnership—took his dominance to another level in 2008, setting a record with 11 wins in one season to give him 47 career victories and his fifth consecutive WRC title. In May 2009 Loeb suffered a disappointing loss in the sixth race of the season, but he had some consolation a few days later when he was awarded the Legion of Honour by French Pres. Nicolas Sarkozy. (PAUL DIGIACOMO)

Lumley, Joanna

(b. May 1, 1946, Srinagar, Kashmir, British India) In early 2009 Joanna Lumley, a tall, blonde British comedic actress, accomplished something that is achieved by very few people—including individual MPs. She pressured the U.K. government to abandon a specific policy and change course. Her cause was that of supporting the Gurkha soldiers from Nepal who had fought for the British army and were seeking to settle in Britain, and with a tenacity that impressed many, she got her way.

Joanna Lamond Lumley was born in India, where her father had fought with the British army's 6th Gurkha Rifles in World War II. During fierce fighting in Burma (now Myanmar) in June 1944, his life was saved by a Gurkha during a battle that saw a number of Gurkhas earn awards for bravery.

Lumley's family returned to Britain, where she was educated at private schools, culminating in the Lucie Clayton finishing school, from which she emerged with a posh accent and upper-class bearing. Nevertheless, she escaped the social restrictions of her upbringing, becoming an unmarried mother at 21. Lumley said later in life, "I have never felt the constraints of social acceptability."

She took up modeling, but her lifelong ambition was to be an actress. Though she failed an exam at 16 to en-

ter the Royal Academy of Dramatic Art, she appeared in a series of small roles, including one in the James Bond film *On Her Majesty's Secret Service* (1969), and enjoyed a stint (1973) on the television drama *Coronation Street*. She achieved stardom in 1976 when she was cast as the female lead, Purdey, in the popular British TV show *The New Avengers* (1976–77). Other substantial roles followed, notably the female lead in the science-fiction series *Sapphire and Steel* (1979–82), but her career did not reach its peak until she starred in the TV situation comedy *Absolutely Fabulous* (1992–96, 2001–05). In *Ab Fab*, as it came to be known, she played Patsy, an aging, sexually aggressive, chain-smoking, heavy-drinking, drug-taking fashionista with a distinctive beehive hairdo. For Lumley, it was a gloriously outrageous, show-stealing, award-winning performance.

Lumley's celebrity status helped power the campaign to persuade the British government to give all Gurkhas who had fought for the British army the right to settle in Britain. Prior to 1997, none had that right, but the Labour government that won power that year granted permission to all future Gurkha soldiers. The goal of the new campaign, which gained momentum with Lumley's involvement from 2007, was to extend that right to Gurkhas who served prior to 1997, including some who had fought in World War II. Lumley's trenchant support for the lifting of all restrictions led to a rare government defeat in the House of Commons on April 29, 2009, and on May 21 the government announced that the right of settlement would be extended to all Gurkhas with more than four years' military service. (PETER KELLNER)

Madoff, Bernie

(b. April 29, 1938, Queens, N.Y.)

In March 2009 Bernie Madoff—an American hedge-fund investment manager and former chairman of the National Association of Securities Dealers Automated Quotations (Nasdaq) stock market—pleaded guilty to fraud, money laundering, and other crimes associated with running what appeared to be history's largest Ponzi scheme (a financial swindle in which early investors are repaid with money acquired from later investors rather than from actual investment income). The thousands of people and numerous charitable foundations who invested with Madoff, directly or indirectly through "feeder funds," thus spent the early months of

2009 assessing their often-huge financial losses. U.S. federal investigators continued to pursue other suspects, including Madoff's accountant and some other members of the Madoff family. Estimates of losses ranged from \$50 billion to \$65 billion, but investigators acknowledged that locating the missing funds might prove to be impossible. On June 26 a federal court ordered that Madoff forfeit more than \$170 billion in assets. Three days later the same court sentenced him to a 150-year prison term, the maximum allowed.

Bernard Lawrence Madoff grew up in the predominantly Jewish neighbourhood of Laurelton in Queens, N.Y. After spending his freshman year at the University of Alabama, he earned a degree (1960) in political science from Hofstra University, Hempstead, N.Y. He studied law briefly at Brooklyn Law School before founding (1960) Bernard L. Madoff Investment Securities with his wife.

Madoff cultivated close friendships with wealthy, influential businessmen in New York City and Palm Beach, Fla., signed them as investors, paid them handsome returns, and used their positive recommendations to attract more investors. He also burnished his reputation by developing relationships with financial regulators. He exploited an air of exclusivity to attract serious, moneyed investors; not everyone was accepted into his funds, and it became a mark of prestige to be admitted as a Madoff investor. Investigators later posited that Madoff's pyramid, or Ponzi, scheme, originated in the early 1980s. As more investors joined, their money was used to fund payouts to existing investors—as well as fee payments to Madoff's firm and, allegedly, to his family and friends.

Some skeptical individuals concluded that his promised investment returns (10% annually, in both up and down markets) were not credible and questioned why the firm's auditor was a small storefront operation with few employees. In 2001 *Barron's* financial magazine published an article that cast doubt on Madoff's integrity, and financial analyst Harry Markopolos repeatedly presented the Securities and Exchange Commission (SEC) with evidence, notably a detailed investigation, "The World's Largest Hedge Fund Is a Fraud," in 2005. Still, the SEC took no actions against Madoff; large accounting firms such as PricewaterhouseCoopers, KPMG, and BDO Seidman reported no red flags in their

financial reviews; and JPMorgan Chase bank ignored possible signs of money-laundering activities in Madoff's multi-million-dollar Chase bank account. When Madoff's operations collapsed in December 2008 amid the global economic crisis, he reportedly admitted the dimensions of the scam to members of his family. Later he acknowledged his guilt in court and issued a public apology to the many victims of his massive swindle. (SARAH FORBES ORWIG)

Marchionne, Sergio

(b. June 17, 1952, Chieti, Italy)

On June 10, 2009, Canadian-Italian businessman Sergio Marchionne, CEO of the Italian automobile manufacturer Fiat SpA, replaced Robert Nardelli as CEO of Chrysler Group LLC. Fiat had gained control of the American car company following its emergence from Chapter 11 bankruptcy, and Marchionne, owing to his tremendous success in turning around the formerly troubled Fiat, was placed at the helm in hopes that he could produce a similar transformation at Chrysler.

Marchionne was born into a Italian military family, but when he was 14, his family immigrated to Toronto. He later earned a bachelor's degree in philosophy (1978) from the University of Toronto, a bachelor's degree in com-

merce (1979) and a master's degree in business (1985) from the University of Windsor, Ont., and a law degree (1983) from Osgoode Hall Law School of York University in Toronto.

After completing his law degree, Marchionne immediately began working as a tax specialist and chartered accountant for the professional-services firm Deloitte & Touche LLP in Toronto. From 1985 to 1988 he served as group controller and then director of corporate development for the global packaging company Lawson Mardon Group Ltd. in Toronto. The following year Marchionne became the executive vice president of the conglomerate Glenex Industries Inc. He served as vice president of finance and chief financial officer (CFO) for the accounting firm Acklands Ltd. from 1990 to 1992. He then returned to Lawson Mardon, where he was vice president of legal and corporate development and CFO until it was acquired (1994) by the Swiss international packaging and aluminum company Alusuisse Lonza Group Ltd. (Algroup). Marchionne quickly moved up through the ranks at the new company, and in 1997 he became the CEO and managing director of Algroup. Following the firm's merger with the Montreal-based production company Alcan Inc. in 2000, he was appointed CEO and then chairman of the spin-off company Lonza Group Ltd. In 2002 Marchionne was named CEO of the Swiss testing, verification, and certification company Société Générale de Surveillance (SGS) Group.

He joined the board of Fiat SpA in 2003 and the following year became CEO. Though lacking in engineering experience, Marchionne was unexpectedly selected two years later as CEO of the automotive division Fiat Group Automobiles SpA. He quickly returned the troubled car company to profitability, however, by downsizing and restructuring management as well as by speeding the introduction of new models, notably the retro-styled minicar sensation Fiat 500.

Marchionne was appointed chairman of SGS in 2006, the same year that he was named a Knight of the Order of Merit for Labour, an Italian honour bestowed upon entrepreneurs who had excelled in their given fields. In 2008 he was among the winners of the CNBC Europe European Business Leaders Awards. (JEANNETTE NOLEN)

Martinelli, Ricardo

(b. March 11, 1952, Panama City, Pan.) Boosted by a campaign that promised

Auto executive Sergio Marchionne with the retro-styled minicar Fiat 500



AFP/Getty Images

“real change,” conservative business tycoon Ricardo Martinelli of the opposition Democratic Change (CD) party prevailed in the May 3, 2009, Panamanian presidential election. Martinelli’s triumph went against the recent trend gaining momentum across Latin America that saw voters showing a preference for leftist anti-U.S. candidates. Martinelli’s win was credited to his having recognized and seized upon growing disenchantment among Panamanian voters, whose confidence in the ruling centre-left Democratic Revolutionary Party (PRD) waned because the country’s once-booming economy showed signs of decline while crime and corruption increased.

Ricardo Alberto Martinelli Berrocal was educated primarily in the United States; he attended Staunton (Va.) Military Academy and the University of Arkansas, where he earned (1973) a degree in business. He went on to study finance at the Central American Institute of Business Administration in San Jose, Costa Rica. Martinelli owned Super 99, Panama’s largest chain of supermarkets, which he joined in 1981 following a stint at Citibank. He was director (1985–87) of the Chamber of Commerce of Panama before serving (1994–96) as the country’s director of social security. In 1998 he formed the CD. He then took office as chairman of the board of directors of the Panama Canal Authority and minister of canal affairs (1999–2003).

Martinelli made his first bid for the five-year, one-term presidency in 2004 and finished last among four candidates, receiving only 5.3% of the vote. For his 2009 run, he led a coalition of right-wing parties and contributed significant funding to his own cause, financing a media campaign in which he presented himself as an outsider vying for an office that had been held by traditional political powers since 1989, when dictator Manuel Noriega was deposed in a U.S. invasion. Early in the campaign, PRDP candidate Balbina Herrera was considered the favourite, but Martinelli already had the support of many of Panama’s business leaders, and his message of change resonated among poor voters in a country in which 40% of the population lived in poverty. He won by a wide margin, garnering some 60% of the vote.

The early challenges of Martinelli’s presidency included fighting an escalating crime rate and stabilizing an economy that in 2008 had grown at a 9.2% annual rate but was forecast to

rise only 3.2% in 2009. He aimed to influence the initiation of a free-trade agreement that had already been signed with the United States but had stalled in the U.S. Congress. Martinelli was also relying on a \$5.25 billion project to expand the Panama Canal to provide some short-term benefits to the economy through the thousands of jobs the enterprise was expected to create.

(ANTHONY G. CRAINE)

McGuinness, Martin

(b. May 23, 1950, Londonderry, N.Ire.) For anyone with memories of the campaign conducted in the latter decades of the 20th century by the paramilitary Provisional Irish Republican Army (IRA), few sights in 2009 could be more startling—or encouraging—than that of Northern Ireland Deputy First Minister Martin McGuinness of Sinn Féin (the IRA’s political wing), a former IRA commander, working harmoniously with his former enemies to run the province. In March 2009, when dissident IRA members killed two off-duty British soldiers in Antrim, N.Ire., McGuinness was forthright in condemning precisely the kind of violent action with which he previously had been associated and described the dissidents as “traitors to the island of Ireland.” Though McGuinness himself was now considered a possible assassination target, he turned down offers of special police protection.

James Martin Pacelli McGuinness joined the Provisional IRA in about 1970, and by 1971 he was one of its leading organizers in Derry (the name used by Republicans for Londonderry). In 1973 a Special Criminal Court in the Irish Republic sentenced him to six months in prison after he had been caught in a car containing large quantities of explosives and ammunition. Although the IRA kept secret the membership of its seven-man Army Council, few doubted that McGuinness was one of its most important members during the 1970s, ’80s, and ’90s. Indeed, even while reportedly planning attacks on civilians in Northern Ireland and the British mainland, McGuinness was involved in spasmodic secret talks with British government ministers and officials to end the conflict. In 1972 McGuinness, with fellow IRA leader Gerry Adams, privately negotiated with British Secretary of State for Northern Ireland William Whitelaw, but these and other talks over the next two decades came to nothing.

McGuinness was the IRA’s chief negotiator in the deliberations, also secret at

first, that culminated in 1998 in the Good Friday Agreement. This pact finally ended the conflict and brought Sinn Féin into a coalition government to rule Northern Ireland. McGuinness was elected to the new Assembly and was appointed minister of education. In this post he eliminated the 11-plus examination—more than a quarter century after the test had been abolished in most of the rest of the U.K.

Disagreements over such issues as policing and the decommissioning of arms caused Northern Ireland’s Executive and Assembly to be suspended for some years, but a fresh agreement in 2006 paved the way for them to be revived. In elections in March 2007, both Sinn Féin and the anti-Republican Democratic Unionist Party (DUP) gained seats. McGuinness became deputy first minister, working with First Minister Ian Paisley, leader of the DUP. The two men, previously bitter enemies, performed so well together that they were dubbed the “Chuckle brothers.” When Paisley retired in 2008, he was succeeded by the DUP’s Peter Robinson, who was considered to be even more militantly anti-Republican. Once again, however, a shared need to rebuild the province’s economy and attract international investment led to cooperation between former opponents.

(PETER KELLNER)

McKellar, Danica

(b. Jan. 3, 1975, La Jolla, Calif.)

In 2009 American actress and nonfiction writer Danica McKellar made appearances on radio and television programs to champion math education and promote her second math book aimed at middle-school girls, *Kiss My Math: Showing Pre-Algebra Who’s Boss* (2008), which was issued in a paperback edition in June 2009. Such a role might seem unusual for a career actress who had gained national recognition portraying the teenager Winnie Cooper in more than 80 episodes of the television program *The Wonder Years* (1988–93). After the series ended, however, McKellar attended the University of California, Los Angeles (UCLA), from which she graduated summa cum laude (1998) with a major in mathematics. In her senior year she took advanced course work in mathematical analysis, and with the encouragement and supervision of Lincoln Chayes, McKellar and fellow undergraduate math student Brandy Winn conducted research into the statistical mechanics of magnetic fields. Their results were published as a paper titled

“Percolation and Gibbs States Multiplicity for Ferromagnetic Ashkin-Teller Models on \mathbb{Z} ” in the *Journal of Physics A: Mathematics and General*, a British periodical on mathematical physics.

Although McKellar chose not to pursue postgraduate studies, she found a voice in advocating math education and testified in 2000 before a U.S. congressional subcommittee on ways of increasing the number of women in mathematics-related fields. She focused on promoting an interest in math among girls in middle school and wrote *Math Doesn't Suck: How to Survive Middle-School Math Without Losing Your Mind or Breaking a Nail* (2007) to help girls grasp such topics as fractions, decimals, and percentages. She soon followed with *Kiss My Math*, providing insight into more advanced middle-school math topics, such as exponents, inequalities, and solving for a variable. Both books—which were written in the style of a teen magazine and contained examples that were chosen to be accessible and appealing to many girls of that age group—became *New York Times* best sellers. McKellar attributed some of the motivation for writing the books to her own early difficulties with math, and she argued that it could be sexy as well as empowering for women to be smart and good at math.

From about age seven McKellar lived in Los Angeles, where she studied at the Diane Hill Hardin Young Actors Space, a performing-arts academy. Before landing her role in *The Wonder Years*, McKellar appeared in commercials and in two episodes (1985, 1987) of *The Twilight Zone*. After attending UCLA, she continued acting. By 2009 she had starred or guest starred in dozens of TV movies and series, including the roles of White House communications assistant Elsie Snuffin (2002–03) on the *The West Wing* and crime-solving Maddie Monroe, the title character in *Inspector Mom* (2006–07). Of special interest to McKellar was the lead role she played in the 2003 San Diego Repertory Theater production of *Proof*, David Auburn's Pulitzer Prize-winning play about a mathematically gifted but troubled young woman. (DAVID C. HAYES)

Messi, Lionel Andrés

(b. June 24, 1987, Rosario, Arg.)

In early 2009 Argentine association football (soccer) star Lionel (“Leo”) Messi capped off a spectacular 2008–09 season with FC Barcelona, helping his team to a treble of trophies by scoring 38 goals in 51 appearances in winning the Span-

ish La Liga championship, the Copa del Rey, and, finally, on May 27 the 2009 Union des Associations Européennes de Football (UEFA) Champions League final in Rome, where he scored with an athletically judged header to clinch Barcelona's 2–0 victory over Manchester United. Going into that game, he was already runner-up to Manchester's Cristiano Ronaldo (q.v.) in the balloting for both the Fédération Internationale de Football Association (FIFA) World Player of the Year and *France Football* magazine's Golden Ball as best European player of the year for 2008. For the third year in succession, Messi was also voted Fédération Internationale des Associations de Footballeurs Professionnels (FIFPro) Young Player of the Year, an outstanding accolade from his fellow professionals. In December 2009 Messi wrapped up a near-perfect year by winning the Golden Ball and FIFA Player of the Year honours.

By age 21 Messi had achieved fame on two continents that had seemed impossible 10 years earlier. He started playing soccer as a boy and in 1995 joined Newell's Old Boys. Messi attracted the attention of the club River Plate, but he was diagnosed with growth hormone deficiency, and for his working-class family it was impossible to find the money for his expensive

High-flying Argentine soccer star Lionel Messi



Lluís Gene—AFP/Getty Images

medical treatment. On a scouting mission in South America, Carles Rexach, then the sporting director of FC Barcelona, recognized Messi's potential and arranged for him to receive treatment if the family was prepared to move him to Europe. At the age of 13, Messi arrived in Barcelona and began playing for the club's Under-14 team. He scored 21 goals in 14 games for the junior team, and he quickly graduated through the C and B teams until given his informal debut with FC Barcelona at age 16 in a friendly match against Porto.

In the 2004–05 season, Messi, then 17, became the youngest official player and goal scorer in the Spanish La Liga. Though only 1.69 m (5 ft 7 in) tall and weighing 67 kg (148 lb), he was strong, well balanced, and versatile on the field. Naturally left-footed, quick, and precise in control of the ball, Messi displayed distribution and could thread his way through packed defenses. In 2005 he was granted Spanish citizenship, an honour greeted with mixed feelings by the fiercely Catalan supporters of Barcelona. The next year he earned his first Champions League winner's medal.

Messi's ties with his homeland remained strong, however, and he established himself as a full Argentine international with 36 appearances, beginning in 2005. He distinguished himself as a member of Argentina's victorious 2005 FIFA World Youth Championship squad, represented his country in the 2006 FIFA World Cup finals, and scored two goals in five matches as Argentina swept to the gold medal at the 2008 Beijing Olympic Games. (JACK ROLLIN)

M.I.A.

(b. July 18, 1975, London, Eng.)

As the Tamil insurgency ground to a bloody halt in Sri Lanka in 2009, singer Maya Arulpragasam—better known by her stage name M.I.A.—brought awareness of the conflict to dance floors around the world. Her efforts to support humanitarian aid for civilians in the Tamil region of Sri Lanka were opposed by the Sri Lankan army, to the extent that she was specifically named on the army's Web site, and critics claimed that her lyrics and music videos betrayed a veiled sympathy for the Tamil separatist movement. Apart from her homeland activities, she earned an Academy Award nomination for the song “O, Saya,” a collaboration with Indian composer A.R. Rahman for the *Slumdog Millionaire* sound track,

Kevin Winter/Getty Images



Singer M.I.A.

and her single “Paper Planes” garnered a surprise Grammy Award nomination for record of the year. Arulpragasam, who was nine-months pregnant and due to deliver on the day of the Grammy Awards in February, performed with rappers T.I., Jay-Z, and Kanye West and provided one of the more memorable images of the ceremony (three days later she gave birth to a boy). It was perhaps unsurprising that this combination of political reach and musical achievement led to M.I.A.’s being named in April as one of *Time* magazine’s 100 Most Influential People.

Although Arulpragasam was born in London, she spent much of her childhood in northern Sri Lanka. When the civil war between the Tamil minority in the north and the Sinhalese government in the south intensified in the 1980s, her father joined the militant Tamil Tigers and the rest of her family fled the country, eventually returning to London. There Arulpragasam studied visual art, often creating works that were influenced by the conflict she had witnessed as a child. She received her first exposure to the music industry as the graphic designer for British pop punk group Elastica, and she familiarized herself with the recording equipment used by dance music producers. Dubbing herself M.I.A., she recorded the single “Galang” in 2003. Although only 500 copies of the song were pressed, it became an instant hit in the European club scene, and word spread quickly on the Internet about its unique fusion of politically aware world music, bass-infused hip-hop, and South London dance-hall patois. Anticipation of a full-length album intensified among

her fans with the release of *Piracy Funds Terrorism*, a 2004 mix tape produced with American songwriter DJ Diplo. Although segments of M.I.A.’s 2005 debut album had been circulating on the Internet for almost a year, its release was still greeted with much critical interest. The album title, *Arular*, was the name her father adopted while a Tamil Tiger, and the album cover featured Arulpragasam’s face surrounded by a collage of cartoon tanks and AK-47s. The compilation was a huge success on the club circuit, based on the strength of singles such as “Galang” and “Bucky Done Gun,” and M.I.A.’s politics lent a new gravity to the dance music genre. M.I.A.’s second album, *Kala*, was released in 2007, and it featured guest production appearances by Diplo and American hip-hop icon Timbaland. More aggressive and sample-heavy than its predecessor, *Kala* spawned the hit “Paper Planes,” which catapulted to mainstream success when it was used in the theatrical trailer for the 2008 Judd Apatow film *Pineapple Express*. (MICHAEL RAY)

Mills, John Evans Atta

(b. July 21, 1944, Tarkwa, Ghana)

On Jan. 7, 2009, John Evans Atta Mills was officially sworn in to succeed John Agyekum Kufuor as president of Ghana. Persistence and determination had finally paid off for Mills when, after having failed in his bid for the presidency in two general elections (against Kufuor in 2000 and 2004), he won the 2008 presidential poll, defeating the ruling party candidate, Nana Akufo-Addo, by a narrow margin (50.23–49.77%). The election marked the second time in Ghana’s history that one legitimately elected leader had handed over power to another. It demonstrated that after an era of coups and dictatorship (1966–92), democracy had been established and reinforced in the West African country, despite occasional eruptions of ethnic conflict and political tension.

After secondary school, Mills studied law at the University of Ghana (LL.B., 1967), the London School of Economics and Political Science (LL.M., 1968), and the University of London’s School of Oriental and African Studies, completing (1971) his Ph.D. dissertation on taxation and economic development. On his return to Ghana, he taught law at his alma mater, where he remained for some 25 years. He also served on numerous boards and committees, occasionally acted as a visiting professor in the U.S. and The Netherlands, and

published extensively on taxation, including the *Report of the Tax Review Commission, Ghana* (1977).

Mills eventually left academia to establish a distinguished career in public service. Appointed in 1988 as acting commissioner of the Internal Revenue Service, he eventually became (1993) substantive commissioner. He stood as Pres. Jerry Rawlings’s running mate in the 1996 elections and took office on Jan. 7, 1997, as vice president, a post he held until 2001. During subsequent presidential campaigns, Mills was roundly criticized for statements that if elected he would consult with Rawlings, but in 2008 Mills distanced himself from his former mentor.

Self-described as a social democrat who believed in the concept of social welfare espoused by Kwame Nkrumah (independent Ghana’s first leader), Mills embraced a political platform that was more comprehensive and less divisive than that of either Nkrumah or Rawlings. As the standard-bearer of the National Democratic Congress in 2008, Mills campaigned on the slogan “I believe in Ghana.” After his inauguration, he set about to improve the socioeconomic situation of ordinary Ghanaians, who ranked among the world’s poorest people, with an average daily income of \$2.32, a 60% literacy rate, and 10% unemployment despite the country’s potentially valuable natural resources. In his first state of the nation address on February 19, Mills announced an austerity program, promising steep cuts in government spending, beginning with cutbacks in wages and the use of two presidential jets. He also instituted policies to eliminate four cabinet ministries and reduced the size of the presidential convoy. The public expressed skepticism, however, about the results of his first 100 days in office.

(LARAY DENZER)

Mogae, Festus

(b. Aug. 21, 1939, Serowe, Bechuanaland Protectorate [now Botswana]) In 2009 former Botswanan president Festus Mogae continued to have an impact on politics but on a global scale as he took centre stage as a speaker or panelist at various international conferences, lending his expertise to a range of topics, notably discussions about achieving growth in Africa and halting the AIDS scourge affecting that continent. In 2008, after having served a decade (1998–2008) as president, Mogae was the recipient of the annual Mo Ibrahim Prize for Achievement in

African Leadership, which carried a \$5 million award over 10 years, a \$200,000 annual lifetime stipend thereafter, and a discretionary \$200,000 sum to be awarded (per year for a decade) to Mogae-designated "good causes."

Festus Gontebanye Mogae was a member of the Ngwato, the largest Tswana group in colonial Botswana (Bechuanaland Protectorate). His father was a headman of the Talaote, a Kalanga (Shona) clan among the Ngwato. After completing secondary education at nearby Moeng College and in London, Mogae took a first degree at University College, Oxford, and a master's in development economics from the University of Sussex, Brighton, Eng. He then joined (1968) the Development Planning (later the Finance and Development Planning) Ministry of newly independent Botswana, under Vice Pres. Ketumile Masire, and became a key figure in Botswana's remarkable rise to economic prosperity, heading (1975–76) the ministry's permanent staff.

In 1976 Mogae was recruited by the International Monetary Fund in Washington, D.C., as alternate executive and then executive director for Anglophone Africa. He returned home to serve as governor of the central bank of Botswana (1980–81) and as permanent secretary (1982–89) to Masire, who had become president in 1980. Their close relationship led to Mogae's leaving government and becoming (1989) a politician in the ruling Botswana Democratic Party (BDP); the move enabled Mogae to be named minister of finance and development planning. He subsequently stood as an MP for Palapye, where his father had been headman, and was appointed Masire's vice president in 1992 after the resignation of Peter Mmusi.

After succeeding Masire as president in April 1998, Mogae made the controversial move of recruiting as his vice president Ian Khama, substantive chief of the Ngwato, and appointing BDP faction leader Ponatshego Kedikilwe as minister of finance and development planning. In other respects Mogae continued the policies of his predecessor and successfully steered the BDP through the 1999 elections. He made himself internationally distinctive among the African leaders by acknowledging the international scientific consensus surrounding the HIV/AIDS epidemic. President Mogae invited international assistance and, in a June 2001 speech before the UN General Assembly, described the epidemic as a national crisis that threatened the very sur-

vival of his people. Mogae was viewed as a shy but principled technocrat who did not shrink from the highest responsibilities. His background at the IMF and his criticism of the repressive regime of Robert Mugabe in Zimbabwe, however, left him open to being seen as too pro-Western. After relinquishing the presidency to Khama in April 2008, Mogae was elevated to the status of elder statesman. (NEIL PARSONS)

Moore, Alan

(b. Nov. 18, 1953, Northampton, Eng.) When the highly anticipated film *Watchmen* debuted in theatres in March 2009, conspicuously absent from its credits was the name Alan Moore. Moore, who collaborated with artist Dave Gibbons to create what was widely regarded to be the most influential graphic novel of all time, took legal steps to ensure that his name would not appear in any press materials related to the project. Moore was committed to the idea that his creations could best be served by remaining on the printed page. This opinion was reinforced by his previous ill-fated dealings with Hollywood. Moore's *From Hell* (originally published 1991–96), an atmospheric commentary on the decline of the British Empire as seen through the Jack the Ripper killings, was turned into a straightforward action film (2001) with an unlikely happy ending, and his *The League of Extraordinary Gentlemen* (first published in 1999) was stripped of its literary sensibility, and new characters—including a crime-fighting Tom Sawyer—were added to the film (2003) to appeal to an American audience. While disinterested in *Watchmen*, Moore celebrated the July settlement of one of the longest-running legal disputes in the comics world. Marvelman, a character revived by Moore in the early 1980s, had languished in intellectual property limbo for more than a decade as various parties fought over who owned the rights to the original stories, as well as the later tales by Moore and fellow writer Neil Gaiman. Marvel Comics inked an agreement with Marvelman's 93-year-old original creator, Mick Anglo, and it appeared that Britain's greatest superhero was set to return to the page.

Moore entered the publishing industry in the early 1970s, working as a writer and artist for a number of independent magazines. He broke into the mainstream with stories for *Doctor Who Weekly* and the science-fiction anthology series *2000 AD*, but his gift for deconstructing the superhero genre

first appeared in 1982, when he resurrected Marvelman for the magazine *Warrior*. Moore imagined Marvelman as a middle-aged reporter who had forgotten his role as the world's preeminent superhero, and later stories examined how an individual with godlike powers would interact with human society. Moore's next project, *V for Vendetta* (1982–86), turned the Marvelman narrative on its head, placing near-infinite power in the hands of a ruling political party (modeled on Britain's National Front) and casting an erudite terrorist in a Guy Fawkes mask as the protagonist. In 1983 DC Comics hired Moore to write *Swamp Thing*, a straightforward monster comic that Moore transformed into a monthly meditation on life and death. It pushed the boundaries of what could be done in a mainstream book, and his success with it led to *Watchmen*. Published serially from 1986 to 1987, *Watchmen* helped define the term *graphic novel* to many readers, and its mature storyline, which sampled from the dystopian visions of both Marvelman and *V for Vendetta*, was unlike anything that had previously been seen in the superhero genre. Moore's later work continued to examine the psychology of the superhero, most notably in the Image Comics title *Supreme*. He launched his own publishing imprint, America's Best Comics, in 1999. (MICHAEL RAY)

Moss, Randy

(b. Feb. 13, 1977, Rand, W.Va.) On Nov. 15, 2009, Randy Moss, who was considered one of the greatest wide receivers in National Football League (NFL) history, caught his 141st career touchdown pass (and his 142nd), surpassing Terrell Owens's 140 to reach the second highest total in NFL history, behind Jerry Rice, who retired with 197 in 2004 after 20 seasons. At the end of the regular 2009–10 season, his 12th in the NFL, Moss had 148 touchdowns and had surpassed 14,000 yd and 900 career receptions.

Moss was a standout high-school football and basketball player, but an arrest for battery during his senior year led the University of Notre Dame to withdraw its scholarship offer. After he enrolled at Florida State University, he violated his parole by failing a drug test, which led to his being kicked off the school's football team. With no more options to play for an upper-division college football program, he accepted a scholarship to Division I-AA (later the Football Championship Subdivision) Marshall Univer-

Hadi Tabrizi/Getty Images



Iranian presidential candidate Mir Hossein Mousavi appears during a campaign rally in Tehran on May 24.

sity in Huntington, W.Va. There Moss set a number of I-AA receiving records in his freshman season and helped lead Marshall to a national championship. During his sophomore year, Marshall moved up to Division I-A (later the Football Bowl Subdivision), and Moss set a I-A record by catching 25 touchdown passes. Although Moss was widely considered to be one of the most talented players available in the 1998 NFL draft, he was not selected until the 21st pick of the first round (by the Minnesota Vikings), because of concerns about his character.

Moss's mix of incredible speed and outstanding leaping ability in a 1.93-m (6-ft 4-in) frame made him a sensation in his first year with the Vikings. He set an NFL rookie record with 17 receiving touchdowns, was named NFL Offensive Rookie of the Year, and earned first-team All-Pro honours. Minnesota scored the most points in NFL history that season and posted a 15–1 regular-season record before losing in the National Football Conference championship game.

In 2005 the Vikings traded Moss to the Oakland Raiders, but he scored only 11 total touchdowns in his two seasons with the Raiders, and he was traded to the New England Patriots in 2007. Moss quickly turned his career around in New England. In 2007–08 he teamed with quarterback Tom Brady to form the core of a high-powered offense that broke the Vikings' single-season scoring mark while posting the first 16–0 regular-season record in NFL history. In addition, Moss broke Rice's 20-year-old NFL single-season record by catching 23 touchdown passes. He then added another 11 touchdowns in 2008–09. (ADAM AUGUSTYN)

Mousavi, Mir Hossein

(b. Sept. 29, 1941, Khameneh, Iran) After a hiatus of some 20 years, former Iranian prime minister Mir Hossein Mousavi returned to the political fore in 2009 with his entry into Iran's presidential election. His campaign featured vocal criticism of Pres. Mahmoud Ahmadinejad and his policies, and he argued that the president's controversial behaviour and rhetoric had damaged Iran's image abroad. Economic concerns, increased personal freedoms, and the confrontation of corruption were also focal points of Mousavi's campaign.

Voter turnout for the election in mid-June was at a record high. Soon after the polls closed, Mousavi announced that he had won the election outright by a large margin; shortly thereafter,

however, officials made a similar announcement in favour of Ahmadinejad. Although Ahmadinejad insisted that the election had been fair, his opponents alleged electoral fraud. Mousavi urged his supporters to protest the results, and in the days following the election, demonstrations unfolded in the capital and elsewhere. On June 19 Iran's supreme leader, Ayatollah Ali Khamenei, publicly backed Ahmadinejad's victory. Mousavi continued to urge supporters to demonstrate peacefully, but subsequent protests were greeted with increasing brutality as well as threats of further confrontation. Following the completion of a partial vote recount, the election results were confirmed, and Ahmadinejad was sworn in for his second term on August 5.

Mousavi received an M.A. in architecture from the National University of Iran (later Shahid Beheshti University) in 1969, and he returned to that institution several years later as an instructor. During his tenure there, Mousavi participated in the underground resistance movement that challenged the regime of Mohammad Reza Shah Pahlavi. Following the Iranian Revolution (1978–79), Mousavi served as the first political director of the Islamic Republican Party (IRP) and as editor in chief of the IRP's official newspaper, *Jomhuri-ye Eslami*. He briefly served as foreign minister during the hostage crisis with the U.S. (1979–81), in which militants seized 66 American citizens at the U.S. embassy in Tehran, holding 52 of them hostage for more than a year. He was subsequently appointed prime minister. Although

Mousavi was favoured for the position by Ayatollah Ruhollah Khomeini, his tenure as prime minister (1981–89) was coloured by competition with Ali Khamenei, then president of Iran, who had strongly opposed his appointment. As prime minister, Mousavi skillfully managed the country's economy during the Iran-Iraq War (1980–88).

Following the abolition of the premiership in the late 1980s, Mousavi largely receded from the political spotlight. He dedicated himself to the arts and held several lower-profile positions within the government, including that of presidential adviser (1989–2005) to both Hashemi Rafsanjani and Mohammed Khatami. In 1998 he cofounded the Iranian Academy of the Arts in Tehran, and he subsequently served as its president and the editorial director of *Khiyal* ("Imagination"), the organization's quarterly publication. In 1997 and again in 2005, reformist groups urged Mousavi to run for the presidency, but on both occasions he refused to do so. (LAURA ETHEREDGE)

Mukwege, Denis

(b. March 1, 1955, Bukavu, South Kivu province, Belgian Congo [now Democratic Republic of the Congo]) In December 2008 and January 2009, Congolese physician Denis Mukwege was honoured with a series of international awards in recognition of his work in treating thousands of victims of sexual violence in the Democratic Republic of the Congo (DRC). These included the 2008 United Nations Human Rights Prize, the 2008 Olof Palme Prize for outstanding achievement in promoting peace, and selection by the Nigerian newspaper *Daily Trust* as its 2008 African of the Year. The awards helped to bring global attention to what Mukwege and others had described as an "epidemic" of sexual violence in the eastern DRC, where combatants in the war-torn region were using the systematic rape of women and girls as a means of terrorizing and displacing the civilian population. The scale of the violence was staggering. As many as 27,000 sexual assaults were reported in just one of the eastern provinces, South Kivu, in 2006, and experts noted that the vast majority of attacks were likely to go unreported. The Panzi Hospital of Bukavu, which Mukwege founded and where he served as director and chief surgeon, represented the "front line" in the treatment of rape victims in the region. The 334-bed hospital admitted an average of 10 victims of sexual assault daily, and since 1998 Mukwege and his staff had

Paula Allen for V-Day

*Congolese physician Denis Mukwege*

performed reconstructive surgery on more than 20,000 women and children.

Mukwege grew up in Bukavu, where he first became aware of the need for better medical care in the region while visiting sick parishioners with his father, a Pentecostal minister. After studying medicine in Burundi, Mukwege returned to the Congo and worked at a hospital in the village of Lemera. Though initially interested in pediatric care, he switched his focus to obstetrics and gynecology after observing the harsh circumstances that many rural women faced while giving birth. He pursued further study in Angers, France, and in 1989 established an obstetrics and gynecology service in Lemera.

After the hospital in Lemera was destroyed during the civil war that erupted in the country in late 1996, Mukwege resettled in Bukavu. His original goal in founding the Panzi Hospital was to provide maternity care that was lacking in the area, but soon the hospital began to receive large numbers of sexual-assault victims, some as young as three years old and many with extreme injuries and mutilations. Mukwege created a staff to specialize in the care of such patients.

Among the perpetrators of the violence were Rwandan Hutu rebels based in the eastern DRC, Congolese government soldiers, and various armed gangs. All of the region's combatants, said Mukwege, had "declared women their common enemy." He urged greater involvement on the part of the international community, including a stronger UN mandate in the DRC, as a means of ending the violence. Mukwege hoped to use prize money that he had received to establish services aimed at

helping survivors of sexual violence re-join society. (SHERMAN HOLLAR)

Obama, Michelle

(b. Jan. 17, 1964, Chicago, Ill.)

On Jan. 20, 2009, Michelle Obama became the first African American first lady of the U.S. as her husband, Barack Obama, formally took office as the country's 44th president. The new first lady generated headlines seemingly with her every move, sharing an extraordinary embrace with Queen Elizabeth II in April (the two reportedly struck up a warm friendship) and making a highly publicized speech in Copenhagen in October as part of the final—though ultimately unsuccessful—pitch to bring the 2016 Olympics to Chicago. The first lady also earned high praise for her fashion sense and appeared during the year on the covers of such magazines as *Vogue* and *Glamour*. She used her public visibility to attract attention to a number of causes that were important to her; notable among these was her wish to improve the lives of the families of U.S. military personnel. On several occasions she visited with the spouses of soldiers who were serving overseas, and in November she helped launch Mission Serve, a military-oriented community service organization.

Michelle Robinson grew up on Chicago's South Side. She studied sociology and African American studies at Princeton University (B.A., 1985) before attending Harvard Law School (J.D., 1988). Returning to Chicago, she took a job as a junior associate at Sidley & Austin (now Sidley Austin LLP), where she specialized in intellectual property law. In 1989, while at the firm, she met Barack Obama, who had been hired as a summer associate. Seeking a more public-service-oriented career path, in 1991 she became an assistant to Chicago Mayor Richard M. Daley. The following year she and Barack were married. In 1993 she founded the Chicago branch of Public Allies, a leadership-training program for young adults. She later held administrative posts at the University of Chicago.

Shortly after her husband announced his candidacy for the 2008 Democratic presidential nomination, Michelle scaled back her professional career to devote herself to the campaign. At the same time, she won many admirers for her dedication to her and Barack's two young daughters, Malia and Sasha. An adept speaker, she stumped extensively for her husband, and in August 2008 Barack became the Democratic Party's

nominee. Michelle's openness on the campaign trail and in interviews endeared her to many. Critics of her husband's campaign, however, took issue with some of her comments—such as when she remarked, while campaigning in Wisconsin, that "for the first time in my adult lifetime, I'm really proud of my country." Michelle later clarified her statement—saying that she meant to say that she was proud that Americans were eagerly engaging in the political process during the 2008 election—and she continued to have an active role in her husband's campaign. Indeed, aides referred to her as "the closer," for her persuasiveness on the stump among uncommitted voters who attended rallies. Her personal popularity remained high in 2009, with one poll conducted in April finding that 76% of Americans had a favorable opinion of the first lady. (AMY TIKKANEN)

Osborne, George

(b. May 23, 1971, London, Eng.)

In the midst of a worldwide recession in 2009, George Osborne, shadow chancellor (finance spokesman) for the U.K.'s opposition Conservative Party, was preparing for his chance to take control of the British economy. The prospect of a Conservative government in power following the U.K. general election expected in the spring of 2010 carried the likelihood that Osborne would become the country's youngest chancellor of the Exchequer in more than 120 years.

Britain's shadow chancellor, George Osborne



Peter Macdiarmid/Getty Images

George Gideon Oliver Osborne was the son of Sir Peter Osborne, 17th baronet of Ballintaylor, a cofounder of the upmarket fabric and wallpaper designers Osborne & Little. At age 13 he dropped his given name, Gideon, in favour of George (and added it officially to his name by deed poll), in what he subsequently described as a rare act of rebellion. Osborne was educated at St. Paul's School, London, and Magdalen College, Oxford. In 1994 he joined the Conservative Research Department, which had served for many years as a kind of "nursery" for leading politicians. The following year he was appointed special adviser to Douglas Hogg, agriculture secretary in the then Conservative government.

In 1997 the Conservatives lost power and chose a new leader, William Hague, who hired Osborne as his political secretary. Osborne entered Parliament in 2001, and he was quickly seen as a rising star. Michael Howard, the party's leader from 2003 to 2005, appointed Osborne to the shadow cabinet in 2004 and to the senior post of shadow chancellor in 2005. When Osborne's friend David Cameron was elected Conservative leader later that year, one of Cameron's first acts was to confirm Osborne as shadow chancellor.

Together, Cameron and Osborne set about modernizing the Conservative Party, which had just lost its third consecutive general election. They wanted to rid the party of its right-wing image and its reputation for not caring about public services or people with average and below-average incomes. This meant modifying the party's long-standing ambitions to cut taxes. Osborne promised to stick to the Labour government's spending plans on health and education and to delay tax cuts until they could be afforded. In 2007 he did commit the party to reducing the inheritance taxes, but this was to be offset by a levy on wealthy foreigners living in Britain.

When the global financial crisis erupted in 2008, Osborne led the Conservative attack on the Labour Party for having mismanaged Britain's finances. Many people warmed to his message, while others disliked what they felt was his strident, youthful arrogance. For a while, Labour Prime Minister Gordon Brown and his chancellor of the Exchequer, Alistair Darling, regained their lead in the opinion polls as the team best able to run the U.K. economy, but by the spring of 2009, Osborne and Cameron were once again ahead, despite being deliberately vague (because of the un-

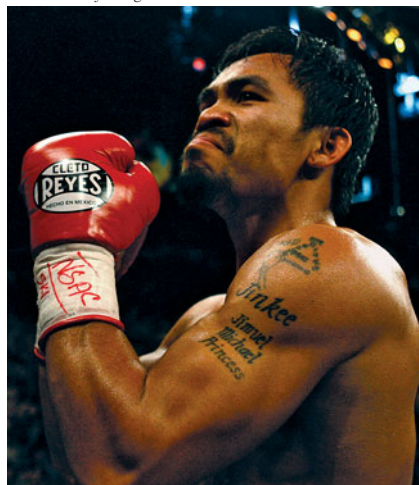
certain outlook for the economy) about what they would do if they came to power.

(PETER KELLNER)

Pacquiao, Manny

(b. Dec. 17, 1978, Kibawe, Bukidnon province, Mindanao, Phil.) From abject poverty to one of *Time* magazine's 100 most influential people of 2009, Filipino boxer Manny Pacquiao's unlikely rise to the pinnacle of his sport was made even more remarkable by his life outside the ring. The charismatic "Pac-Man" was the idol of his people and a unifying force in the Philippines, where his unprecedented popularity led to commercial endorsements, movies, TV shows, CDs, a postage stamp, and a failed bid for a congressional seat in 2007. In 2003 he was voted the country's Person of the Year over Pres. Gloria Macapagal Arroyo.

Al Bello/Getty Images



Boxer Manny Pacquiao

Although Pacquiao had been a growing pay-per-view (PPV) boxing attraction since 2002, his breakthrough as a global phenomenon came on Dec. 6, 2008, when he thrashed longtime box-office star Oscar De La Hoya of the U.S. in a nontitle welterweight bout. The fight sold approximately 1.25 million buys, generating roughly \$70 million in PPV revenue, the third largest PPV gross in nonheavyweight history.

Emmanuel Pacquiao left home as a teenager and stowed away on a ship bound for Manila, where he became a boxer, making his professional debut as a junior flyweight on Jan. 22, 1995, at the age of 16. Many of his early bouts were televised on a program called *Blow by Blow*, where his all-action style and boyish smile quickly made him a fa-

vourite with Filipino boxing fans. He won his first major title on Dec. 4, 1998, knocking out Thailand's Chatchai Sasakul to capture the World Boxing Council (WBC) flyweight title. After failing to make weight, however, he lost the title to Medgoen Singsurat (or Lukchao-pormasak) of Thailand in September 1999. Pacquiao moved up in weight class, and on June 23, 2001, in his first fight in the U.S., he scored a sixth-round knockout of Lehlo Ledwaba to win the International Boxing Federation (IBF) junior featherweight title. Following four successful defenses, he knocked out Mexico's Marco Antonio Barrera on Nov. 15, 2003, to win *The Ring* magazine featherweight championship.

Over the next several years, Pacquiao engaged in a series of high-profile fights, winning the World Boxing Association (WBA) and IBF featherweight titles, the WBC and *The Ring* junior lightweight titles, and the WBC lightweight title. He was the Boxing Writers Association of America and *The Ring's* Fighter of the Year in 2006 and 2008. By the time he faced De La Hoya, Pacquiao was a complete fighter, combining excellent footwork, blazing speed, and a vastly improved defense, and he was widely considered, pound-for-pound, the world's finest boxer.

On May 2, 2009, Pacquiao won *The Ring* junior welterweight championship (his sixth weight class as a champion and his ninth as a professional boxer) with a spectacular one-punch second-round knockout of England's Ricky Hatton in Las Vegas. A few days later he formed a new "local" political party, the Peoples' Champ Movement, back in the Philippines. This action did not signal the end of Pacquiao's career in the ring, however: on November 14 he added another championship belt—in a record seventh weight class—when he defeated Miguel Cotto of Puerto Rico in 12 rounds to take the World Boxing Organization welterweight title. The victory brought Pacquiao's record to 50 wins (37 by knockout), 3 losses, and 2 draws.

(NIGEL COLLINS)

Persson, Stefan

(b. Oct. 4, 1947, Stockholm, Swed.)

At a time of falling stock prices and global economic recession, Swedish retailing executive Stefan Persson held his position in 2009 as one of the wealthiest individuals in the world. Persson came in at number 18 on *Forbes* magazine's list of billionaires (up from number 35 on the 2008 list), largely because the share value of his

company, H&M (Hennes & Mauritz AB), increased by 20% (in local currencies) in the first half of 2009. In late May, Persson used some of his wealth to purchase the village of Linkenholt in Hampshire, Eng., for some £25 million (about \$39.8 million).

Persson learned fashion retailing from his father, Erling Persson, who founded a women's clothing store, Hennes ("Hers") in Västerås, Swed., in 1947. The company added a store in Stockholm and soon became a fixture of fashion in the Swedish market, eventually extending its reach to other European countries. Men's clothing was added through the 1968 acquisition of Swedish hunting-gear retailer Mauritz Widforss, after which time the firm was commonly known as H&M. Persson, who joined the family firm in 1972, helped lead its European expansion and was present when the first British store opened in London in 1976. He assumed leadership as H&M's managing director and CEO in 1982 when his father became chairman of the board.

By the late 1990s, H&M had become Europe's largest retail clothing chain. As it grew, H&M built its reputation on "fast fashion"—inexpensive trendy designs with wide appeal, all of which were initially created by in-house designers, whose concepts were rapidly transformed into mass-market garments through a network of manufacturers in such low-cost countries as Turkey, Bangladesh, and China. Persson recognized the business potential of—as well as the cultural interest in—global fashion; consequently, H&M did not alter garment designs for specific national or regional markets. This strategy allowed H&M to exploit economies of scale as the firm expanded to the U.S. (in 2000), Canada (2004), the Middle East (2006), and East Asia (2007). By 2009 H&M operated more than 1,800 stores in 34 countries, with some 73,000 employees. Most of the brands sold through H&M were in-house labels, but Persson tapped star appeal by soliciting design lines from fashion designers Karl Lagerfeld, Stella McCartney, Matthew Williamson, and Jimmy Choo, as well as pop singers Kylie Minogue and Madonna.

Only a few missteps occurred under Persson's leadership, notably the appointment in 1998 of Fabian Månsson, a former skateboard champion, to fill his shoes as managing director while he succeeded his father as chairman: Månsson resigned two years later. In

July 2009 Persson's son Karl-Johan was named H&M's CEO, but Persson remained chairman.

(SARAH FORBES ORWIG)

Ramos, Maria

(b. Feb. 22, 1959, Lisbon, Port.)

On March 1, 2009, economist and businesswoman Maria Ramos took charge as the new CEO of the South African financial group Absa. In taking the post, she stepped down from the chief executive position with South Africa's Transnet Ltd., where she had served since 2004. Her move to Absa Group, one of South Africa's "big four" banks, occurred at a challenging time when Absa's majority owner, Barclays, was said to be considering a reduction of its 57% stake in the South African retail bank. In July Ramos was named outstanding businesswoman of the year in the African Business Awards granted by the Commonwealth Business Council and *African Business* magazine.

Maria Da Conceicao Das N C Ramos moved to South Africa with her parents when she was a child and later became a citizen. She studied economics at the University of the Witwatersrand (B.Com., 1987) in Johannesburg and at the University of London (M.Sc., 1992). As a student she heard about a men-only scholarship offered by Barclays Bank, where she worked as a clerk to pay for her education; she lobbied for the prize and in 1983 won the Barclays Bank Graduate Scholarship. In her early career Ramos worked in banking and finance (in both private- and public-sector jobs), taught economics (1989–94), and served (1990–94) as an economist for the African National Congress's Department of Economic Planning. In 1996 she was appointed as the country's director general of finance. In that position she worked closely with Finance Minister Trevor Manuel (whom she married in 2008) to strengthen the country's economy by increasing exports and cutting debt; the two effectively guided South Africa toward a free-market economic model. Ramos held the finance post into 2003.

Since she had devoted most of her career to fiscal policy and economic planning, her move in 2004 to Transnet—an operator of ports and shipping operations, bus and other passenger transit systems, rail systems, and fuel-transport lines—appeared to be an unlikely choice. Given the size of the state-controlled firm, however, with more than 75,000 employees and a near monopoly on transportation within South Africa,

the CEO position offered Ramos an opportunity to transform the country's economy by reorganizing one of its most inefficient and debt-ridden companies. She embarked on a campaign of privatization, with the goal of selling all but Transnet's core businesses (pipelines, ports, and freight railways). Unions resisted by demanding job guarantees, and strikes in 2006 forced changes in some of Transnet's restructuring plans. Although Ramos was unable to restructure South Africa Airways (SAA), she strengthened Transnet's balance sheet by transferring the money-losing SAA division to a different government entity. Ramos gained international notice as Transnet became profitable under her leadership, and *Fortune* magazine ranked her as one of the most powerful women in international business for four straight years (2004–07). (SARAH FORBES ORWIG)

Roberts, Nora

(b. Oct. 10, 1950, Silver Spring, Md.)

In 2009 best-selling American romance novelist Nora Roberts demonstrated her penchant for creating charming settings not only for the characters in her stories but also for real-life couples; just in time for Valentine's Day, she opened the Inn Boonsboro, a cozy boutique hotel-bed and breakfast, in her home state of Maryland. Roberts purchased the decrepit 18th-century stone building in 2007. During renovations in 2008 to restore the structure to its former grandeur, a fire broke out in the hotel, which forced Roberts and her contractors to start from scratch. Hoping to attract literary fans to her inn, Roberts outfitted each room with furnishings theme-related to characters in great love stories with happy endings, including the Shakespeare room based on the lovers Oberon and Titania from *A Midsummer Night's Dream* and the *Pride and Prejudice* suite, based on the characters Elizabeth and Darcy in the Jane Austen novel.

As a child, Roberts was an avid reader and frequently formulated her own stories. Her passion for creating fiction resulted in her extremely disciplined practice of writing up to eight hours, five days per week. Confined to her home with her two young sons during a blizzard in 1979, she penned her first novel, *Irish Thoroughbred*, published in 1981 by Silhouette. Following that debut, Roberts enjoyed phenomenal success as she continued to whet her audience's appetite with dozens of enthralling romance novels. Considered

Laura Cavanaugh—UPI/Landov



American romance novelist Nora Roberts

to be among the world's most prolific writers, Roberts sometimes finished a dozen publications annually, and by 2009 she had completed some 175 volumes. When she delved into double duty as a romance-crime writer in 1995, her publisher released these new works under the pseudonym J.D. Robb to differentiate her romance books from these new suspense titles. Roberts's novels were translated into dozens of languages (some 300 million copies were sold worldwide) and consistently topped the best-seller lists. Her titles appeared on the *New York Times* best-seller lists an astounding 91 times in 2002, some occupying the number one spot for up to 23 weeks. Many, such as *Sanctuary* (1997), *The Reef* (1998), and *Midnight Bayou* (2001), were adapted as made-for-television movies.

Roberts showed no sign of slowing down in 2009, releasing several new titles, including *Bed of Roses*, *Black Hills*, *Kindred in Death*, *Promises in Death*, and *Vision in White*. She was the first inductee (1986) into the Romance Writers of America Hall of Fame and, for her 100th novel, *Montana Sky* (1996), the first recipient of its Centennial Award. Roberts also received lifetime achievement awards from Waldenbooks and the Romance Writers of America. (BARBARA A. SCHREIBER)

Rogen, Seth

(b. April 15, 1982, Vancouver, B.C.) Canadian comic actor and screenwriter Seth Rogen, who had won over audiences as a charismatic schlub in several

box-office hits, continued to light up movie screens in 2009. He began the year with a starring role as a mall cop in the dark comedy *Observe and Report* and followed it with *Funny People*, his latest in a string of collaborations with writer-director-producer Judd Apatow, about a friendship that blossoms between two comedians.

Rogen was born to liberal Jewish parents. At age 13 he began doing stand-up on the local comedy-club circuit alongside performers more than twice his age, and three years later he auditioned for the American high-school television dramedy *Freaks and Geeks*, winning the role of the sardonic Ken. The series proved to be short-lived, but producer Apatow was impressed by Rogen's ease in front of the camera and talent for improvisation and in 2001 hired him as both an actor and a writer on a new college-themed sitcom, *Undeclared*. When that show met a similar fate, Rogen, along with childhood friend Evan Goldberg, landed jobs writing for the Sacha Baron Cohen showcase *Da Ali G Show*. Rogen also surfaced in an episode of the teen-centred drama *Dawson's Creek*.

Meanwhile, Rogen's association with Apatow remained fruitful, as he received bit parts in two of Apatow's early film productions, *Anchorman: The Legend of Ron Burgundy* (2004) and *The 40-Year-Old Virgin* (2005), stealing scenes in the latter from lead Steve Carell. Rogen put in another supporting performance in *You, Me, and Dupree* (2006), but it was his next film that made him a household name. In *Knocked Up* (2007), which Apatow wrote and directed, Rogen starred as an oafish pot-smoking slacker whose one-night stand with an attractive career woman (Katherine Heigl) inadvertently results in her pregnancy. The crude yet heartwarming movie grossed more than \$200 million worldwide, and Rogen's appealing performance established his A-list credentials.

Rogen had long desired to make his own movies, however, and finally got the chance with *Superbad* (2007), a raunchy comedy of teenage misadventures that he and Goldberg had originally scripted when they were teenagers themselves. (Rogen served as executive producer and appeared briefly as a bumbling police officer.) The writing duo returned the following year with *Pineapple Express* (2008), an action-oriented farce starring Rogen opposite his *Freaks and Geeks* costar James Franco. At the same time, Rogen

kept busy with a lead role in *Zack and Miri Make a Porno* (2008) and a handful of animated features, which utilized his distinctive voice.

Though Rogen was beginning to flirt with overexposure, fans anticipated his turn as the Green Hornet in a Rogen-and-Goldberg-penned adaptation of the comic-book franchise scheduled for release in 2010. By year's end it was apparent that Rogen had become not only one of Hollywood's premier goofballs but a major creative force as well.

(JOHN M. CUNNINGHAM)

Ronaldo, Cristiano

(b. Feb. 5, 1985, Funchal, Madeira, Port.) In January 2009 Portuguese association football (soccer) player Cristiano Ronaldo was voted the Fédération Internationale de Football Association (FIFA) Player of the Year for 2008. Then in June, Ronaldo—considered by many to be the most gifted footballer of his generation—was sold by Manchester United to Real Madrid for a record £80 million (about \$131 million). (The six-year contract would eventually cost the Spanish club some £187 million [about \$306 million].) The deal represented a substantial profit for United, which had paid £12.24 million (\$19.81 million) when in 2003 it signed him from the Lisbon-based team Sporting Club. Rumours had persisted since 2006 that Ronaldo wanted to play for Real Madrid, and he adjusted to his new team immediately, scoring a penalty goal on his La Liga debut against Deportivo de La Coruña in August.

Ronaldo's father, José Dinis Aveiro, was the equipment manager for the local club Andorinha. (The name Ronaldo was added to Cristiano's name in honour of his father's favourite movie actor, Ronald Reagan, later the U.S. president.) At age 15 Ronaldo had a heart condition that necessitated surgery, but he was sidelined only briefly and made a full recovery. He played for Clube Desportivo Nacional of Madeira and then transferred to Lisbon, where he debuted for Sporting in 2002.

Although Ronaldo was an unusually tall player—at 1.85 m (6 ft 1 in) and 84.5 kg (185 lb), given a football he became transformed into a formidable athlete. Originally a right-winger, he developed into a foraging forward with a free-reined attack. He became famous for his triple step-over technique and drag-backs, and he was able to mesmerize opponents with a "sleight of foot" that made sufficient space to provide openings in opposing defenses. His switch

from wing to forward also seemed to inject a selfish streak into his game, however, and his lethal finish from free-kicks was often overrated—though occasionally spectacular, only 10% of such shots on goal were successful.

During Ronaldo's first season with Manchester United, he made 39 appearances and scored eight goals, including one in the team's triumphant FA Cup final. Without doubt, however, his finest season with United came in 2007–08 when he scored 42 League and Cup goals and earned the Golden Boot as Europe's leading marksman, with 31 League goals. United went on to win the Champions League, but the team lost in the 2009 final to Barcelona.

After moving through the youth and under-21 ranks, Ronaldo made his first appearance for Portugal's full national team against Kazakhstan in August 2003 (four days after his debut for United). He subsequently became the captain, and by late 2009 he had made 65 appearances and scored 22 goals for Portugal.

(JACK ROLLIN)

Roubini, Nouriel

(b. March 29, 1958, Istanbul, Tur.)

In early 2009 the business periodical *Institutional Investor* named Turkish-born American economist Nouriel Roubini to its "Power 50" list of influential people in finance. In April, *Time* magazine designated him one of the world's 100 most influential people. By then, Roubini's subscription Web site, RGE Monitor (which began in 1997 as a single page of Web links), had become known as a central source for economic analysis of the ongoing global credit crisis, and Roubini, who had earned the nickname "Dr. Doom" in 2006 for his dire economic predictions, convinced even those economists and pundits who had dismissed his pessimistic outlook that he had been right.

Born to Iranian Jewish parents, Roubini moved with his family to Iran and Israel before they settled in Italy in 1962. After a year at Hebrew University of Jerusalem, he studied economics at Bocconi University in Milan (B.A., 1982) and Harvard University (Ph.D., 1988), where he specialized in macroeconomics and international economics. He joined the economics faculty at Yale University in 1988 and taught there until 1995, when he moved to New York University. He also served as a visiting scholar to the International Monetary Fund (IMF), was a research associate with the National Bureau of Economic Research (NBER), and held single-year

terms on the White House Council of Economic Advisers (1998–99) and at the U.S. Department of the Treasury (1999–2000). Roubini spent much of his early career studying countries that experienced extreme economic failures, such as Mexico (in 1994), Thailand and other countries associated with the 1997 Asian financial crisis, Russia (1998), and Argentina (2000). He determined that each shared one common element: a massive current account deficit.

Out of curiosity, Roubini began looking for the next national economy most likely to collapse. The data led him to the United States. He presented his findings in a speech to the IMF in September 2006. Many in the audience laughed when he predicted a deep, painful recession marked by the tumultuous burst of a housing bubble, mortgage defaults, a collapse in real-estate values, and economic repercussions that would shock financial markets around the world. When his predictions came true beginning in 2007, some critics asserted that it was a lucky call; they portrayed Roubini as a chronic pessimist (or "permabear") who used any number of reasons over the years to predict and explain a market collapse.

Meanwhile, Roubini, his successful consulting firm, Roubini Global Economics, and his Web site benefited from the publicity. By mid-2009 he had softened his worst-case scenario—that the recovery would be L-shaped (i.e., not a recovery)—but he still criticized those who were predicting a recovery later in the year. Roubini expected more financial shocks, especially from bank insolvencies, to persist through 2009. More optimistically, he predicted that a somewhat normal, U-shaped economic recovery would begin in 2010.

(SARAH FORBES ORWIG)

Shawn, Wallace

(b. Nov. 12, 1943, New York, N.Y.)

In the spring of 2009, London's Royal Court Theatre staged a three-month festival featuring the works of American playwright Wallace Shawn, which included the premiere of his first new play in more than 10 years, *Grasses of a Thousand Colors*. While arguably best known in his home country for his lengthy career as a character actor in films and television shows, Shawn had long been a critical darling in the British theatre, where his oft-surreal, probing plays led some critics to call him America's leading contemporary dramatist.

Shawn was exposed to New York City's literary culture from a young age, as his father, William Shawn, was the editor of *The New Yorker* from 1952 to 1987. He studied history at Harvard University and then philosophy and economics at Magdalen College, Oxford, before turning to playwriting after returning to New York. His first produced work was *Our Late Night*, which premiered in 1975 and won an Obie Award for playwriting. Shawn's *A Thought in Three Parts*—featuring a prolonged simulated orgy in the second act—was met with parliamentary protests when it debuted in London in 1977 and was subsequently pulled from the theatre, which helped forge his reputation as a risk-taking playwright. In 1979 he made his on-screen acting debut with a small role in director Woody Allen's *Manhattan*, and his "second career" soon led to his first brush with international fame.

Shawn and fellow actor-writer André Gregory starred in the film *My Dinner with André* (1981), which was an art-house sensation upon its release and became a cult classic in later years. The movie recreated a real-life dinner between the two principals, and the plot simply consisted of a long, meandering philosophical conversation, an unusual subject matter for a modest box-office hit. Shawn went on to have memorable roles in four more Allen movies and in such films as *The Princess Bride* (1987), *Vanya on 42nd Street* (1994), and *Clueless* (1995). He also appeared on television (including in a recurring role on the 1996–97 *Clueless* spin-off) and provided voices for a number of animated

Actor-playwright Wallace Shawn



Stephen Lovekin/Getty Images

Icelandic Ministry of Social Affairs and Social Security

movies, including *Toy Story* (1995), *Toy Story 2* (1999), and *The Incredibles* (2004).

Meanwhile, Shawn continued to produce highly lauded dramas. *Aunt Dan and Lemon* (1985) won Shawn a second Obie Award, and he took a third in 1991 for *The Fever*, a caustic 90-minute monologue that dissects the power relations between the world's poor and elite classes and finds a pervasive moral deficiency in the latter. *The Designated Mourner* (1996; filmed 1997) touched on similar ground, telling the story—through actionless narrations by the three characters—of educated and privileged people who grapple with their humanity during a chaotic civil war in an unnamed country. Shawn published a nonfiction collection, *Essays*, in September 2009. (ADAM AUGUSTYN)



Icelandic Prime Minister Jóhanna Sigurðardóttir

Sigurðardóttir, Jóhanna

(b. Oct. 4, 1942, Reykjavík, Ice.)

Following the resignation of Icelandic Prime Minister Geir H. Haarde and his coalition government in January 2009 in the wake of the country's economic collapse and weeks of large-scale street demonstrations outside the Althingi (parliament) in Reykjavík, Social Affairs Minister Jóhanna Sigurðardóttir led a coalition of the Social Democrats and the Left-Green Party to form a caretaker minority government. On February 1 she formally took office as Iceland's prime minister. Sigurðardóttir was the country's first female prime minister as well as the world's first openly gay head of government.

After graduating from the Commercial College of Iceland in Reykjavík, Sigurðardóttir worked (1962–71) as a flight attendant for Loftleiðir Icelandic Airlines, becoming active as a labour union organizer. She twice served (1966, 1969) as chairman of the board of the Icelandic Cabin Crew Association. She took an office job with a packaging company in Reykjavík in 1971 and later sat on the board of the Commercial Workers' Union. In 1978 Sigurðardóttir was elected to the Althingi as a member of the Social Democratic Party, representing Reykjavík. She quickly gained a reputation as an advocate for social justice, and she called for the strengthening of Iceland's welfare system.

Sigurðardóttir served (1984–93) as vice-chairman of the Social Democratic Party. She was named minister of social affairs in 1987, a position she held until 1994, when she unsuccessfully campaigned for leadership of the Social Democrats. Sigurðardóttir responded to this setback by forming her own party,

National Movement, which captured four seats in the subsequent parliamentary election. The two parties eventually reconciled in 1999, when they joined with the Women's Alliance and the People's Alliance to contest that year's election; in 2000 the coalition formally became the Social Democratic Alliance. Sigurðardóttir was again appointed minister of social affairs in 2007.

In 2002 Sigurðardóttir established a civil partnership with her companion, Jónína Leósdóttir, a noted playwright and journalist. (Sigurðardóttir had two sons from an earlier marriage to banker Torvaldur Johannesson.) In public opinion surveys, she was consistently rated as Iceland's most popular politician. Even in late 2008, as the country's economic crisis was deepening, a Gallup Poll found that Sigurðardóttir enjoyed an approval rating of 73%. After she was sworn in as prime minister, her interim government called for new parliamentary elections to be held, and on April 25 the Social Democrats and the Left-Greens won 34 seats, capturing a slim majority in the 63-seat legislature. Shortly thereafter Sigurðardóttir announced that one of her top priorities as prime minister would be securing Iceland's membership in the EU, and on July 17 the country submitted its formal bid for EU entry. (EDITOR)

Sotomayor, Sonia

(b. June 25, 1954, Bronx, N.Y.)

In May 2009 U.S. Pres. Barack Obama nominated federal appeals court judge Sonia Sotomayor to the Supreme Court

in order to fill the vacancy left by departing justice David Souter. Sotomayor's confirmation hearings before the Senate Judiciary Committee in July went smoothly, and the following month she was confirmed (68–31) by the Senate. Sotomayor was the first Hispanic and the third woman to serve on the Supreme Court.

Sotomayor's parents moved to New York City from Puerto Rico, and she was raised in a housing project in the Bronx. After the death of her father, her mother worked long hours as a nurse to support the family. Sotomayor credited the episodes of the television crime show *Perry Mason* that she watched as a child with influencing her decision to become a lawyer. She graduated summa cum laude from Princeton University (B.A., 1976) before attending Yale Law School, where she worked as an editor of the *Yale Law Journal*. She graduated in 1979 and worked for five years as an assistant district attorney in New York county before pursuing private practice in a New York firm, where she worked on intellectual property and copyright cases.

In 1992 Pres. George H.W. Bush appointed Sotomayor a federal judge in the U.S. District Court, Southern District of New York. As a federal judge, Sotomayor received national attention in 1995 when she ruled in favour of Major League Baseball players, then on strike, who were suing because of changes to the free agent system and salary arbitration rules. Sotomayor issued an injunction against the team owners, effectively bringing the eight-month strike to an end.

When Pres. Bill Clinton nominated Sotomayor to be a judge of the U.S. Court of Appeals for the Second Circuit in 1997, Republican senators delayed her appointment for more than a year because of their concerns that the position might lead to a Supreme Court nomination. After her appointment to the appeals court in 1998, Sotomayor became known for her candid, direct speaking style and for her carefully reasoned decisions. Some of her decisions provoked controversy. In 2001 she ruled in favour of a woman with dyslexia who wanted more accommodations under the Americans with Disabilities Act in order to take the bar exam. In 2003 in *Ricci v. DeStefano*, a group of white firefighters from New Haven, Conn., sued the city for having discarded a test, the results of which had in effect barred all African American firefighters from promotion.

Sotomayor and two other judges in 2008 accepted the lower court's decision against the white firefighters with little further comment, but in June 2009 the Supreme Court reversed their decision. (CHELSEY PARROTT-SHEFFER)

Svindal, Aksel Lund

(b. Dec. 26, 1982, Løerensskog, Nor.) Norwegian skier Aksel Lund Svindal won his second overall Fédération Internationale de Ski (FIS) Alpine World Cup title in March 2009, narrowly defeating his closest rival, Benjamin Raich of Austria, in the final event of the season at Åre, Swed. Svindal won the title by a record-low two-point margin, with a record-low winning-point total. The narrow victory completed a triumphant comeback from a devastating crash in 2007 that had left him seriously injured and inactive for nearly a year.

Svindal's parents, both skiers, bought him his first pair of skis for his third birthday, and by age nine he was racing competitively. He attended high school in Oppdal, a ski resort that hosted World Cup slalom skiing events, which enabled him to study and work on his technique on the slopes at the same time. He won the national under-16 slalom title and was chosen to ski for the Norwegian junior national team. At the FIS junior world ski championships in 2002, Svindal collected four medals, including a gold in the combined event, and later that year he posted his first European Cup win, taking the gold in the KO giant slalom at San Vigilio, Italy. In March 2005 he earned his first world Alpine ski championship medal at Bormio, Italy, when he won the silver in the combined.

Svindal's first trip to the Olympic Games, in February 2006, did not result in any medals. He finished fifth in the supergiant slalom (super G) and sixth in the giant slalom (GS). His performance the following month, however, hinted at what was to come as he finished second overall in the World Cup behind Raich. The next season Svindal won two gold medals (the GS and the downhill) in February at the world championships in Åre and then in March claimed his first overall World Cup title with a dominating performance in the season finale at Lenzerheide, Switz., winning the downhill, super G, and GS.

A promising start to the 2007–08 season had Svindal thinking about a World Cup repeat, but his hopes ended in November when he crashed during a downhill training run at Beaver Creek,

Colo. He suffered a severe abdominal injury and fractures to his face and did not ski competitively for 11 months. In December 2008 Svindal returned to Beaver Creek, and in a courageous performance he won the downhill and the super G. At the 2009 world championships in Val d'Isère, France, Svindal took the gold in the super combined and the bronze in the super G; he then completed his remarkable comeback season at Åre the following month, barely winning the overall World Cup title after Raich was disqualified in his final race for straddling a gate. Svindal's 1,009 points for the season beat out Raich's 1,007 to end the tightest World Cup race in history. (ANTHONY G. CRAINE)

Swift, Taylor

(b. Dec. 13, 1989, Wyomissing, Pa.) Teen country music sensation Taylor Swift dominated the industry award circuit in 2009. Her sophomore album *Fearless* (2008) was recognized as album of the year by the Academy of Country Music in April, and she topped the best female video category for "You Belong with Me" at the MTV Video Music Awards (VMAs) in September. During her VMA acceptance speech, Swift was interrupted by rapper Kanye West, who protested that the award should have been given to nominee Beyoncé for what he called "one of the best videos of all time." At the Country Music Association's CMA Awards that November, Swift won all four categories in which she was nominated. Her recognition as CMA entertainer of the year made her the youngest-ever winner of that award, as well as the first female solo artist to triumph since 1999.

Swift showed an interest in music at an early age, and she progressed quickly from roles in children's theatre to her first appearance before a crowd of thousands. She was just 11 years old when she sang "The Star-Spangled Banner" before a Philadelphia 76ers National Basketball Association game; the following year she picked up the guitar and began to write songs. Taking her inspiration from artists such as Shania Twain and the Dixie Chicks, Swift crafted original material that reflected her experiences of "tween" (pre-teen) alienation. When she was 13, Swift's parents sold their farm in Pennsylvania to move to Hendersonville, Tenn., so that Taylor could devote more of her time to courting country labels in nearby Nashville.

A development deal with RCA Records allowed Swift to make the ac-

quaintance of recording industry veterans, and in 2004 the 14-year-old was signed to Sony/ATV as a songwriter. She performed many of the songs that she wrote at venues in the Nashville area. It was at one such performance that she was noticed by record executive Scott Borchetta, who signed Swift to his fledgling Big Machine label. Her first single, "Tim McGraw," was released in the summer of 2006, and the song was an immediate success; it spent eight months on the *Billboard* country singles chart. The 16-year-old Swift followed with a self-titled debut album, and she went on tour, opening for Rascal Flatts. *Taylor Swift* was certified platinum in 2007, having sold more than one million copies, and Swift continued a rigorous touring schedule, opening for artists such as George Strait, Kenny Chesney, Tim McGraw, and Faith Hill.

On *Fearless* she demonstrated a refined pop sensibility, managing to court the mainstream pop audience without losing sight of her country roots. *Fearless* opened at number one on the *Billboard* 200 chart and sold 592,000 copies in its first week; it ultimately spent more time atop the *Billboard* chart than any album released in the previous 10 years. (MICHAEL RAY)

Van Rompuy, Herman

(b. Oct. 31, 1947, Brussels, Belg.)

In November 2009 Belgian Prime Minister Herman Van Rompuy was appointed the first permanent president of the European Council, the EU's chief decision-making body. Van Rompuy was widely viewed as a contemplative coalition builder who would work to reconcile the frequently disparate interests of the 27-member EU. His two-and-a-half-year term of office (which could be renewed once) would officially begin on Jan. 1, 2010.

Van Rompuy earned a bachelor's degree in philosophy (1968) and a master's degree in economics (1971) from the Catholic University of Leuven. In 1972 he began his career as an economist at the National Bank of Belgium. The following year he entered politics, serving as the vice president of the youth section of the centre-right Flemish Christian Democrat party. Van Rompuy left banking in 1975, and within three years he was working in the Christian Democrats' national office. From 1988 to 1993 he served as president of that party.

Van Rompuy's background in economics was put to use in 1993 when he

was elevated to the dual posts of deputy prime minister and budget minister. In the latter role he significantly trimmed the country's public debt. He left office after the Christian Democrats' defeat in the 1999 general election. That year he entered the legislature as a member of the Chamber of Representatives, and in 2004 he was named minister of state. With the return of the Christian Democrats to the majority in July 2007, Van Rompuy was named leader of the Chamber of Representatives.

When Prime Minister Yves Leterme, a Christian Democrat, resigned in December 2008 amid allegations of improper conduct in the disposition of Belgian-owned shares in the failed Fortis bank, King Albert II designated a reluctant Van Rompuy to replace him. Albert had previously entrusted Van Rompuy with brokering deals between Belgium's estranged Walloon (French-speaking) and Flemish communities, and Van Rompuy's term as prime minister saw a lessening of tension between the regions.

Van Rompuy's light diplomatic touch was noticed by other European leaders. After the ratification of the Lisbon Treaty in November 2009, he became the compromise choice for the European Council presidency, earning the appointment despite bids for the post by several higher-profile candidates, including former British prime minister Tony Blair, former Spanish prime minister Felipe González, and Dutch Prime Minister Jan Peter Balkenende. Nevertheless, Van Rompuy's selection was not without controversy. In 2004 he had openly declared his opposition to the possible EU membership of Turkey, a country that gained EU candidate status in 1999, on the basis of what he perceived to be religious differences.

(MICHAEL RAY)

Waters, Alice

(b. April 28, 1944, Chatham, N.J.)

In 2009 chef, restaurateur, and food activist Alice Waters intensified her efforts to bring seasonal, organically grown food to the American mainstream; in particular she championed an overhaul of the public-school lunch system. As co-owner and chef of the famed Berkeley, Calif., restaurant Chez Panisse, Waters had long fought to overturn the elitist stereotypes surrounding the "slow food" movement, which billed itself as the healthy antithesis to fast food.

Waters studied French culture at the University of California, Berkeley, re-

George Rose/Getty Images



Chef and "slow food" advocate Alice Waters

ceiving her bachelor's degree in 1967. She participated in the 1960s Free Speech Movement, and the idealism that was then prevalent at Berkeley was reflected in her ideology throughout her career. She studied abroad for a time in France, and it was there that her love of farm-to-plate dining took hold. Following graduation, she spent a year at the International Montessori School in London before returning to California to teach.

In the 1970s the U.S. was still years away from the "foodie revolution," which by 2009 had brought farmers' markets and organic foods to a larger audience. Waters's prescient passion for whole foods, however, inspired her and her friend Lindsey Shere to found a market-inspired restaurant, despite having little capital and no experience as restaurateurs. When Chez Panisse opened in 1971, it was with a relatively untrained staff, a set fixed-price menu that changed daily, and an uncompromising dedication to a vision that seemed to many untenable: Waters wanted to create meals by using only locally grown seasonal ingredients, and she wanted to forge relationships with the producers and suppliers.

These exacting tenets kept the restaurant in debt for its first eight years of business; it was frequently saved from bankruptcy by loans from Waters's friends. When Chez Panisse finally starting turning a profit, Waters had time to devote herself to other facets of food activism, such as the Garden Proj-

ect, which provided produce to the San Francisco county jail and work opportunities to its former inmates. In 1996, to celebrate the restaurant's 25th anniversary, Waters founded the Chez Panisse Foundation, which funded programs that educated young people on responsible agriculture.

The advocacy venture for which she became best known was the Edible Schoolyard, originally established in 1995. Waters began the program by planting a garden in the yard of Berkeley's Martin Luther King Jr. Middle School. A cooking classroom was installed a few years later, and by 2009 the Edible Schoolyard was a thriving educational tool, though not a source of lunchroom produce. From these small beginnings grew Waters's new cause, that of persuading the government to increase funding to improve school lunch programs. Her indomitable dedication to providing schoolchildren with more healthful-eating options earned Waters a fair share of detractors, who argued that seasonal food was a dispensable luxury for already underfunded schools. As with her restaurant, however, her philosophy regarding the project was "If we do it right, the money will come."

(MELISSA ALBERT)

Watson, Paul

(b. Dec. 2, 1950, Toronto, Ont.)

In 2009 Canadian environmental warrior Paul Watson and his crew sailed into the second season of their popular program *Whale Wars* on the Animal Planet cable television network. The

Canadian environmental warrior Paul Watson



Chantal Henderson/Sea Shepherd Conservation Society

show featured the dangerous exploits of the Sea Shepherd Conservation Society's expeditions to protect and defend marine wildlife from illegal poaching. Patrolling the seas under a modified Jolly Roger pirate flag, Watson and his crew of volunteers endured aggressive attempts by whalers to thwart their interference with the whaling operations; these included being assaulted with water cannons, flash grenades, and LRADS (long-range acoustic devices). Watson's direct-action approach to saving the whales, which caused some whalers to label him as an ecoterrorist, included positioning his ship, the *Steve Irwin*, between the whalers and a targeted pod of whales, entangling ropes in their propellers, throwing stink bombs onto the offending vessel, and even ramming up against the whaling ship. In 2008 Watson estimated that his interventions had saved the lives of more than 500 whales.

Watson exhibited an early affinity for protecting wildlife. At the age of nine he would seek out and destroy leghold traps that were set by beaver hunters, interfere with deer and duck hunters, and foil the attempts of other young boys to shoot birds. During the late 1960s he joined the Canadian Coast Guard and gained sailing experience with the British, Canadian, Norwegian, and Swedish merchant marines. He was an early member of Greenpeace International (founded in 1971). During his years with the organization, Watson often employed daring and innovative tactics to defend wildlife from hunters, such as positioning his inflatable Zodiac boat in between a pod of sperm whales and the harpoon of a large Soviet whaling vessel or forcing sealing ships to a halt by standing on the ice in their path. He was also known to handcuff himself to a pile of seal pelts being hoisted up onto a sealing vessel. Owing to conflicts concerning such unconventional protest methods, Watson left Greenpeace and established (1977) the Sea Shepherd Conservation Society.

Watson shared his passion for animals and the environment through his involvement with numerous other organizations, including Defenders of Wildlife, Friends of the Wolf, Fund for Animals, the Royal Society for the Protection of Animals, and the Sierra Club, of which he was director (2003–06). For his valiant efforts on behalf of wildlife, Watson was granted the Genesis Award (1998), the George H.W. Bush Daily Point of Light Award (1999), and enrollment (2002) in the

U.S. Animal Rights Hall of Fame, and in 2000 *Time* magazine named him one of the environmental heroes of the 20th century. Watson's many books include *Shepherds of the Sea* (1980), *Ocean Warrior* (1994), and *Seal Wars* (2002). The Sea Shepherd Conservation Society's battle with a Japanese whaling fleet in 2006–07 was recorded in the documentary film *At the Edge of the World* (2008). (BARBARA A. SCHREIBER)

Wu, Jason

(b. Sept. 27, 1982, Taipei, Taiwan)

New York City-based fashion designer Jason Wu became an overnight sensation when on Jan. 20, 2009, U.S. First Lady Michelle Obama (*q.v.*) appeared at the balls feting the inauguration of her husband, U.S. Pres. Barack Obama, in an opulent gown that Wu had created. By the next morning Wu had been interviewed on television by CNN, the *Today* show, and *Good Morning America*, and one of Taiwan's largest circulation newspapers, *The Liberty Times*, ran a banner headline declaring "Michelle's Evening Gown Designed by Taiwanese."

Wu claimed that his upbringing in Vancouver, B.C.—where his family settled in the early 1990s after leaving Taipei—was instrumental to his success. His mother hired a fashion student there to teach her young son, who was "always sketching and drawing," the art of pattern cutting and sewing. Wu's parents knew that boys in Taiwan were expected to study business, and they believed that Canada would offer a more relaxed environment for him to explore his interests.

Following three years of study at the Parsons School of Design, New York City, Wu worked (2005) as an intern for Narciso Rodriguez, whom he classified as his role model. Once he established his own eponymous label in 2006, Wu operated his business in a Seventh Avenue studio near one run by Rodriguez. Manhattan socialites, including *Vogue* contributing editor Marina Rust and business tycoon Ivanka Trump, were early fans of the polished feminine ready-to-wear line Wu had produced even before he designed Obama's gown.

Wu was commissioned to create the inauguration gown by Ikram Goldman, a Chicago high-fashion retailer from whom Obama purchased most of her clothing and who sold Wu's designs. Wu recollected that he was asked to sketch three formal looks and that even though he was unaware that the designs were intended for inauguration day, he presumed that he was being

Bebeto Matthews/AP



Fashion designer Jason Wu

commissioned for a major occasion. He wanted the dress to reflect "hope, fantasy, a dream." According to Wu, 100 hours of workmanship went into his intricate confection. Handmade organza flowers enhanced by sparkling Swarovski crystals embellished the floor-length white silk chiffon column.

Following the inauguration festivities, Michelle Obama further raised Wu's profile by appearing in his designs at a series of historic occasions. On March 31, the first day of President Obama's visit to the U.K. for the Group of 20 economic summit, she decamped from Air Force One in Wu's chartreuse sheath dress, and a few days later she flaunted a Wu black duchess satin opera coat when she appeared at Buckingham Palace to meet Queen Elizabeth II. The March 2009 cover of *Vogue* magazine featured Obama clad in another sleeveless Wu dress. Her patronage worked wonders for the designer—catapulting his brand into the "big league." At Wu's spring-summer 2010 show, his line attracted a fashion "executive elite," including top buyers from Saks Fifth Avenue and Bergdorf Goodman, where Wu sold his work. His collection ran the gamut from sharp-tailored separates in lush materials, such as tweed and satin, to flirty cocktail frocks and languorous long chiffon evening gowns.

(BRONWYN COSGRAVE)

Obituaries

In 2009 the world **LOST** many leaders, **PATHFINDERS**, newsmakers, **HEROES**, **CULTURAL ICONS**, and **ROGUES**. The pages below **RECAPTURE** the lives and **ACCOMPLISHMENTS** of those we remember best.

Agnelli, Susanna, Italian politician and philanthropist (b. April 24, 1922, Turin, Italy—d. May 15, 2009, Rome, Italy), served (1995–96) as the first female foreign minister of Italy. The granddaughter of Giovanni Agnelli, the founder of the carmaker Fiat, she combined her elegant upbringing—detailed in her 1975 memoir *Vestivamo alla marinara* (*We Always Wore Sailor Suits*)—and a forceful personality to become a vibrant force in Italian politics. Her philanthropy centred on education and the environment, and she was responsible in 1990 for establishing Italy's annual research-funding charity telethon. Agnelli was also known for her years as an advice columnist for *Oggi*, a weekly magazine.

Aksyonov, Vasily Pavlovich (VASILY PAVLOVICH AKSENOV), Russian novelist and short-story writer (b. Aug. 20, 1932, Kazan, Russia, U.S.S.R.—d. July 6, 2009, Moscow, Russia), was one of the leading literary spokesmen for the generation of Soviets who reached maturity after World War II. The son of parents who spent many years in Soviet prisons, Aksyonov was raised in a state home. He graduated from medical school in 1956 and worked as a doctor for a few years. He also turned to writing, and in the cultural thaw of the late 1950s and early '60s, he published a number of short stories and novels. Aksyonov excelled in fast-moving narratives dealing with youthful rebels who are attracted to Western culture even though they share the collectivist ideals of the previous generation. He incorporated elements of fantasy, satire, and parody in such novels as *Ostrov Krym* (1981; *The Island of Crimea*, 1983), *Ozhog* (1980; *The Burn*, 1984), and *Skazhi izyum* (1985; *Say Cheese!*, 1989). Because of his reputation and his involvement in the attempted publication of *Metropol*, an uncensored literary journal, in 1980 he was forced

into exile in the West. Aksyonov's citizenship was restored by decree in 1990, and he later lived in Moscow.

al-Hafez, Amin, Syrian military leader and head of state (b. 1921?, Aleppo, Syria—d. Dec. 17, 2009, Aleppo), helped bring the Ba'ath Party to power in Syria and, as de facto ruler of the country (1963–66), embarked on a widespread nationalization program and set in place a military tribunal. Hafez graduated (1946) from military school and fought in the Arab-Israeli war of 1948–49. In the late 1950s, inspired by the fervent pan-Arab nationalism of Egyptian Pres. Gamal Abdel Nasser, he and others in Syria's Ba'ath Party endorsed the formation (1958) of the United Arab Republic (U.A.R.). After Nasser outlawed Syrian political parties from the union, however, the Ba'athists grew disillusioned with the arrangement, and in 1961 the U.A.R. collapsed. Within months of a Ba'athist junta's seizure of power in Syria in 1963, Hafez took over as chairman of the National Council of the Revolutionary Command (head of state). Overthrown in a coup three years later, he eventually took refuge in Iraq, where he remained until Saddam Hussein's Ba'athist regime was toppled in 2003.

Alfonsín, Raúl (RAÚL RICARDO ALFONSÍN FOULKES), Argentine politician (b. March 12, 1927, Chascomús, Arg.—d. March 31, 2009, Buenos Aires, Arg.), emerged victorious in the 1983 Argentine presidential elections as leader of the moderate Radical Civic Union (UCR); his victory marked the first time that the Peronist party had been beaten in a free election, and his term as president followed eight years of military rule in which at least 9,000 persons "disappeared." He attended the Liceo Militar General San Martín, obtained a law degree (1950) from the National University of La Plata, and founded the

newspaper *El Imparcial* in his native Chascomús. After serving for a decade in provincial politics, he was elected to the National Congress (1963) under a UCR president, who later fell victim to a military takeover (1966). Alfonsín ran unsuccessfully for the UCR nomination in the 1973 presidential election, which was won by a candidate from the rival

Daniel Luna—AFP/Getty Images



Argentine politician Raúl Alfonsín

Peronist party, which was later overthrown (1976) by the military. In response to human rights abuses perpetrated by state security forces during the ensuing regime, Alfonsín wrote *La cuestión Argentina* (1980) and co-founded the Permanent Assembly for Human Rights. After the U.K. defeated Argentina in the Falkland Islands War (1982), the discredited military allowed a freely contested presidential election.

Ali, Rashied (ROBERT PATTERSON, JR.), American musician (b. July 1, 1935, Philadelphia, Pa.—d. Aug. 12, 2009, New York, N.Y.), was among the first to depart from the drummer's traditional role in jazz by playing pure in-

terplay with soloists rather than “keeping time”—indicating tempo and metre. His 1965–67 work in tenor saxophonist John Coltrane’s groups climaxed in the classic album of Coltrane-Ali duets *Interstellar Space* (1967).

Allen, Betty (ELIZABETH LOUISE ALLEN), American opera singer (b. March 17, 1927, Campbell, Ohio—d. June 22, 2009, Valhalla, N.Y.), was part of the post-World War II wave of African American singers on the international stage. She completed her vocal training at Hartford (Conn.) School of Music (1953) and made her City Opera debut in 1954 as Queenie in Jerome Kern’s *Show Boat*. As a lower-range mezzo-soprano, Allen was more often cast as the brooding or matronly character than the dainty heroine; she was Jocasta in Igor Stravinsky’s *Oedipus Rex*, Mistress Quickly in Giuseppe Verdi’s *Falstaff*, and the raving gypsy Azucena in Verdi’s *Il trovatore*, one of her favourite roles. Allen sang with many companies, notably the New York City Opera, the Metropolitan Opera, and the New York Philharmonic conducted by Leonard Bernstein, and she toured internationally as a recitalist.

Amacher, Maryanne, American composer (b. Feb. 25, 1938, Kane, Pa.—d. Oct. 22, 2009, Rhinebeck, N.Y.), produced experimental electronic musical works that incorporated multiple aspects of acoustics and hearing on a large scale. Amacher studied composition privately with Karlheinz Stockhausen and earned a B.F.A. degree (1964) from the University of Pennsylvania. Amacher collaborated (1974–80) with choreographer Merce Cunningham (*q.v.*), composing (1976) the music for the dance *Torse*, and with composer John Cage (1975–84), for whom she created a storm sound track for his multimedia *Lecture on the Weather* (1975). She was perhaps best known for her installation series *City-Links #1–22* (launched in 1967), *Music for Sound-Joined Rooms* (begun in 1980), and *Mini-Sound* series (started in 1985). In her final faculty position, Amacher taught electronic music (2000–09) at Bard College, Annandale-on-Hudson, N.Y.

Amit, Meir (MEIR SLUTZKY), Israeli military leader, intelligence chief, and politician (b. March 17, 1921, Tiberias, British Palestine—d. July 17, 2009, Israel), was the only person in Israel’s history to lead the foreign intelligence

agency Mossad and military intelligence simultaneously; he was credited with modernizing Mossad’s intelligence gathering. Amit fought during Israel’s 1947–49 war of independence and was wounded while leading an attack; he eventually rose to the military rank of major general. After studying business at Columbia University, New York City, he was named head of Israeli military intelligence (1961) and then director of Mossad (1963), a position he held until he was fired in 1968.

Andersson, Arne, Swedish athlete (b. Oct. 27, 1917, Trollhättan, Swed.—d. April 1, 2009, Vänersborg, Swed.), set world records in both the 1,500-m and mile distances, especially in races against his rival and countryman Gunder Hägg; between 1941 and 1945, in the run-up to the famed one-mile time of 3 min 59.4 sec run by Britain’s Roger Bannister on May 6, 1954, Andersson and Hägg were considered the world’s best middle-distance runners, with 19 world records between them. Andersson’s world-record 1,500-m time, 3 min 44.9 sec, was set on Aug. 17, 1943, and held for 11 months until broken by Hägg. Andersson set the one-mile record three times: July 10, 1942 (4 min 6.2 sec, tied with Hägg), July 1, 1943 (4 min 2.6 sec), and July 18, 1944 (4 min 1.6 sec). In 1946 both men were stripped of their amateur status for having accepted payments from race promoters. Decades later Andersson’s amateur status was officially reinstated.

Aquino, Corazon (MARIA CORAZON COJUANGCO AQUINO), Philippine political leader (b. Jan. 25, 1933, Tarlac

Philippine political leader Corazon Aquino



Val Rodriguez/AP

province, Phil.—d. Aug. 1, 2009, Makati, Phil.), as president (1986–92) of the Philippines, restored democratic rule in that country after the long dictatorship of Ferdinand Marcos. She was born into a wealthy, politically prominent family and graduated (1953) from the College of Mount St. Vincent in New York City before marrying (1954) Benigno Simeon Aquino, Jr., a promising young politician. She remained in the background during her husband’s subsequent career, rearing their five children at home. Her husband, who had become a prominent opposition leader, was jailed by Marcos for eight years (1972–80), and in 1980 Aquino accompanied him into exile in the U.S. Her husband’s assassination upon his return to the Philippines in 1983 galvanized opposition to the Marcos government. When Marcos called for presidential elections in February 1986, Aquino became the unified opposition’s candidate. Though she was officially reported to have lost to Marcos, Aquino and her supporters challenged the results, charging widespread voting fraud. High officials in the military publicly renounced Marcos and proclaimed Aquino the rightful president. On Feb. 25, 1986, both Aquino and Marcos were inaugurated as president, but that same day Marcos fled the country. Aquino appointed a commission to write a new constitution, which restored the bicameral Congress. She then held elections to the new Congress and broke up the monopolies held by Marcos’s allies over the economy, which experienced steady growth for several years. Aquino failed to undertake fundamental economic or social reforms, however, and her popularity steadily declined as she faced continual outcries over economic injustice and political corruption.

Arcan, Nelly (ISABELLE FORTIER), Canadian writer (b. March 5, 1973, Lac-Mégantic, Que.—found dead Sept. 24, 2009, Montreal, Que.), created a sensation with her first novel, *Putain* (2001; *Whore*, 2005), which was a finalist for the French literary prizes the Prix Médicis and the Prix Femina. She followed it with three more novels that established her as a literary star in Quebec and in France. Like her first book, her second, *Folle* (2004), was semiautobiographical and scandalous, and her own fragile beauty contributed to the public fascination with her. She had recently completed

Ulf Andersen/Getty Images



Canadian author Nelly Arcan

work on a fifth novel, entitled *Paradis, clef en main* (2009), when she committed suicide.

Argüello, Alexis (“EL FLACO EXPLO-SIVO”), Nicaraguan boxer (b. April 19, 1952, Managua, Nic.—found dead July 1, 2009, Managua), held world titles in three different divisions—featherweight, junior lightweight (now super featherweight), and lightweight—between 1974 and 1982, though he failed in his attempt to move up to junior welterweight; in 90 bouts as a professional, he compiled an impressive record of 82 victories (64 by knockout) and 8 losses. He was inducted into the International Boxing Hall of Fame in 1992.

Arthur, Bea (BERNICE FRANKEL), American actress (b. May 13, 1922, New York, N.Y.—d. April 25, 2009, Los Angeles, Calif.), portrayed an outspoken, acerbic-tongued feminist in the television sitcom *Maude* (1972–78) and a sharp-witted divorcée who shares a home with her mother (played by Estelle Getty) and two other middle-aged women (Betty White and Rue McClanahan) in *The Golden Girls* (1985–92), which, like *Maude*, often explored such hot-button issues as abortion, homosexuality, infidelity, gun control, and aging. Arthur, who garnered 11 Emmy Award nominations, won an Emmy in 1977 for her role as Maude Findley, and in 1988 she was awarded the statuette for her portrayal

of Dorothy Zbornak in *The Golden Girls*.

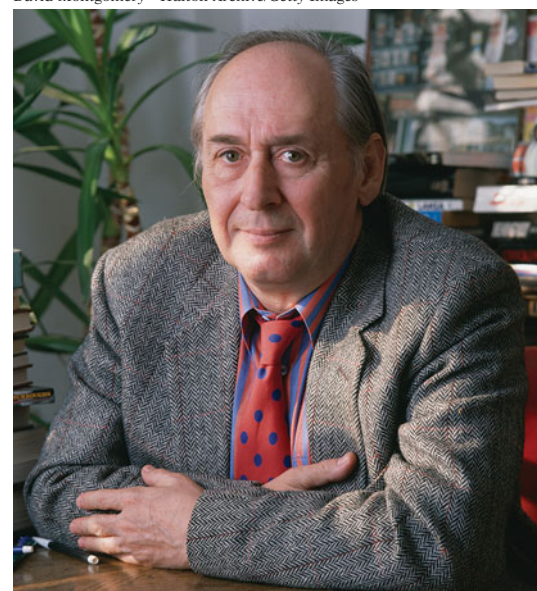
Asheton, Ron (RONALD FRANKLIN ASHETON), American guitarist (b. July 17, 1948, Washington, D.C.—found dead Jan. 6, 2009, Ann Arbor, Mich.), was the guitarist for the Stooges, an American rock band of the late 1960s and early '70s that helped define punk music; described by one critic as the “godfather of punk guitar,” Asheton was admired for his raw and energetic style of playing, particularly on such recordings as “I Wanna Be Your Dog” (1969), “TV Eye” (1970), and “Down on the Street” (1970). In 2003 *Rolling Stone* magazine included Asheton on its list of the 100 greatest guitarists of all time.

Ayala, Francisco, Spanish novelist and sociologist (b. March 16, 1906, Granada, Spain—d. Nov. 3, 2009, Madrid, Spain), explored the collapse of moral order and the hopelessness of human relations in society, notably in his two long satiric novels, *Muertes de perro* (1958; *Death as a Way of Life*, 1964) and *El fondo del vaso* (1962). Ayala received a law degree from the University of Madrid in 1929, having already published the novel *Tragicomedia de un hombre sin espíritu* (1925) and several stories. He studied in Berlin (1929–30) and received a doctoral degree in law (1932) from the University of Madrid, where in 1933 he joined the faculty. Ayala went into exile during the Spanish Civil War (1936–39) and then moved to Argentina, where he taught and published a sociology textbook. In 1949 he published two collections of short stories, *Los usurpadores* (*The Usurpers*, 1987) and *La cabeza del cordero*. The next year he joined the faculty of the University of Puerto Rico, and in 1958 he began a professorial career in the U.S. He retired in 1997 and three years later finally returned to Madrid to live. His later works include the short-story collections *El jardín de las delicias* (1971) and *El jardín de las malicias* (1988) and the final revision of his memoir, *Recuerdos y olvidos* (2006). Ayala received the Cervantes Prize in 1991. The Francisco Ayala Foundation was established in 2006 in honour of his 100th birthday.

Ballard, J(ames) G(raham), British author (b. Nov. 15, 1930, Shanghai, China—d. April 19, 2009, London, Eng.), was much admired for his science fiction set in ecologically unbalanced landscapes caused by decadent

technological excess, but to the wider public he was best known for his largely autobiographical novel *Empire of the Sun* (1984; film 1987) and for the novel *Crash* (1973; film 1996), in which he explored “the perverse eroticism of the car crash.” His first short stories appeared in the 1950s. With the gory images of his surreal stories in *The Atrocity Exhibition* (1970; also published as *Love and Napalm: Export U.S.A.*; film 2000), Ballard began writing of dehumanized sex and technology at their most extreme. Beginning in the 1960s, he also wrote novels, including

David Montgomery—Hulton Archive/Getty Images



British writer J.G. Ballard

The Wind from Nowhere (1962), *Concrete Island* (1974), *High Rise* (1975), *Rushing to Paradise* (1994), *Cocaine Nights* (1996), *Super-Cannes* (2000), *Millennium People* (2003), and *Kingdom Come* (2006). *The Kindness of Women* (1991) follows the alternately dissipated and transcendent later life of the protagonist of *Empire of the Sun*.

Bano, Iqbal, Pakistani singer (b. 1935, Delhi, British India—d. April 21, 2009, Lahore, Pak.), excelled at performing classical and semiclassical South Asian vocal music, especially ghazals, thumris, and dadras. Although Bano sang in both Urdu and Persian, she was especially admired for her renditions of Urdu poet Faiz Ahmed Faiz's verse. In 1974 Prime Minister Zulfikar Ali Bhutto's government granted Bano the national Pride of Performance award.

Barker, Bernard Leon, Cuban-born American CIA agent and Watergate burglar (b. March 17, 1917, Havana, Cuba—d. June 5, 2009, Miami, Fla.), was one of five men arrested for breaking into the Democratic National Committee headquarters in the Watergate complex, Washington, D.C.; the ensuing scandal prompted the investigation of U.S. Pres. Richard M. Nixon's administration. Barker was found crouching under a desk in the Watergate complex the night of June 17, 1972, and in January 1973 he pleaded guilty to seven charges of conspiracy, burglary, and wire-tapping. He was sentenced to up to six years in prison by Judge John Sirica, but he was allowed to appeal in 1974 and was released less than a year later. Barker was also involved in the 1971 burglary of a psychiatrist's office to obtain the records of former Department of Defense employee Daniel Ellsberg, who had leaked the classified Pentagon Papers on the Vietnam War.

Barry, Gene (EUGENE KLASS), American actor (b. June 14, 1919, New York, N.Y.—d. Dec. 9, 2009, Woodland Hills, Calif.), glamorized the role of the lawman as the debonair star of the television series *Bat Masterson* (1958–61), in which he sported a derby hat and clobbered villains in the old West with his gold-handled cane, and as a millionaire who luxuriated in chauffeur-driven rides in his Rolls-Royce as he solved crimes in Los Angeles as a police captain (1963–65) and chief of detectives (1994–95) in *Burke's Law*. For his role as Amos Burke, he won the 1965 Golden Globe best actor award. In the TV series *The Name of the Game* (1968–71), he donned another suave persona, publishing tycoon Glenn Howard. Barry began his show business career on Broadway (*Pins and Needles*) and appeared in a string of musical hits, notably a series of operettas at Carnegie Hall, New York City, before moving to Hollywood in 1951. His most memorable role on the big screen was as a scientist in the cult classic *The War of the Worlds* (1953).

Bashung, Alain (ALAIN CLAUDE BASCHUNG), French singer, songwriter, and actor (b. Dec. 1, 1947, Paris, France—d. March 14, 2009, Paris), was known as “the gentleman rocker of

French chanson” for his distinctive French-language take on rock music. Bashung formed his first band in 1962, dropped out of school to pursue a career in music, and performed widely, releasing several extended-play recordings and albums, including *Roman photos* (1977) and *Pizza* (1981). He finally achieved stardom with the 1980 single “Gaby oh! Gaby” and the album *Play blessures* (1982), co-written and recorded with Serge Gainsbourg. He also acted in the 1973 stage musical *La Révolution française* and in a score of



French singer Alain Bashung

movies and television shows. He continued to perform after being diagnosed with lung cancer in 2007 and released his last album, *Bleu pétrole*, in 2008. Bashung received the Legion of Honour in January 2009, and on February 28, just two weeks before his death, he performed live at the Victoires de la Musique ceremony, where he won 3 awards, bringing his career total to a record 11.

Bausch, Pina (PHILLIPPINE BAUSCH), German ballet dancer and choreographer (b. July 27, 1940, Solingen, Ger.—d. June 30, 2009, Wuppertal, Ger.),

broke down the boundaries between ballet and theatre with her dramatic choreographed works incorporating dance, speech, music, and fantastical sets. Her best-known works include *Café Müller* (1978), inspired by her childhood at her parents' hotel and restaurant; a version of Igor Stravinsky's ballet *Le Sacre du printemps* (1975), performed on an earth-covered stage; and *Nelken* (1982; “Carnations”), which included a field of flowers and four large dogs. Bausch graduated (1958) in dance from the Folkwang School in Essen and then studied ballet on scholarship at the Juilliard School in New York City. She danced with the Metropolitan Opera and worked with choreographer Paul Taylor in New York before returning to Germany in 1962 as a soloist with the Folkwang Ballet. There she began to choreograph and in 1969 became the company director. In 1973 she took charge of the Wuppertal Dance Theatre, where her first choreographed piece there, *Fritz*, was poorly received by those who disliked its intensely bleak subject matter. Bausch's avant-garde dance theatre later earned acclaim, however, and the company toured to India, Japan, and Britain. Bausch appeared in Federico Fellini's film *E la nave va* (1983; *And the Ship Sails On*) and in Pedro Almodóvar's *Hable con ella* (2002; *Talk to Her*).

Begg, Dame Heather (ISOLEEN HEATHER BEGG), New Zealand opera singer (b. Dec. 1, 1932, Nelson, N.Z.—d. May 12, 2009, Sydney, Australia), delighted international audiences with her rich mezzo-soprano voice and dramatic talent for playing matrons, confidants, and spinsters. She made her singing debut in 1954 as Azucena in Verdi's *Il trovatore* with the National Opera of Australia, where she was a principal mezzo-soprano. She sang across the globe in more than 100 roles and was a member (1969–76) of the Royal Opera in London. Begg was especially known for her humour and often appeared in Gilbert and Sullivan's works, notably as Lady Jane in *Patience*, Katisha in *The Mikado*, and the Duchess of Plaza Toro in *The Gondoliers*, all which she reprised on television. She also repeated her role as the jealous housekeeper Marcellina in Mozart's *Le*

nozze di Figaro for the 1975 film by French opera director Jean-Pierre Ponnelle. Begg became a principal at the Opera Australia in 1976, and her 53-year career ended in 2006. She was made OBE (1978) and became a Distinguished Companion of the New Zealand Order of Merit (2000), which in 2009 was redesignated Dame Companion.

Behrens, Hildegard, German opera singer (b. Feb. 9, 1937, Varel, Ger.—d. Aug. 18, 2009, Tokyo, Japan), performed

Johan Elbers—Time Life Pictures/Getty Images



German opera singer Hildegard Behrens

powerfully in dark soprano roles, most notably as Brünnhilde in Richard Wagner's *The Ring of the Nibelung*. Behrens began her operatic career unusually late, studying voice at age 26 at the Freiburg (Ger.) Academy of Music after having earned a law degree from the University of Freiburg. She made her debut (1971) as the Countess Almaviva in Mozart's *Le nozze di Figaro* and in 1972 joined the Deutsche Oper am Rhein in Düsseldorf. She made her debut (1976) at London's Covent Garden as Leonore in Beethoven's *Fidelio*. Behrens sang (1976–99) with the New York Metropolitan Opera, where she gave 171 performances, notably as the title character in Giacomo Puccini's *Tosca*, as staged by director Franco Zeffirelli. She received international recognition at the 1977 Salzburg (Austria) Festival in the title role of Richard Strauss's tragic opera *Salome*. Her performances in passionate lead roles in Wagner's *Tristan und Isolde*

and Strauss's *Elektra* were similarly distinguished by the dramatic fervour of her acting and stage presence as well as her voice.

Bellson, Louie (LUIGI PAULINO ALFREDO FRANCESCO ANTONIO BALASSONI), American musician (b. July 6, 1924, Rock Falls, Ill.—d. Feb. 14, 2009, Los Angeles, Calif.), was an extraordinary drummer who electrified audiences with his solos and, while still a teenager, was the inventor of the double-bass drum kit that became his trademark. Bellson's playing was characterized more by restraint than flamboyance and rendered him a tasteful accompanist for popular singers such as Tony Bennett and Ella Fitzgerald and for musicians such as Count Basie, Art Tatum, and Oscar Peterson. Bellson released more than 60 albums under his own name.

Benedetti, Mario (MARIO ORLANDO HAMLET HARDY BRENNIO BENEDITTI FARUGIA), Uruguayan novelist and poet (b. Sept. 14, 1920, Paso de los Toros, Uruguay—d. May 17, 2009, Montevideo, Uruguay), explored themes of love, daily life, and political unrest in more than 40 years of literary work. Benedetti was best known for his poetry and novels, including *La treuga* (1960; *The Truce*, 1969) and *Gracias por el fuego* (1965), but he also wrote short stories (his most accomplished tales appeared in the collection *Montevideanos* [1959]), essays, and plays and edited several literary journals, including the political *Marcha*. Many of Benedetti's

Uruguayan novelist and poet Mario Benedetti



Pablo Bielli—AFP/Getty Images

poems were set to music, notably *El sur tambein existe* (1985), which was featured on an album by Catalan singer-songwriter Joan Manuel Serrat. On the political front, Benedetti was active in leftist politics; he staunchly supported the Cuban Revolution and Cuban Pres. Fidel Castro, advocated independence for Puerto Rico, and criticized the United States for its foreign policy and consumer-driven society. In Uruguay he helped to organize the Broad Front, a coalition of leftist groups, and was exiled for his politics following the military coup in 1973. He returned home in 1985. His exile influenced his later works, notably *El desexilio y otras conjeturas* (1984). A collection of his short stories was translated into English as *Blood Pact and Other Stories* (1997).

Bennett, Estelle, American pop singer (b. July 22, 1941, New York, N.Y.—found dead Feb. 11, 2009, Englewood, N.J.), with her sister, Veronica (Ronnie) Bennett, and their cousin, Nedra Talley, formed the Ronettes, one of the premier pop girl singing groups of the early 1960s. After first gaining attention as performers at the Peppermint Lounge in New York City, the Ronettes signed (1963) with Phil Spector's Philles record label and soon released a string of hit singles, including “Be My Baby” (1963), which reached the top five on both the American and British pop music charts, “Baby I Love You” (1963), and “Walking in the Rain” (1964). The group's biggest hits were characterized by Spector's reverberant “wall of sound” technique, which relied on layered vocals and elaborate orchestral arrangements. The group ultimately split up in 1966. The Ronettes were inducted into the Rock and Roll Hall of Fame in 2007.

Bennett, Jay, American musician and songwriter (b. Nov. 15, 1963, Rolling Meadows, Ill.—found dead May 24, 2009, Urbana, Ill.), was best known for his role in shaping the sound of the alternative rock band Wilco. After recording with a number of bands, most notably the alternative rock quartet Titanic Love Affair, Bennett was recruited in 1994 by Jeff Tweedy to join Wilco. With the addition of Bennett, a multi-instrumentalist and gifted producer, Wilco's sound expanded. Bennett contributed to the albums *Being There* (1996) and *Summerteeth* (1999), and he assisted with the arrangement of the Wilco/Billy Bragg collaboration *Mermaid Avenue*, a collection of unfinished Woody Guthrie

songs. The apex of Bennett's influence on the band's sound was the 2002 release *Yankee Hotel Foxtrot*, but the relationship between Bennett and Tweedy was strained, and Bennett was asked to leave the group just prior to the album's release. Bennett released a string of solo albums that showcased his skills as a producer, but he rarely toured.

Berri, Claude (CLAUDE BEREL LANGMANN), French filmmaker (b. July 1, 1934, Paris, France—d. Jan. 12, 2009, Paris), was involved—as an actor, writer, director, or producer—in more than 125 motion pictures over a 55-year career, but he was best known as the director of *Jean de Florette* (1986) and its sequel, *Manon des sources* (1986; *Manon of the Springs*), both of which he adapted from Marcel Pagnol's 1962 novel *L'Eau des collines*. Berri made his debut as an actor in *Le Bon Dieu sans confession* (1953). His first directing job was *Le Poulet* (1962; *The Chicken*), which won the Academy Award for best live-action short film. His other significant films include *Tchao pantin* (1983), *Le Vieil Homme et l'enfant* (1967; *The Two of Us*), *Uranus* (1990), *Germinal* (1993), and *Lucie Aubrac* (1997). Berri also produced dozens of films that he did not direct, notably Roman Polanski's *Tess* (1979), *L'Ours* (1988; *The Bear*), *La Reine Margot* (1994), two films based on the characters Asterix and Obelix, and the hit comedy *Bienvenue chez les Ch'tis* (2008).

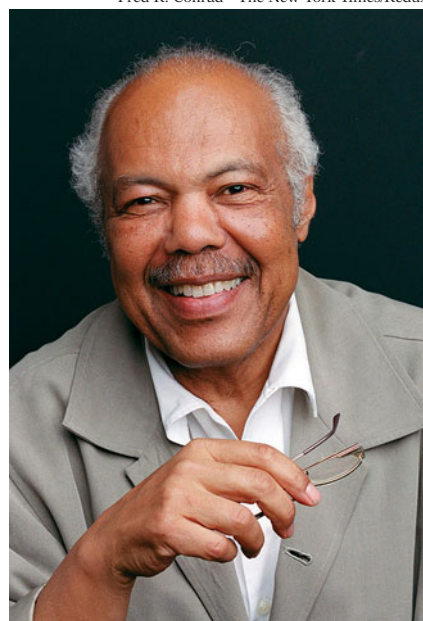
Boal, Augusto, Brazilian dramatist (b. March 16, 1931, Rio de Janeiro, Braz.—d. May 2, 2009, Rio de Janeiro), created the Theatre of the Oppressed, a form of interactive theatre intended to transform lives as spectators become performers, acting out solutions to social problems. Boal began his career with the Arena Theatre in São Paulo in 1956; he was its director until 1971, during which time he developed his theories. He was arrested in 1971 by the military junta then ruling Brazil and spent the next 15 years in exile. During this period he published *Teatro del oprimido y otras poéticas políticas* (1974; *Theatre of the Oppressed*), set up a centre for the practice of his theory in Paris, and organized international Theatre of the Oppressed festivals in the early to mid-1980s. Boal returned to Brazil in 1986 and established a Centre for the Theatre of the Oppressed in Rio de Janeiro as well as several community theatres. In 1992 he published

Jeux pour acteurs et non-acteurs (*Games for Actors and Non-Actors*), which describes techniques for putting his method into practice.

Bogle, Bob (ROBERT LENARD BOGLE), American musician (b. Jan. 16, 1934, Wagoner, Okla.—d. June 14, 2009, Vancouver, Wash.), cofounded (with fellow guitarist Don Wilson) the Ventures, the most successful instrumental band in rock history. The group was founded (1958) in the Seattle area and toured throughout the Pacific Northwest. Unsuccessful in their efforts to secure a record contract, Bogle and Wilson created their own label. In 1960 the Ventures' single "Walk—Don't Run" reached number two on the pop charts, and the band went on to record some of the most recognizable songs of the surf rock genre. "Perfidia" and "Diamond Head" were minor hits, and the theme to the television show *Hawaii Five-O* reached the top five in 1969. Although the band's popularity in the U.S. faded in the 1970s, the Ventures remained hugely popular in Japan, and they sold some 40 million albums in that country alone. Bogle and the Ventures were inducted into the Rock and Roll Hall of Fame in 2008.

Bohr, Aage Niels, Danish physicist (b. June 19, 1922, Copenhagen, Den.—d. Sept. 8, 2009, Copenhagen), shared the 1975 Nobel Prize for Physics with American James Rainwater and American-born Ben R. Mottelson for their work in determining the asymmetrical shapes of certain atomic nuclei. Bohr, the son of Niels Bohr (1922 Nobel physics laureate), enrolled at the University of Copenhagen in 1940, but his education was cut short in 1943 when his Jewish family escaped from Nazi-occupied Denmark to Sweden. (He eventually returned to school and received a doctorate in 1954.) During 1943–45 he worked as assistant to his father on the development of the atomic bomb at Los Alamos, N.M. From 1946 he was associated with the Institute for Theoretical Physics (later named the Niels Bohr Institute), founded in Copenhagen by his father, whom he succeeded as director (1963–70). Bohr's writings include *Rotational States of Atomic Nuclei* (1954) and *Nuclear Structure* (2 vol.; 1969, 1975).

Bond, J(ames) Max, Jr., American architect and educator (b. July 17, 1935, Louisville, Ky.—d. Feb. 18, 2009, New



American architect J. Max Bond, Jr.

York, N.Y.), designed a number of significant buildings, and he played an instrumental role in the design of the museum section of the National September 11 Memorial and Museum at the site of the World Trade Center in New York City. He gained international recognition while working (1964–67) in Ghana, where he designed the Bolgatanga Regional Library. Other important commissions included the Audubon Biomedical Science and Technology Park for Columbia University, New York City; the Martin Luther King, Jr., Center for Nonviolent Social Change in Atlanta; the Schomburg Center for Research in Black Culture in Harlem, New York City; and the Birmingham (Ala.) Civil Rights Institute. Aside from his role as lead partner in the firm Davis Brody Bond, Bond was a member (1980–86) of the New York City Planning Commission and presided (1980–84) as chairman of the architecture division at the Columbia University Graduate School of Architecture and Planning. He also served (1985–92) as dean of the School of Architecture and Environmental Studies at the City College of New York.

Bongo, Omar (EL HADJ OMAR BONGO ONDIMBA; ALBERT-BERNARD BONGO), Gabonese political leader (b. Dec. 30, 1935, Lewai, French Equatorial Africa [now Bongoville, Gabon]—d. June 8, 2009, Barcelona, Spain), was president of Gabon for nearly 42 years, having

risen to power in 1967; at the time of his death, Bongo was the longest-serving head of state in Africa and the longest-serving head of government in the world. Bongo was educated in Brazzaville (now in the Republic of the Congo). After a stint (1958–61) in the French air force, he returned to newly independent Gabon, where he served in the cabinet (1962–67) and as vice president (1967). He was granted presidential powers in place of the ailing Pres. Léon M'ba in February 1967, and when M'ba died on November 28, the presidency passed uneventfully to Bongo. He took the name El Hadj Omar Bongo when he converted to Islam in 1973 and added Ondimba in 2003. During his four decades in office, Bongo preserved economic and political ties with France, the former colonial power, and offered privileged oil-drilling rights to the French state-owned petroleum company Elf-Aquitaine (later Total S.A.). He also maintained relative sta-

Desirey Minkoh—AFP/Getty Images



Long-serving Gabonese head of state Omar Bongo

bility in Gabon despite periodic accusations of corruption, money laundering, election rigging, and intimidation of political opponents.

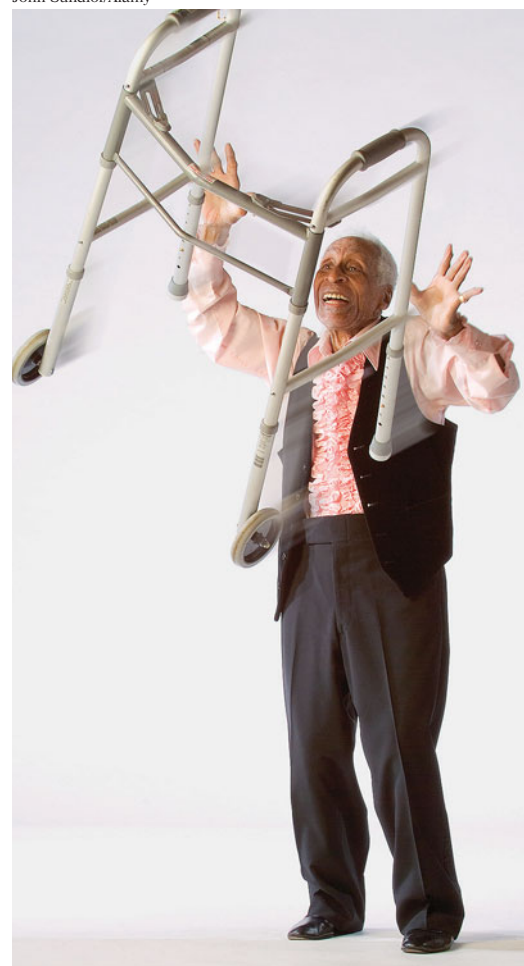
Borlaug, Norman Ernest, American agricultural scientist and plant pathologist (b. March 25, 1914, Cresco, Iowa—d. Sept. 12, 2009, Dallas, Texas), won the Nobel Prize for Peace in 1970 for his contributions in laying the groundwork of the so-called Green Rev-

olution, the agricultural technological advance that promised to alleviate world hunger. After earning a Ph.D. (1942) in plant pathology from the University of Minnesota, Borlaug served (1944–60) in Mexico as a research scientist at the Rockefeller Foundation's Cooperative Mexican Agricultural Program. His work was founded on earlier discoveries of ways to induce genetic mutations in plants. These methods led to modern plant breeding, with momentous results that included the tailoring of crop varieties for regions prone to climatic extremes. At a research station at Campo Atizapan, he developed strains of grain that dramatically increased crop yields. Borlaug ultimately developed short-stemmed ("dwarf") wheat, a key element in the Green Revolution in less-developed countries. Borlaug also created a wheat-rye hybrid known as triticale. He then served as director (1960–63) of the Inter-American Food Crop Program and as director (1964–79) of the International Maize and Wheat Improvement Center, Mexico City. In 1986 Borlaug created the World Food Prize as a way to honour individuals who had contributed to improving the availability and quality of food worldwide.

Brown, Anne Wiggins, American-born actress and singer (b. Aug. 9, 1912, Baltimore, Md.—d. March 13, 2009, Oslo, Nor.), collaborated with composer George Gershwin on the creation of the role of Bess for the 1935 world premiere of his folk opera *Porgy and Bess* and played the character in more than 600 performances thereafter, including the 1942 Broadway revival.

Brown, Ernest ("BROWNIE"), American tap dancer (b. April 25, 1916, Chicago, Ill.—d. Aug. 21, 2009, Burbank, Ill.), enjoyed a career in tap that spanned more than 80 years; he performed in early vaudeville circuits with Charles ("Cookie") Cook in the dance duo Cook and Brown and as a member of the Original Copasetics. By age 12 Brown was appearing with the traveling vaudeville group Mammy and Her Picks, and he soon teamed up with Cook. Their comedic routine featured acrobatic choreography, with the impish Brown (standing at about 1.4 m [4 ft 9 in] tall) often being tossed around the stage by Cook. In 1949 Brown became one of the founding members of the Original Copasetics dance group, which formed upon the death of Bill ("Bojangles") Robinson. The troupe

John Sundlof/Alamy



American tap dancer Ernest "Brownie" Brown

brought the raw energy of improvisation to its engagements, often in small theatres, and showcased the individual styles of its star ensemble. Over the course of his career, Brown performed on Broadway in *Kiss Me, Kate* and at the Newport (R.I.) Jazz Festival, New York City's Radio City Music Hall, Harlem's Cotton Club, the Palladium in London, and the Latin Casino in Paris. Brown and Cook were inducted (2008) into the American Tap Dance Foundation's International Tap Dance Hall of Fame.

Brutus, Dennis Vincent, South African poet and political activist (b. Nov. 28, 1924, Salisbury, Southern Rhodesia [now Harare, Zimb.]—d. Dec. 26, 2009, Cape Town, S.Af.), penned works that centred on his sufferings and those of his fellow blacks in South Africa. He also became involved in a series of antiapartheid-related activities, notably efforts to end discrimination in

sports. Owing in part to Brutus's continued pressure on the International Olympic Committee, South Africa was suspended from the 1964 Olympic Games and later was officially expelled from the Olympics; the country did not compete again until 1992. After teaching English and Afrikaans in South Africa for 14 years, Brutus became politically involved and was banned by the government from teaching, writing, publishing, attending social or political meetings, and pursuing his studies in law at the University of the Witwatersrand. In 1963 his refusal to abide by the ban resulted in an 18-month prison term. After leaving South Africa (1966) with a Rhodesian passport, Brutus went to England and then to the U.S., where he taught African literature at the University of Denver; Northwestern University, Evanston, Ill.; and the University of Pittsburgh. In 1983, after a protracted legal struggle, he won the right to remain in the U.S. as a political refugee. Brutus's first collection of poetry, *Sirens, Knuckles, Boots* (1963), was published in Nigeria while he was in prison. Later volumes include *Salutes and Censures* (1982), *Airs and Tributes* (1989), *Still the Sirens* (1993), and *Leafdrift* (2005).

Cabral, Luís de Almeida, Guinea-Bissauan politician (b. April 11, 1931, Bissau, Portuguese Guinea [now Guinea-Bissau]—d. May 30, 2009, Lisbon, Port.), was the first president of independent Guinea-Bissau (1974–80). Cabral, a younger half brother of the charismatic revolutionary leader Amílcar Cabral, participated in the guerrilla war launched in 1960 by the African Party for the Independence of Guinea and Cape Verde (PAIGC) against the Portuguese colonial government. He assumed leadership of the Bissau branch of the PAIGC after his brother's assassination in 1973 and became president when Guinea-Bissau gained independence a year later. Deposed in 1980 in a coup d'état led by Prime Minister João Bernardo Vieira (*q.v.*), Cabral was briefly imprisoned before going into exile, first in Cuba and then in Portugal.

Caldera Rodríguez, Rafael Antonio, Venezuelan politician (b. Jan. 24, 1916, San Felipe, Venez.—d. Dec. 24, 2009, Caracas, Venez.), served as president of Venezuela (1969–74; 1994–99) and helped to establish democratic stability. A pioneer of the Christian Democratic movement in Latin America, he co-founded (1946) Venezuela's centre-right

Social Christian Party (COPEI). Caldera entered politics in the mid-1930s before earning a doctorate (1939) in political science from the Central University of Venezuela. He was first elected to Congress in 1941. As COPEI's candidate for the presidency in 1947, Caldera made the first of four unsuccessful bids for the office. Following the fall of a military dictatorship in 1958, he was one of the signatories to an agreement between the three largest political parties intended to ensure the soundness of the country's democracy, in part by having the electoral victor share government positions with the other two parties. During Caldera's first term as president, he restored ties with the Soviet Union, Cuba, and Latin American military dictatorships (Argentina, Panama, and Peru) and granted amnesty to leftist revolutionaries, encouraging them to enter politics peacefully. He also restored the legal status of the Communist Party (outlawed since 1962) and attempted to diversify the country's oil-dependent economy. Caldera returned to power some 20 years later as an independent, having fallen out with COPEI.

Calisher, Hortense, American writer (b. Dec. 20, 1911, New York, N.Y.—d. Jan. 13, 2009, New York City), penned novels, novellas, and short stories that were known for elegant style and insightful rendering of characters; much of her often semiautobiographical short fiction was published originally in *The New Yorker* magazine. Calisher graduated (1932) from Barnard College, New York City, and later taught there as an adjunct professor of English. Her short-story collections *In the Absence of Angels* (1951) and *The Collected Stories of Hortense Calisher* (1975), a compilation of previous collections, contain stories featuring Calisher's alter ego, Hester Elkins, a Jewish child living in New York City with her extended family. Calisher, the recipient of numerous O. Henry short-story awards, excelled in producing well-plotted, psychologically perceptive short fiction. Her collected fiction includes *Tale for the Mirror: A Novella and Other Stories* (1962), *Extreme Magic: A Novella and Other Stories* (1964), and *Saratoga, Hot* (1985). Her first novel, *False Entry* (1961), contains characters who are reintroduced in a radically different setting in *The New Yorkers* (1969), in which a 12-year-old girl kills her father's unfaithful wife. Calisher's other novels include *Queenie* (1971),

Age (1987), *In the Palace of the Movie King* (1993), and *Sunday Jews* (2002). In 2004 Calisher published the memoir *Tattoo for a Slave*.

Carazo Odio, Rodrigo, Costa Rican politician (b. Dec. 27, 1926, Cartago, Costa Rica—d. Dec. 9, 2009, San José, Costa Rica), served (1978–82) as president of Costa Rica during a time in which he faced both domestic and foreign crises; during his term he also helped to create the University for Peace and took significant steps to preserve environmental resources. After earning a degree in economics from the University of Costa Rica, Carazo entered politics as a member of the National Liberation Party (PLN) and as a follower of then president José Figueres. Carazo later distanced himself from Figueres and won the presidency as the candidate of the Social Christian Unity Party (PUSC).

Cardiff, Jack British cinematographer and director (b. Sept. 18, 1914, Great Yarmouth, Norfolk, Eng.—d. April 22, 2009, Ely, Cambridgeshire, Eng.), won international acclaim for his dazzling camera work, intense light-and-shadow effects, and extraordinary use of colour in such films as *Black Narcissus* (1947), for which he won an Academy Award, and *The Red Shoes* (1948); he also earned Oscar nominations for *War and Peace* (1956) and *Fanny* (1961). Cardiff began his career working as a cameraman and cinematographer on early Technicolor films, notably *Wings of the Morning* (1937) and *A Matter of Life and Death* (1946; U.S. title *Stairway to Heaven*). He shot more than 50 other movies, including *The African Queen* (1951), *The Barefoot Contessa* (1954), *The Prince and the Showgirl* (1957), *The Vikings* (1958), *Death on the Nile* (1978), and *Conan the Destroyer* (1984), as well as the television miniseries *The Far Pavilions* (1984). He had less success as a director, though he earned an Oscar nomination for *Sons and Lovers* (1960). In 1993 Cardiff received the International Award from the American Society of Cinematographers, and two years later he was given a lifetime achievement award from the British Society of Cinematographers. In 2001 he was granted an honorary Oscar for his artistic achievements in cinematography. Cardiff was made OBE in 2000.

Carradine, David (JOHN ARTHUR CARRADINE), American actor (b. Dec. 8,

1936, Hollywood, Calif.—found dead June 4, 2009, Bangkok, Thai.), was best known for his iconic portrayal of a Shaolin monk in the television series *Kung Fu* (1972–75). Carradine studied music and earned a living as a painter before following his father, John Carradine, into an acting career. Following a stint (1960–62) in the army, he performed on Broadway and television before landing the role of Kwai Chang Caine in the surprise hit *Kung Fu*. After the show ended, Carradine continued to work in television and in feature films, but he did not have another smash success until 2003, when he played the title character in Quentin Tarantino's film *Kill Bill: Vol. 1*, a role he reprised a year later in *Kill Bill: Vol. 2*. Carradine was found dead in his hotel room in Bangkok.

Carroll, Jim (JAMES DENNIS CARROLL), American author and rock musician (b. Aug. 1, 1949, New York, N.Y.—d. Sept. 11, 2009, New York City), wrote several acclaimed collections of poems but was best known for *The Basketball Diaries* (1978; filmed 1995), an unvarnished account of his

American author and rock musician
Jim Carroll



Andrew Serban/Getty Images

drug-addled adolescence in 1960s New York City.

Carter, W(alter) Horace, American journalist (b. Jan. 20, 1921, Albemarle, N.C.—d. Sept. 16, 2009, Wilmington, N.C.), helped to curb the presence of the white supremacist Ku Klux Klan in the Carolinas through a series of truculent articles and editorials in the newspaper he published, the *Tabor City* (N.C.) *Tribune*. In 1946 he founded the weekly *Tabor City Tribune*. After the Ku Klux Klan held a parade through the town in 1950, Carter used his pulpit to voice strong opposition to the group, and over the next three years, despite threats to his life, he ran dozens of stories on violent Klan activities in the area, which culminated in a federal investigation and the arrest of more than 100 Klansmen. For its efforts the *Tabor City Tribune* in 1953 earned a Pulitzer Prize for public service. After leaving the newspaper in the 1970s, Carter wrote 22 books and scores of articles about the outdoors.

Cavero, Arturo (“ZAMBO”), Peruvian folk singer and percussionist (b. Nov. 29, 1940, Lima, Peru—d. Oct. 9, 2009, Lima), was beloved in Peru for his rich, expressive voice and his captivating interpretations of traditional Creole, or Afro-Peruvian, songs; he made numerous recordings but was best known for the Creole waltz “Contigo Peru.” In 1987 Cavero was among several notable Peruvian musicians honoured by the Organization of American States at a ceremony that was held in Washington, D.C. He was posthumously awarded the Orden del Sol, Peru’s highest honour for achievement.

Chambers, Marilyn (MARILYN ANN BRIGGS), American adult-film actress (b. April 22, 1952, Providence, R.I.—found dead April 12, 2009, near Santa Clarita, Calif.), cultivated an image as a fresh-faced blonde and adorned (with a sweet-faced baby) the boxes of Ivory Snow laundry soap, the slogan of which was “99% pure,” but her persona underwent a sensational transformation when she starred in the X-rated film *Behind the Green Door* (1972). The hard-core film, for which she negotiated a payment of \$25,000 and a percentage of the profits, was credited (along with *Deep Throat* [1972]) with establishing a mainstream market for pornography. Ivory Snow initially extended her contract when a boost in sales occurred, but Chambers’s visage

UPI Photo/Landov



American adult-film actress Marilyn Chambers

was ultimately replaced on its boxes. She went on to become a soft- and hard-core pornography star on film and video.

Cheng, Nien (YAO NIEN YUAN), Chinese dissident and memoirist (b. Jan. 28, 1915, Beijing, China—d. Nov. 2, 2009, Washington, D.C.), was imprisoned for more than six years (1966–73) during China’s Cultural Revolution. In *Life and Death in Shanghai* (1986), she bore eloquent witness to both her continued defiance and the severe hardships she had endured. She was a widow when she was arrested, and upon her release she discovered that her only child had been killed by the Red Guards. Cheng was allowed to leave the country in 1980.

Chessex, Jacques, Swiss novelist (b. March 1, 1934, Payerne, Switz.—d. Oct. 9, 2009, Yverdon-les-Bains, Switz.), was honoured as the first non-French winner of the Prix Goncourt for his novel *L'Ogre* (1973; *A Father's Love*, 1975), a semiautobiographical account of the troubled relationship between a son and his (recently deceased) father. Chessex gained early recognition for his work, publishing a poetry collection at the age of 18, but he came to be known primarily for his prose, which he wrote in French. He was also a painter, and his works were prominently exhibited in Switzerland. Chessex often explored

controversial subjects about his homeland, notably in *Un Juif pour l'exemple* (2008; *A Jew Must Die*, 2010), which recounted the fact-based story of a Jewish cattle trader's brutal death at the hands of Swiss Nazis during World War II, when Switzerland maintained official neutrality.

Christensen, Inger, Danish poet (b. Jan. 16, 1935, Vejle, Den.—d. Jan. 2, 2009, Copenhagen, Den.), crafted linguistically sophisticated work that explores the interconnections of language, fiction, and reality. Christensen was the daughter of a tailor on Denmark's Jutland coast. She graduated from Vejle Gymnasium in 1954 and studied at Teachers' College in Århus. While a student she began publishing poems and met the poet and critic Poul Borum, who was her mentor and (1959–76) husband. She taught briefly (1963–64) at the College for Arts in Holbæk before devoting herself exclusively to writing. Christensen's early collections include *Lys* (1962; "Light") and *Græs* (1963; "Grass")—translated within the same volume as *Light and Grass*—both of which explore the relationship of language to the natural world. The publication of her long poem *Det* (1969; *It*) brought Christensen international acclaim. *Alfabet* (1981; *Alphabet*) builds on her earlier analogies between language and physical reality by applying alphabetic and numeric structures, such as the Fibonacci numbers, as principles of creative order. Her last collection, *Sommerfugledalen* (1991, *The Butterfly Valley: A Requiem*), is a sonnet cycle about death and transformation. Christensen also wrote novels, short stories, essays, children's stories, radio and stage plays, and opera librettos.

Clancy, Liam (WILLIAM CLANCY), Irish folk musician (b. Sept. 2, 1935, Carrick-on-Suir, County Tipperary, Ire.—d. Dec. 4, 2009, Cork, Ire.), was the youngest member of the singing Clancy Brothers, who, along with Tommy Makem, helped to popularize traditional Celtic folk music in the U.S. and elsewhere in the 1960s. Clancy originally immigrated to the U.S. to become an actor, but instead he began performing in folk clubs with two of his brothers—Tom and Paddy—along with Makem. Under the name the Clancy Brothers and Tommy Makem, the quartet released their first two albums in 1959, *The Rising of the Moon: Irish Songs of Rebellion* and *Come Fill Your Glass with Us*,

before reaching a wider audience with a television appearance in 1961 on *The Ed Sullivan Show*. From 1973 Clancy pursued a solo career, starred in a Canadian TV program, and reunited (1975–88) as a duo with Makem. Clancy made a comeback in 2005 and released his last album, *The Wheels of Life*, in 2008.

Coburn, the Rev. John Bowen, American clergyman (b. Sept. 27, 1914, Danbury, Conn.—d. Aug. 8, 2009, Bedford, Mass.), led the Episcopal Church during a period of change, in which a new Book of Common Prayer was adopted and women were officially ordained. Coburn attended an Episcopal school founded by his father before studying politics at Princeton University (B.A., 1936). After spending several years teaching biology in Istanbul, Coburn returned to the U.S. and earned (1942) a master's degree in divinity at Union Theological Seminary, New York City. He served as a chaplain in the U.S. Navy, as dean of the Episcopal Theological School (now the Episcopal Divinity School) in Cambridge, Mass., and taught high-school dropouts in Harlem before taking the high-profile position of rector (1969–76) of St. James' Church on Madison Avenue, New York City. As the president (1967–76) of the Episcopal House of Deputies, part of the Episcopal Church's governing legislative body, he oversaw the church through passionate debates about ordaining women, electing an openly gay man as a bishop, and reconciling the relationship with the Union of Black Clergy and Laity (later known as the Union of Black Episcopalians). Coburn subsequently served (1976–86) as the 13th bishop of the Episcopal Diocese of Massachusetts until his retirement.

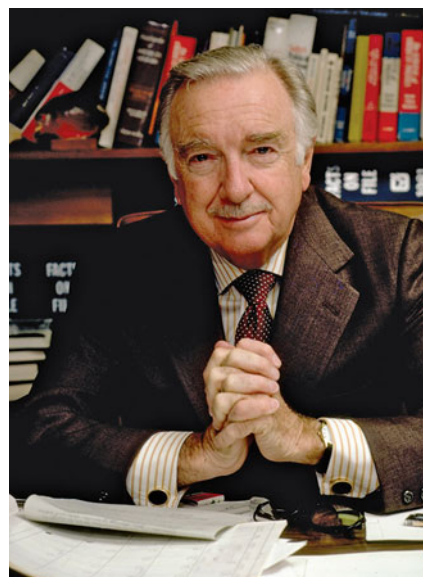
Crawford, Hank (BENNIE ROSS CRAWFORD, JR.), American jazz and blues musician (b. Dec. 21, 1934, Memphis, Tenn.—d. Jan. 29, 2009, Memphis), played alto saxophone with a fervently emotional sound and phrasing that fused gospel music with blues and also improvised fluently on standard material in a Charlie Parker-influenced style. He was noted as the arranger, pianist, baritone and alto saxophonist, and musical director of Ray Charles's band (1958–63). Crawford became widely influential while leading his own combos and recording soul-jazz albums, and he continued to arrange for himself and others, including bluesman B.B. King

and singer Etta James. Crawford often worked with tenor saxophonist David ("Fathead") Newman (*q.v.*) and coled combos with organist Jimmy McGriff.

Crofton, Sir John Wenman, British clinician (b. March 27, 1912, Dublin, Ire.—d. Nov. 3, 2009, Edinburgh, Scot.), became the first tuberculosis researcher to use a three-drug approach to the disease, which initially had proved resistant to drug treatment. His method remained the template not only for tuberculosis treatment but also for the treatment or alleviation of diseases such as cancer and AIDS. Crofton earned a bachelor's degree and a doctorate in medicine from Sidney Sussex College, Cambridge, before receiving further training at London's St. Thomas's Hospital. His tuberculosis studies began in 1946, when he joined a team conducting trials on the use of an antibiotic against the then often-fatal disease. Although the drug ultimately did not work, Crofton was set on a course that would lead in the late 1950s to his successful use of a three-drug regimen, which he tested in a widespread clinical trial while serving as chairman of the department of respiratory diseases and tuberculosis at the University of Edinburgh (1952–77). Crofton was honoured with a knighthood in 1977.

Cronkite, Walter (WALTER LELAND CRONKITE, JR.), American journalist (b. Nov. 4, 1916, St. Joseph, Mo.—d. July 17, 2009, New York, N.Y.), was a pio-

Journalist Walter Cronkite



Carl Mydans—Time Life Pictures/Getty Images

neer of television news programming and became known as “the most trusted man in America” as the long-time anchor of the *CBS Evening News with Walter Cronkite* (1962–81). He studied political science (1933–35) at the University of Texas at Austin before leaving to take a full-time position with the Houston paper for which he had been working. In 1939 Cronkite became a news editor for United Press (UP). When the U.S. entered World War II in 1941, UP elevated Cronkite to overseas war correspondent, assigning him to cover fighting in the North Atlantic. He was soon reassigned to London, where he reported on German bombing raids on the city. Cronkite also covered the invasion of North Africa. He flew in bombing raids over Germany and in 1944 reported on the Allied landing on the beaches of Normandy, France, on D-Day. After the war’s conclusion, he remained in Europe, covering the Nürnberg trials and helping to set up numerous UP bureaus. Before returning to the U.S., he served (1946–48) as UP bureau chief in Moscow. Cronkite attracted the attention of CBS vice president Edward R. Murrow, who in 1950 hired him as a correspondent for the CBS television affiliate in Washington, D.C. Throughout the 1950s Cronkite hosted the CBS shows *You Are There*, an imaginary broadcast of historical events; *The Morning Show*, which he cohosted with a puppet named Charlemagne; and a documentary series, *The Twentieth Century*. Cronkite had an unflappable calmness and an uncanny ability to extemporize verbally, which made him ideal for hosting the political news show *Man of the Week* (1952–53). Shortly after Cronkite took over the *CBS Evening News* from his predecessor, Douglas Edwards, the 15-minute broadcast was expanded to 30 minutes and became the first half-hour nightly news show on American network television. From the CBS anchor chair, he reported on the assassination (1963) of U.S. Pres. John F. Kennedy, the Apollo 11 Moon landing (1969), the Watergate Scandal (1972–75), the resignation (1974) of U.S. Pres. Richard M. Nixon, the historic peace negotiations (1977–78) between Egyptian Pres. Anwar el-Sadat and Israeli Prime Minister Menachem Begin, and the Vietnam War, which he famously denounced as unwinnable in 1968. Cronkite’s avuncular mien and adherence to journalistic integrity—exemplified by his sign-off line, “And that’s the way it is”—endearred him to

the American public, and a 1972 poll named him “the most trusted man in America.” He hosted numerous TV documentaries, contributed essays to National Public Radio’s *All Things Considered*, and occasionally served as a special correspondent for CBS. He won several Emmy and Peabody awards, and in 1981 U.S. Pres. Jimmy Carter awarded him the Presidential Medal of Freedom.

Cunningham, Merce (MERCIER PHILIP CUNNINGHAM), American dancer and choreographer (b. April 16, 1919, Centralia, Wash.—d. July 26, 2009, New York, N.Y.), made a momentous mark on modern dance in the U.S. and Britain by expanding the potentialities of space, time, and movement in the creation of abstract dance, especially in works for the Merce Cunningham Dance Company, which he founded in 1953. Cunningham, who began instruction in dance at age 12, later studied for two years at the Cornish School in Seattle (there he met composer John Cage, who later became his collaborator and life partner); with Lester Horton at Mills College, Oakland, Calif. (1938); and at the Bennington (Vt.) School of the Dance (1939), where Martha Graham invited him to join her group. Cunningham showcased his incredible jumps in the lead roles in Graham’s *El Penitente* (1940), *Letter to the World* (1940), and *Appalachian Spring* (1944). Encouraged by Graham, Cunningham had begun to choreograph in 1942. Among his early works were *Root of an Unfocus* (1944) and *Mysterious Adventure* (1945). He also had already started collaborating with Cage and in 1944 had presented his first solo concert, with music by Cage. After leaving (1945) Graham’s company, Cunningham and Cage produced such works as *The Seasons* (1947) and *Inlets* (1977). Cunningham developed “choreography by chance,” a technique in which selected isolated movements are assigned sequence by such random methods as tossing a coin. The sequential arrangement of the component dances in *Sixteen Dances for Soloist and Company of Three* (1951) was thus determined, and in *Suite by Chance* (1953) the movement patterns themselves were so constructed. Many of Cunningham’s works were associated with Dadaist, Surrealist, and existentialist motifs. In 1974 he abandoned the repertory that had been built over a 20-year period for what he called “Events,” excerpts from old or new dances, sometimes two or more simultaneously.

CBS Photo Archive—Hulton Archive/Getty Images



American dancer and choreographer
Merce Cunningham

Choreography created expressly for videotape was still another innovation, notably *Blue Studio: Five Segments* (1975–76). He also began working with film and created *Locale* (1979). Later dances included *Duets* (1980), *Fielding Sixes* (1980), *Channels/Inserts* (1981), and *Quartet* (1982). Though he left the performance stage soon after Cage’s death in 1992, Cunningham continued to lead his dance company.

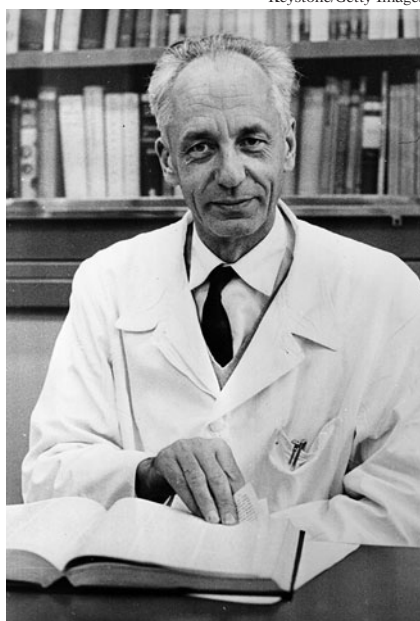
Daly, Cahal Brendan Cardinal, Irish Roman Catholic prelate (b. Oct. 1, 1917, Loughguile, County Antrim, Ire.—d. Dec. 31, 2009, Belfast, N.Ire.), was the archbishop of Armagh and primate of all Ireland from 1990 until he retired as archbishop emeritus in 1996. He publicly denounced as “sinful” the violence advanced by the Irish Republican Army and censured Sinn Féin, the IRA’s political wing, while he advocated peace and ecumenical dialogue with Protestants. Daly, the son of a rural schoolteacher, studied classics and philosophy at St. Malachy’s College, Belfast; Queen’s University, Belfast; and St. Patrick’s College, Maynooth (D.D.; 1944). After his ordination (1941), he studied scholastic philosophy at the Catholic Institute in Paris and in Connecticut before returning to the faculty at St. Malachy’s (1946–63) and then at Queen’s (1963–67). Daly was made bishop of the rural diocese of Ardagh and Clonmacnoise in 1967 and was

moved in 1982 to the see of Down and Connor, which included Belfast. He was appointed archbishop of Armagh in November 1990 and was elevated to cardinal the following June. Although Daly was credited as a strong voice for peace, he was criticized for not being sufficiently proactive when the church faced a series of sex scandals.

Dannenberg, Konrad, German-born engineer and rocket scientist (b. Aug. 5, 1912, Weissenfels, near Leipzig, Ger.—d. Feb. 16, 2009, Hunstville, Ala.), was one of more than 100 German scientists who devised the V-1 and V-2 missiles for Nazi Germany and then, after the end of World War II, accompanied Wernher von Braun to the United States, where they applied their expertise to the Redstone and Jupiter missile programs. In 1960 Dannenberg joined NASA, where he contributed to the development of the Saturn launch vehicle, which proved to be the mainstay (1967–73) of the Apollo and Skylab space programs. Dannenberg retired from NASA in 1973; that same year he was awarded the NASA Exceptional Service Medal.

Das, Kamala (KAMALA SURAIYA), Indian author (b. March 31, 1934, Thrissur, Kerala, British India—d. May 31, 2009, Pune, India), inspired women struggling against domestic and sexual oppression with her honest assessments of sexual desire and marital problems in more than 20 books. Das was part of a generation of English-language Indian writers whose work centred on personal rather than colonial experiences, and her short stories, poetry, memoirs, and essays brought her both respect and notoriety. She grew up primarily in Calcutta (now Kolkata) in a family of artists, where she felt ignored and unloved. As a teenager she married an older relative, and the emotional and sexual problems arising from that unsatisfying relationship and her young motherhood provided material for her first memoir, *My Story* (1976). Das wrote in English and, under the pen name Madhavikutty, in the Malayalam language of southern India. An advocate for human rights, especially for women and children, Das reflected her social concerns in such short stories as “Padmavati the Harlot” (1992) and “A Doll for the Child Prostitute” (1977).

Dausset, Jean (JEAN-BAPTISTE-GABRIEL-JOACHIM DAUSSET), French hematologist and immunologist (b.



French hematologist and immunologist Jean Dausset

Oct. 19, 1916, Toulouse, France—d. June 6, 2009, Palma, Majorca, Spain), earned a share (with George Snell and Baruj Benacerraf) of the 1980 Nobel Prize for Physiology or Medicine for his studies on the genetic basis of the immunological reaction. Dausset took a medical degree (1945) from the University of Paris. He pursued advanced studies in the U.S. at Harvard University and later returned to France, where he served as laboratory director (1946–63) of the National Blood Transfusion Centre. He also conducted research and taught (1958–77) at the University of Paris and was a professor of experimental medicine (1977–87) at the Collège de France. In 1984 Dausset co-founded the Human Polymorphism Study Center (CEPH; renamed the Fondation Jean Dausset-CEPH in 1993), from which he retired as president in 2003.

Davis, Glenn Ashby (“JEEP”), American hurdler (b. Sept. 12, 1934, Wellsburg, W.Va.—d. Jan. 28, 2009, Barberton, Ohio), was a world-record holder (1956–62) in the 400-m hurdles and the first man to win the Olympic gold medal twice in that event. Davis excelled in track for Barberton High School, often scoring more points individually than entire opposing teams. At Ohio State University he ran sprint races and was a long jumper as well as a hurdler. At the 1956 Olympic Games in Melbourne, he pulled away from

teammates Eddie Southern and Josh Culbreath after the seventh hurdle to take the gold medal in the first U.S. sweep of the event since 1920. In 1958 Davis won the James E. Sullivan award as the country's top amateur athlete. At the 1960 Olympic Games in Rome, Davis won the gold medal in the 400-m hurdles and was a member of the winning 4 × 400-m relay team. That same year he ran the 200-m hurdles in a world-record time of 22.5 sec.

de Larrocha, Alicia (ALICIA DE LARROCHA Y DE LA CALLE), Spanish pianist (b. May 23, 1923, Barcelona, Spain—d. Sept. 25, 2009, Barcelona), was known for her elegant, focused, and subtle performances, especially of works by Mozart and by Spanish composers. Her appearance onstage was often remarked upon because the unassuming and unusually petite pianist (well under 1.5 m [5 ft] tall) at times played virtuosic repertory that demanded a large reach; the shape of her hand and her assiduous stretching exercises, however, allowed her to span a 10th (for example, C to the next octave's E) and thus to master virtually any piano music. De Larrocha began taking piano lessons at age three when, at her own insistence, Frank Marshall, director of the Academia Marshall, reluctantly accepted her as a pupil. She performed works by J.S. Bach and Mozart at the International Exhibition in Barcelona in May 1929, made her first recording at age 9, and at age 11 was soloist in a Mozart concerto with the Madrid Symphony Orchestra. Because she could not easily travel during the Spanish Civil War and World War II, de Larrocha did not make her first European tour until 1947. In 1955 she made her American orchestral debut with the Los Angeles Philharmonic and her recital debut in New York City. She returned to Spain in 1959 to succeed her mentor as director of the Academia Marshall. De Larrocha toured annually from 1965 until her retirement in 2003 and maintained a long association (1971–2003) with Lincoln Center's Mostly Mozart Festival in New York City. Her close association with Spanish composers was documented in her recordings of Granados's *Goyescas*, Isaac Albéniz's *Iberia*, and the works of Federico Mompou. De Larrocha won four Grammy Awards (1974, 1975, 1988, and 1991), and in 1995 she was awarded the International Music Council/UNESCO Prize, the only Spanish artist to be so honoured.

Dearie, Blossom Margrete, American singer (b. April 28, 1924, East Durham, N.Y.—d. Feb. 7, 2009, New York, N.Y.), attracted a cult following with her wispy jazz vocals and her stylish piano accompaniment; she was especially noted for her rendition of the songs “I’m Hip” and “Peel Me a Grape” and for a six-album set she recorded for Verve Records. Though Dearie was initially trained as a classical pianist, she gravitated to jazz while performing with a high-school band. After moving to New York City, she appeared with the Blue Flames, a group associated with the Woody Herman band, and in Paris she sang with the Blue Stars, a vocal octet that found fame with its recording in French of “Lullaby of Birdland.” After embarking on a solo career, Dearie insisted that her nightclub audiences refrain from smoking during her performances so that she could preserve her tender voice.

DeCarava, Roy Rudolph American photographer (b. Dec. 9, 1919, New York, N.Y.—d. Oct. 27, 2009, New York City), crafted arresting images of African Americans that chronicled daily life in Harlem, the civil rights movement, and performances of such legendary jazz musicians as Louis Armstrong, John Coltrane, Duke Ellington, and Billie Holiday. DeCarava initially took up photography to record images he would use in his painting, but he came to prefer the camera to the brush. In the late 1940s he began a series of scenes of his native Harlem, aiming for “a creative expression, the kind of pen-

etrating insight and understanding of Negroes which I believe only a Negro photographer can interpret.” Edward Steichen, then curator of photography for the Museum of Modern Art, New York City, attended DeCarava’s first solo show in 1950 and bought several prints for the museum’s collection. In 1952 DeCarava was awarded a Guggenheim fellowship, the first African American photographer to receive the grant. The monetary award allowed him to devote himself to photographing Harlem full time, and many of these images were compiled in the book *The Sweet Flypaper of Life* (1955; reissued 1988), with text written by Hughes. In 1958 DeCarava became a freelance photographer. He also taught at the Cooper Union School of Art (1969–72) and at Hunter College from 1975. Many of his jazz portraits were published in *The Sound I Saw: Improvisation on a Jazz Theme* (2001). DeCarava received a National Medal of Arts in 2006.

DeLuise, Dom (DOMINICK DELUISE), American comic actor (b. Aug. 1, 1933, Brooklyn, N.Y.—d. May 4, 2009, Santa Monica, Calif.), stole the show with broad and funny characterizations in dozens of movies, especially in association with director Mel Brooks and actor Burt Reynolds. DeLuise began his career on the stage and in children’s television shows in the 1950s and became a staple on TV variety shows in the 1960s. His best-known films include (with Brooks) *The Twelve Chairs* (1970), *Blazing Saddles* (1974), and *Silent Movie* (1976), as well as (with Reynolds) *The Cannonball Run* (1981) and *The Best Little Whorehouse in Texas* (1982). DeLuise also wrote two cookbooks as well as several books for children.

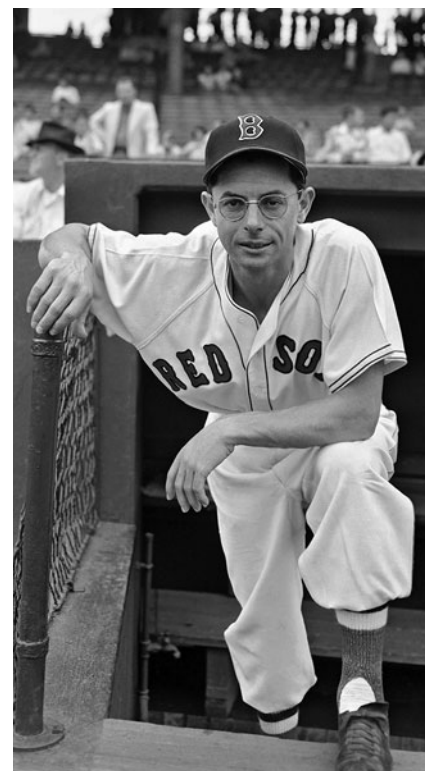
Des Forges, Alison (ALISON B. LIEBHAFSKY), American human rights activist and historian (b. Aug. 20, 1942, Schenectady, N.Y.—d. Feb. 12, 2009, near Buffalo, N.Y.), detailed the horrific genocide (1994) in Rwanda, in which more than 500,000 people were slaughtered by the Hutu militia, in her book *Leave None to Tell the Story: Genocide in Rwanda* (1999); she also sharply criticized the failure of leading countries to intervene in the tragedy.

Dia, Mamadou Moustapha, Senegalese politician (b. July 18, 1910, Khombole, Senegal—d. Jan. 25, 2009, Dakar, Senegal), was a protégé of Léopold Sédar Senghor and served (1959–62) as the first prime minister of

Senegal. Dia, a Muslim, studied at the William Ponty School and worked as a teacher and journalist before entering politics in the early 1940s. He represented (1948–56) Senegal in the French Senate and then served as vice president (1957–58) and president (1958–59) of Senegal’s Government Council before becoming prime minister in April 1959. He retained the latter post after Senegal gained independence in 1960, but he was ousted in December 1962 by then president Senghor in a power struggle that Senghor denounced as an attempted constitutional coup. Dia was sentenced to life in prison, but in 1974 he was pardoned. In 1976 Dia, who had obtained an M.B.A. in 1969, took a post with the World Bank.

DiMaggio, Dom (DOMINIC PAUL DIMAGGIO; “THE LITTLE PROFESSOR”), American baseball player (b. Feb. 12,

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Boston Red Sox centrefielder Dom DiMaggio

1917, San Francisco, Calif.—d. May 8, 2009, Marion, Mass.), enjoyed a stellar career in Major League Baseball as a centrefielder for the Boston Red Sox, despite being overshadowed by the prowess of his legendary older brother, Joe, a centrefielder for the New York



Martin Cabrera/AP

Mehdi Fedouach—AFP/Getty Images

Yankees; during his 11 seasons (1940–42, 1946–53) with the club, Dom was selected to the All-Star team seven times, recorded 1,680 hits, and amassed a lifetime batting average of .298. In 1948 he set an American League record by making 503 putouts. The following year DiMaggio batted safely in 34 consecutive games, establishing a franchise record; it remained unbroken at the time of his death.

Doi, Takeo, Japanese psychiatrist (b. March 17, 1920, Tokyo, Japan—d. July 5, 2009, Tokyo), broke ground with his best-selling book *Amae no kōzō* (1971; *The Anatomy of Dependence*, 1973), as perhaps the first Japanese expert to analyze the Japanese idea of *amae* (“indulgent dependency”) and the first to exert wide influence on Western psychiatric thought. In 1950 he traveled to the U.S. to study psychiatry, and the culture shock he experienced prompted his investigation of the Japanese psyche. Doi’s groundbreaking theory centered on the concept of *amae*, which he defined as a culturally ingrained dependence on authority figures that retained a pervasive influence on all Japanese social structures.

Downes, Sir Edward, British conductor (b. June 17, 1924, Birmingham, Eng.—d. July 10, 2009, Zürich, Switz.), was a leading figure for decades at opera houses around the world. Downes was most noted for his long associations with the Royal Opera House (ROH) in London—initially as a french horn player (1945–46) and later as a répétiteur (1952–53) and conductor (1953–72) of some 49 different operas in nearly 1,000 performances—and the Manchester-based BBC Philharmonic (originally the BBC Northern Symphony Orchestra) as principal conductor (1980–91) and conductor emeritus (from 1991). He also served (1972–74) as music director of the Australian Opera, where he conducted the first performance at the iconic Sydney Opera House. Downes was made CBE in 1986 and knighted in 1991.

Druon, Maurice-Samuel-Roger-Charles French author, politician, and man of letters (b. April 23, 1918, Paris, France—d. April 14, 2009, Paris), wrote plays, essays, and novels, including *Les Grandes Familles* (1948), which won the 1948 Prix Goncourt. For many years, however, he was best known for co-writing (with his uncle novelist Joseph Kessel) the lyrics to “Chant des



French man of letters Maurice Druon

partisans,” the stirring unofficial anthem of France’s World War II Resistance movement. Druon’s other published works include a series of six related novels known collectively as *Les Rois maudits* (1955–60). In 1966 he was elected to the 40-member French Academy, of which he was perpetual secretary from 1985 to 1999. Druon was awarded the Grand Cross of the Legion of Honour, and the British government made him honorary CBE (1988) and KBE (1999).

Duckworth, Ruth, (RUTH WINDMÜLLER), German-born American artist (b. April 10, 1919, Hamburg, Ger.—d. Oct. 18, 2009, Chicago, Ill.), created abstract works in clay and bronze that ranged from small ceramic pieces to large-scale public installations and murals. Duckworth moved from Germany to England to study (1936–40) at the Liverpool School of Art; she spent her early years as an artist carving decorations on tombstones. After enrolling at London’s Central School of Arts and Crafts in 1956, however, she turned her attention to ceramics and soon won recognition for pieces that abandoned the potter’s traditional utilitarian techniques for a Modernist-inspired sculptural approach. She later taught (1964–77) at the University of Chicago and there produced her most enduring works, notably *Earth, Water, and Sky* (1967–68) and *Clouds over Lake Michigan* (1976), both expansive stoneware murals that fluidly and poetically render the Earth’s natural features.

Dunne, Dominick, American writer (b. Oct. 29, 1925, Hartford, Conn.—d. Aug. 26, 2009, New York, N.Y.), covered high-profile crime trials for the magazine *Vanity Fair* and wrote popular novels based on true crimes in high society; his fame reached its zenith with his reporting of the 1995 murder trial of former football star O.J. Simpson. Dunne entered show business as a stage manager and associate director of television shows in the 1950s. He went on to become a film producer in the 1970s; his credits include *The Boys in the Band* (1970); *The Panic in Needle Park* (1971), the screenplay of which was written by his brother, John Gregory Dunne, and his sister-in-law, Joan Didion; and *Play It as It Lays* (1972), adapted from a novel by Didion. By the mid-1970s, however, excessive drinking had extinguished his career. Dunne reinvented himself as a writer, penning the novel *The Two Mrs. Grenvilles* (1985), based on a 1955 murder, as well as *People like Us* (1988), *An Inconvenient Woman* (1990), and *Another City, Not My Own* (1997), based on the Simpson trial. Dunne’s first piece for *Vanity Fair*, “Justice: A Father’s Account of the Trial of his Daughter’s Killer,” was a highly personal narrative of the trial of the man who had in 1982 murdered Dunne’s daughter, actress Dominique Dunne.

Elon, Amos, Israeli author and essayist (b. July 4, 1926, Vienna, Austria—d. May 25, 2009, Tuscany, Italy), gained international recognition with his book *The Israelis: Founders and Sons* (1971), which broke ground by criticizing Israel’s founders for discounting the wishes of Arab residents; the work was considered the first critique of its kind written by an Israeli. Elon moved to Palestine with his family in 1933 and grew up in Tel Aviv, learning English and Hebrew while speaking German at home. He studied law and history at Hebrew University in Jerusalem and the University of Cambridge. Beginning in 1951, Elon was a reporter for the Israeli liberal newspaper *Haaretz*, to which he contributed sporadically for more than three decades; he also wrote essays that appeared in *The New Yorker* and *The New York Review of Books*. He was well known for his criticism of Israel’s militancy, extremism, and relations with both Palestinians and poorer Middle Eastern Jews. Elon published nine books on both Israeli and German history and social criticism.

Endara, Guillermo (GUILLERMO DAVID ENDARA GALIMANY), Panamanian politician (b. May 12, 1936, Panama City, Pan.—d. Sept. 28, 2009, Panama City), served (1989–94) as Panama's president after the United States deposed the military strongman Manuel Noriega; he was credited with leading the country back to democracy. Endara, as the candidate of a coalition opposed to the rule of Noriega, was elected president in May 1989, but Noriega annulled the election and installed his own candidate. Endara led a protest demonstration during which he and his vice presidential candidates were beaten by Noriega's Dignity Battalions. The U.S. invaded in December 1989, and Endara was sworn in as president. Within two months he dissolved the armed forces and replaced them with a civilian police force. Endara joined the political party of three-time president Arnulfo Arias in 1961 and took the post of minister of planning and economic policy in Arias's third presidency in October 1968; 11 days later, however, Arias was overthrown for the third time by the military. Endara was briefly imprisoned in 1971 before going into exile; he returned to Panama and politics in 1977.

Endo, Yukio, Japanese gymnast (b. Jan. 18, 1937, Akita, Japan—d. March 25, 2009, Tokyo, Japan), attained a legendary reputation in gymnastics during the 1960s by winning seven Olympic medals, including five golds, as well as 10 world championship medals; the element on the high bar known as the "Endo roll" was named after him. Endo led the Japanese teams that claimed the Olympic men's gymnastics team titles in 1960, 1964, and 1968. At the 1964 Games, held in his home country, he also won the individual all-around title and took gold on the parallel bars and silver in the floor exercise. In 1968 he picked up another Olympic silver medal, in the vault. Endo returned to the Olympics in 1972 as coach of the Japanese men's squad, which earned the country's fourth consecutive team gold. He was inducted into the International Gymnastics Hall of Fame in 1999.

Erickson, Arthur Charles, Canadian architect (b. June 16, 1924, Vancouver, B.C.—d. May 20, 2009, Vancouver), was internationally recognized for his original and varied designs, which were characterized by his use of concrete, glass, and neutral colours and by the harmonious blending of buildings with

their surroundings. His plan for Simon Fraser University (1963–65), Burnaby, B.C., designed with Geoffrey Massey, included an enormous skylit indoor plaza that served as a sensitive response to a cool, rainy climate. Erickson's design for Robson Square (1978–79), a large civic centre in Vancouver, incorporated waterfalls, a roof garden, plazas, and stairs with integrated ramps. Among his other notable works were the Canadian embassy (1989) in Washington, D.C., and the Museum of Glass (2002) in Tacoma, Wash. He also designed the prizewinning Canadian pavilion at the Expo '70 fair in Osaka, Japan.

Escalona Martínez, Rafael Calixto, Colombian folk-song composer (b. May 27, 1927, Patillal, Colom.—d. May 13, 2009, Bogotá, Colom.), was celebrated in Colombia as "el maestro" of the *val-lenato*, an accordion-based folk music that originated in the country's Caribbean coastal region and that Escalona helped to make internationally popular; many of his songs were regarded as classics of the genre, including "La casa en el aire" (1952) and "El manantial" (1952), and were recorded by numerous singers and musicians. The Latin Recording Academy honoured Escalona with a lifetime achievement award in 2006.

Estemirova, Natalya Khusainova, Russian human rights activist (b. Feb. 28, 1959, Saratov, Russia, U.S.S.R.—d. July 15, 2009, near Nazaran, In-

Russian human rights activist Natalya Estemirova



Dylan Martinez—Reuters/Landov

gushetiya, Russia), documented illegal torture, kidnappings, and murders to give a voice and publicity to victims of political violence in the Russian republic of Chechnya. Estemirova was born to a Chechen father and Russian mother and moved to Chechnya at age 19. She studied history in the capital at Grozny University and then taught history until 1998, when she began to work recording the stories of victims in the 1994–96 conflict with the Russian government. In 2000 she started officially working with the human rights group Memorial, investigating civilian deaths and kidnappings and presenting documentation to try to hold the Chechen and Russian governments accountable for violence in Chechnya. Estemirova was very critical of the Chechen and Russian authorities and was personally threatened by Chechen Pres. Ramzan Kadyrov for her opinions. She recently had contributed to the 2009 Human Rights Watch report accusing the Chechen government of having burned the homes of more than two dozen families of suspected rebels. Her murder came just hours after she had been kidnapped, and her death prompted Memorial to withdraw its services from Chechnya.

Evdokimova, Eva (EVA EVDOKIMOVA-GREGORI), American ballerina (b. Dec. 1, 1948, Geneva, Switz.—d. April 3, 2009, New York, N.Y.), rose to stardom during her tenure (1969–85) with the West Berlin German Opera, where she performed as prima ballerina from 1973. Evdokimova was the daughter of an American UN employee (through whom she qualified for U.S. citizenship) and her Bulgarian husband. As a child growing up in Munich, Evdokimova studied ballet at the Bavarian State Opera before training at the Royal Ballet School in London under the direction of Maria Fay and in Copenhagen with Vera Volkova while dancing (1966–69) with the Royal Danish Ballet. She was awarded a gold medal at the Varna International Ballet Competition in 1970 and became a principal dancer (1974–75) at the London Festival Ballet (later the English National Ballet). Known for her graceful refinement, Evdokimova excelled in coveted leading roles in such ballets as *Giselle* and *La Sylphide* and often partnered with Rudolf Nureyev. Some of her greatest roles included the Gardener's Daughter in *Scarecrows*, the title role in *Cinderella*, and the lead role in *Verklärte Nacht*.

Fanthorpe, U(rsula) A(skham), British poet (b. July 22, 1929, London, Eng.—d. April 28, 2009, Gloucester, Eng.), created verse based to a large extent on her everyday experiences as assistant instructor (1954–62) and head of English (1962–70) at Cheltenham Ladies' College in Gloucestershire and then as a hospital receptionist (1973–89) in Bristol. Fanthorpe studied at St. Anne's College, Oxford (B.A., 1953; M.A., 1956). She published her first volume of poetry, *Side Effects*, in 1978. Her collections issued by the small publisher Peterloo Poets received widespread recognition. Fanthorpe was the first woman nominee (1995) for the post of Oxford Professor of Poetry and in 1999 was considered a contender for poet laureate. When performing poetry readings she sometimes shared the stage with her partner of 44 years, poet R.V. (Rosie) Bailey. Fanthorpe's later collections include *Homing In* (2006) and *From Me to You* (2007). Her many honours and awards included a Royal Society of Literature fellowship (1988) and the Arts Council Writers' Award (1994). Fanthorpe was made CBE in 2001, and in 2003 she was awarded the Queen's Gold Medal for Poetry.

Fawcett, Farrah (MARY FARRAH LENI FAWCETT; FARRAH FAWCETT-MAJORS), American actress (b. Feb. 2, 1947, Corpus Christi, Texas—d. June 25, 2009, Santa Monica, Calif.), was a glamorous pinup girl whose feathered blond hair inspired the style adopted by legions of fans in the 1970s; her beguiling look vaulted her to superstardom in the hit television series *Charlie's Angels*, in which she appeared (1976–77), together with Kate Jackson and Jaclyn Smith, as a sexy private investigator. Though Fawcett left the show to pursue more challenging roles, she had little success until she appeared in a series of dramatic made-for-TV movies, notably as a victim of domestic abuse (*The Burning Bed* [1984]) and rape (*Extremities* [1986]). Fawcett's career began when she was named one of the 10 most beautiful girls on the campus of the University of Texas at Austin, and a publicist encouraged the photogenic ingénue to travel to Hollywood. There, under the guidance of actor Lee Majors, to whom she was married (1973–82), Fawcett launched her career. A poster of her clad in a wet one-piece red bathing suit and flashing her dazzling smile became iconic and sold some six million copies. Other endorsed items included lunch boxes,



Pinup girl and actress Farrah Fawcett

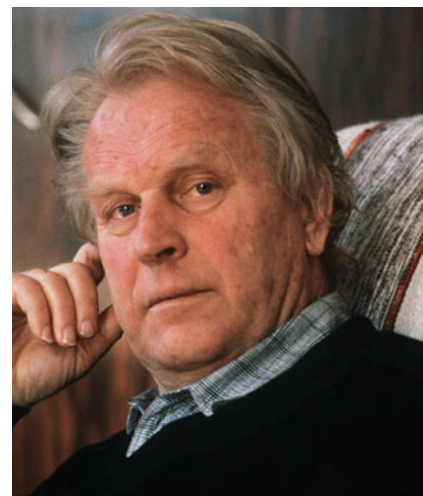
wigs, pillows, and T-shirts. Following her string of 1980s films for TV, Fawcett gained kudos for her serious role in the big-screen film *The Apostle* (1997), opposite Robert Duvall. That same year the 50-year-old Fawcett delighted admirers when she showcased her lithe figure in a racy video, *Playboy: Farrah Fawcett, All of Me*. Following her diagnosis of anal cancer in 2006, Fawcett chronicled her battle in the film *A Wing & a Prayer: Farrah's Fight for Life* (2008) and in the TV movie *Farrah's Story* (2009).

Fawehinmi, Gani (GANIYU OYESOLA FAWEHINMI), Nigerian human rights lawyer (b. April 22, 1938, Ondo Town, Nigeria—d. Sept. 5, 2009, Lagos, Nigeria), devoted his life to fighting for the rights of the Nigerian people; as a tireless advocate for justice, he made many enemies among Nigeria's military and civilian regimes. He was the son of a prosperous family, but his father's death while Fawehinmi was studying law at the University of London made it necessary for him to work in order to finance the remainder of his education. He began practicing law in Lagos in 1965 and quickly became known as "the people's lawyer," taking on such cases as the mysterious killing in 1986 of a newspaper editor (for which Fawehinmi blamed the military junta in power at that time) and often representing those who could not afford to pay for his services. Despite the risk of

assassination, he cofounded (1994) the National Conscience Party and continued to take on powerful opponents until his death. Fawehinmi's activism extended to philanthropy, including the granting of scholarships to impoverished Nigerian youths. He also published several books and founded (1986) the *Nigerian Weekly Law Reports*. Fawehinmi was awarded the Bruno Kreisky Prize in 1993 in honour of his work in advancing human rights. In 2001 he was made a senior advocate of Nigeria, the country's highest title in the legal profession.

Fehn, Sverre, Norwegian architect (b. Aug. 14, 1924, Kongsberg, Nor.—d. Feb. 23, 2009, Oslo, Nor.), was known for his designs of private houses and museums that integrated modernism with traditional vernacular architecture. Fehn's corpus of completed works reflects the influence of such modernists as Mies van der Rohe, Le Corbusier, Louis I. Kahn, and Frank Lloyd Wright but also particularizes the Scandinavian setting. Fehn graduated (1949) from the Oslo School of Architecture (now the Oslo School of Architecture and Design). One of his first ongoing projects was the Handicraft Museum in Lillehammer, Nor. (1949–56), but he first gained international acclaim in 1958 at the World Exhibition in Brussels, where his Norwegian Pavilion captured first prize in the design competition. Fehn's Nordic Pavilion at the 1962 Venice Biennale won the Golden Lion Award for national pavilions. His other notable museums in Norway include the Norwegian Glacier Museum (completed 1991) in Fjærland, the Hedmark Cathedral Museum

Norwegian architect Sverre Fehn



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(1979) in Hamar; (completed 1996) in Alvdal; and the Norwegian Museum of Photography (completed 2001) in Horten. He also adapted a 19th-century Neoclassical bank building in Oslo for the Norwegian Museum of Architecture (completed 2007). Fehn was a professor (1971–95) at the Oslo School of Architecture, lectured widely in Europe and the U.S., and wrote (with Per Olaf Fjeld) *Sverre Fehn: The Thought of Construction* (1983). He won the Pritzker Architecture Prize in 1997.

Feoktistov, Konstantin Petrovich, Russian spacecraft designer and cosmonaut (b. Feb. 7, 1926, Voronezh, Russia, U.S.S.R.—d. Nov. 21, 2009, Moscow, Russia), took part, with Vladimir M. Komarov and Boris B. Yegorov, in the world's first multi-manned spaceflight, Voskhod 1 (1964). When Voronezh was occupied in World War II, Feoktistov, who was then only 16 years old, worked as a scout for the Soviet army. He was captured by the Germans and sentenced to death by firing squad. Shot through the neck, he feigned death and escaped from a burial trench. He later attended Bauman Moscow Higher Technical School and worked as a factory engineer. In 1955 he earned the equivalent of a Ph.D., and from that time he worked in the Soviet space program designing spacecraft and equipment. Feoktistov was awarded the Order of the Red Banner of Labour after the first artificial satellite, Sputnik 1, was launched (Oct. 4, 1957) and again after the first successful manned flight, by Yuri Gagarin (April 12, 1961). During the flight of Voskhod 1 (Oct. 12–13, 1964), Feoktistov carried out extensive scientific experiments and observations beyond the capability of previous cosmonauts. After the flight he returned to engineering and played a major role in designing the Salyut and Mir space stations.

Ferrante, Art(hur), American pianist (b. Sept. 7, 1921, Brooklyn, N.Y.—d. Sept. 19, 2009, Longboat Key, Fla.), performed with Lou Teicher (who died in 2008) in the popular two-piano act Ferrante & Teicher. Ferrante began classical piano studies as a child at the Juilliard School, New York City, where he met and often played with Teicher. After his graduation (1942), Ferrante briefly worked as a dance accompanist and as an orchestrator for Irving Berlin's film scores before reuniting with Teicher (1946; they retired in 1989). Although their concerts included

classical works, the two were best known for lush arrangements of the theme songs from films and Broadway shows (e.g., *The Apartment*, *West Side Story*, and *Exodus*).

Fidrych, Mark Steven ("THE BIRD"), American baseball player (b. Aug. 15, 1954, Worcester, Mass.—d. April 13, 2009, Northborough, Mass.), had a phenomenal rookie year as a pitcher for Major League Baseball's Detroit Tigers in 1976 and a quirky approach to the game that endeared him to fans. His won-lost record that season was 19–9, and he had an earned run average of 2.34 and 97 strikeouts. Fidrych was named the American League Rookie of the Year and was the starting pitcher for the All-Star game. His career was cut short, however, by a knee injury in spring training in 1977, followed by a rotator cuff injury in an early season game that was not diagnosed until 1985.

Flindt, Flemming, Danish ballet dancer, choreographer, and company director (b. June 30, 1936, Copenhagen, Den.—d. March 3, 2009, Sarasota, Fla.), shocked audiences with his audacious stagings, dark themes, and startling choreography; his first and best-known ballet, *The Lesson* (1963; first performed on television as *Enetime*), was an adaptation of a Eugène Ionesco story and depicts a power-crazed ballet teacher as he abuses and murders female students who fail to meet his exacting standards. Several of Flindt's other ballets featured nudity, notably the Ionesco-inspired *The Triumph of Death* (1971) and *Salome* (1978); he later created such character-based ballets as *The Overcoat* (1989) and *Death in Venice* (1991) for the aging Rudolf Nureyev. Flindt studied with the Royal Danish Ballet (RDB) and in 1955 joined the RDB as a soloist. He excelled at demanding virtuoso leading roles with the RDB and other ballet troupes, including the Paris Opéra Ballet (1960–66), before turning to choreography. As RDB artistic director (1966–78), he introduced modern new productions to the repertoire and worked to broaden the company's appeal. Flindt and his ballerina wife (and frequent star), Vivi Flindt (née Gelker), formed their own short-lived ballet company before settling in Texas, where he was artistic director (1981–89) of the Dallas Ballet.

Foote, Horton (ALBERT HORTON FOOTE, JR.), American playwright and screenwriter (b. March 14, 1916, Wharton, Texas—d. March 4, 2009, Hartford,

Michael Rougier—Time Life Pictures/Getty Images



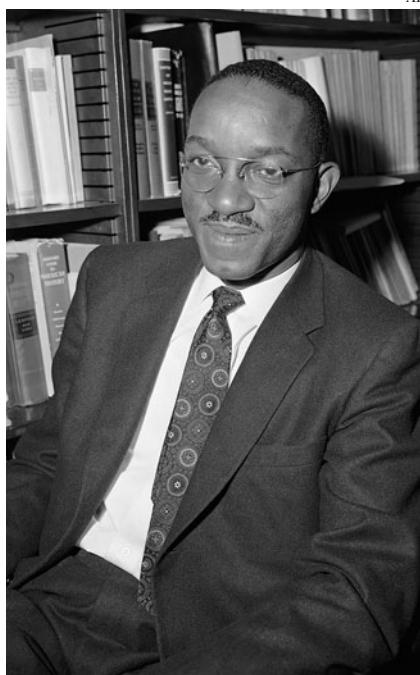
American playwright Horton Foote

Conn.), evoked American life in beautifully observed minimal stories frequently set in the early 20th century in the fictional small town of Harrison, Texas. His first two plays, *Wharton Dance* (1940) and *Texas Town* (1941), were staged by the American Actors' Company in New York City. Foote's best-known work, *The Trip to Bountiful*, was written as a television play and broadcast in 1953; later that year it was staged on Broadway, and in 1985 it was produced as a film, for which Foote also wrote the Oscar-nominated screenplay. His 1954 play *The Travelling Lady*, with his screenplay, became the film *Baby, the Rain Must Fall* in 1965. Foote won Oscars for screenwriting for the movies *To Kill a Mockingbird* (1962), which he adapted from the novel by Harper Lee, and *Tender Mercies* (1983). He wrote an acclaimed nine-play cycle called *The Orphan's Home* (1980s), and he was honoured with a Pulitzer Prize for drama in 1995 for *The Young Man from Atlanta*.

Foss, Lukas (LUKAS FUCHS), German-born American composer, pianist, and conductor (b. Aug. 15, 1922, Berlin, Ger.—d. Feb. 1, 2009, New York, N.Y.), was known for his experiments with improvisation and aleatory music. He studied in Berlin and Paris and, after moving to the U.S. in 1937, with the

composers Randall Thompson and Paul Hindemith and the conductors Serge Koussevitzky and Fritz Reiner. Foss published his first work at age 15, and in 1945 he became the youngest composer to have won a Guggenheim fellowship. In 1957, while a professor of composition and the orchestra director at the University of California, Los Angeles, he founded the Improvisation Chamber Ensemble, which served as the vehicle for many of his experiments in music generally described as aleatory (chance) and stochastic (based on a system of mathematical probability). In 1963 Foss founded and became director of the Center for Creative and Performing Arts at the State University of New York at Buffalo. Orchestras with which he worked as music director and conductor included the Buffalo Philharmonic (1963–70), as well as the Brooklyn Philharmonia (1971–90; later the Brooklyn Philharmonic) and the Milwaukee Symphony Orchestra (1981–86). Foss's early works, which include symphonic music (*Ode*; first performed in 1945), cantatas, and chamber music, as well as a ballet score (*Gift of the Magi*, 1945), were neoclassical—tonal and well-organized in harmony and counterpoint. One of his early concerti, *Piano Concerto No. 2* (1951, revised in 1953), won a Music Critics' Award. An opera, *Griffelkin* (1955), was commissioned by the National Broadcasting Company and first performed on television. His later chamber pieces, including *Echoi* (1963) and *Elytres* (1964), were considered avant-garde, ordering musical events by means of chance operations and leaving many decisions about the performance to the performers.

Franklin, John Hope, American historian and educator (b. Jan. 2, 1915, Rentiesville, Okla.—d. March 25, 2009, Durham, N.C.), was noted for his scholarly reappraisal of the American Civil War era and the importance of the black struggle in shaping modern American identity. He also helped to fashion the legal brief that led to the historic Supreme Court decision outlawing public school segregation, *Brown v. Board of Education of Topeka* (1954), and was instrumental in the development of African American studies programs at colleges and universities. Franklin first gained international attention with the publication of *From Slavery to Freedom: A History of African Americans* (1947; 8th. ed., 2000). His



American historian and educator John Hope Franklin

other works treating aspects of the American Civil War include *The Militant South, 1800–1861* (1956), *Reconstruction: After the Civil War* (1961), and *The Emancipation Proclamation* (1963). He also edited three books from the Civil War period, as well as several other books, including *Color and Race* (1968) and *Black Leaders of the Twentieth Century* (1982). Later works include *George Washington Williams: A Biography* (1985), *Race and History: Selected Essays, 1938–1988* (1989), and *The Color Line: Legacy for the Twenty-First Century* (1993). In 1995 Pres. Bill Clinton honoured Franklin with the Presidential Medal of Freedom; two years later Clinton appointed the scholar to the seven-member Race Initiative Advisory Board.

French, Marilyn (MARILYN EDWARDS), American author (b. Nov. 21, 1929, Brooklyn, N.Y.—d. May 2, 2009, New York, N.Y.), was a staunch feminist whose works explored her radical beliefs about relationships between the sexes, most notably in her debut novel, *The Women's Room* (1977), in which she maintained that “all men are rapists, and that's all they are” and that women's identities were lost when they married. While completing her studies in philosophy and English literature at Hofstra College, Hempstead, Long Island, N.Y., she married (1950) Robert

French, whom she supported while he completed his law degree. The following year French received a B.A. from Hofstra, and she later (1964) went on to earn an M.A. there. As French pursued a writing career, her marriage failed, and the couple divorced in 1967. After the release of *The Women's Room*, which sold more than 20 million copies and was translated into 20 languages, an eponymous television movie based on the novel debuted in 1980. French's other works include the books *The Bleeding Heart* (1980), *Her Mother's Daughter* (1987), *The War Against Women* (1992), *In the Name of Friendship* (2006), and the four-volume *From Eve to Dawn: A History of Women* (2008) and a number of essays and articles written under the pseudonym Mara Solwoska.

Fuller, Millard Dean, American philanthropist (b. Jan. 3, 1935, Lanett, Ala.—d. Feb. 3, 2009, Americus, Ga.), founded (1976) the Christian charity organization Habitat for Humanity International, which went on to build more than 300,000 quality homes to shelter at least 1.5 million needy people in some 100 countries. The principle of the organization was based on sweat equity—involving future homeowners in the construction of their own homes. Manual labour was provided by thousands of support volunteers, including celebrities and U.S. Presidents Jimmy Carter and Bill Clinton; the latter awarded (1996) Fuller the Presidential Medal of Freedom. In 2005 Fuller resigned from Habitat's board of directors to launch a new organization, the Fuller Center for Housing.

Furchgott, Robert Francis, American pharmacologist (b. June 4, 1916, Charleston, S.C.—d. May 19, 2009, Seattle, Wash.), shared, with Louis J. Ignarro and Ferid Murad, the 1998 Nobel Prize for Physiology or Medicine for the discovery that nitric oxide acts as a signaling molecule in the cardiovascular system. Their combined work uncovered an entirely new mechanism by which blood vessels in the body relax and widen. Furchgott received a B.S. in chemistry (1937) from the University of North Carolina and a Ph.D. in biochemistry (1940) from Northwestern University, Evanston, Ill. He joined SUNY-Brooklyn's department of pharmacology in 1956, a position he held until 1989, when he retired as professor emeritus and became an adjunct professor at the University of Miami

School of Medicine. In the work for which he shared the Nobel Prize, Furchgott demonstrated that cells in the endothelium, or inner lining, of blood vessels produce an unknown signaling molecule. The molecule, which he named endothelium-derived relaxing factor (EDRF), signals smooth muscle cells in blood vessel walls to relax, dilating the vessels. Furchgott also received (1996) the Albert Lasker Basic Medical Research Award.

Gaidar, Yegor Timurovich, Russian economist and government official (b. March 19, 1956, Moscow, Russia, U.S.S.R.—d. Dec. 16, 2009, Odintsovo, Russia), instituted sweeping economic reforms in the early days of post-Soviet Russia that aided the country's transition from communism to capitalism. Gaidar studied economics at Moscow State University (Ph.D., 1980) and, following a stint as a journalist, became (1990) director of the Institute for Economic Policy. Shortly before the fall of the Soviet Union in 1991, he was appointed deputy prime minister and economics minister under Pres. Boris Yeltsin, and he swiftly deregulated prices, slashed spending, and initiated the privatization of industry—measures that became known as “shock therapy.” In June 1992 Gaidar was named acting prime minister, though he was never approved by the legislature and was eventually ousted. After briefly serving (1993–94) as deputy prime minister, he became chairman (1994–2001) of the Democratic Choice of Russia party, and he later served (1999–2004) in the State Duma (lower house of parliament).

Gatti, Arturo, Italian-born Canadian boxer (b. April 15, 1972, Calabria, Italy—found dead July 11, 2009, Porto de Galinhas, Braz.), held two world titles during his 16-year professional career (1991–2007)—the International Boxing Federation (IBF) super featherweight (junior lightweight; 1995–97) and the World Boxing Council (WBC) junior welterweight (2004–05). Gatti's relentless aggression and fierce determination in the ring made him a perennial favourite with boxing fans, and his three brutal nontitle bouts against American Micky Ward (May 18, 2002; Nov. 23, 2002; and June 7, 2003), the latter two of which Gatti won, were considered by many to be among the most exciting fights in boxing history. He retired in 2007 with a career record of 40 wins (31 by knockout) and 9 losses. Although police initially sus-

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Canadian boxer Arturo Gatti

pected that Gatti had been murdered by his Brazilian wife, authorities later ruled his death a suicide.

Gelbart, Larry Simon, American writer and librettist (b. Feb. 25, 1928, Chicago, Ill.—d. Sept. 11, 2009, Beverly Hills, Calif.), wrote comedy hits for the stage, screen, and television but was best known for creating the pilot (1972) for the enormously influential TV smash hit program *M*A*S*H*, which he adapted from Robert Altman's 1970 blockbuster film. During *M*A*S*H*'s 11-year TV run (Gelbart remained involved for 4), the show blended comedy and tragedy while following the lives of staff working in a Korean War military field hospital. After shifting his attention to the Broadway stage, Gelbart captured two Tony Awards for best book of a musical: the first in 1963 (with Burt Shevelove and Stephen Sondheim) for *A Funny Thing Happened on the Way to the Forum* (1962; he also wrote the 1966 screenplay) and the second in 1990 for *City of Angels* (1989). Gelbart's credits as a screenwriter include *The Notorious Landlady* (1962), *Oh, God!* (1977), and *Tootsie* (1982); the latter two garnered him Academy Award nominations.

Gelfand, Israil Moiseyevich, Soviet mathematician (b. Sept. 2, 1913, Okny, Ukraine, Russian Empire [now Krasni Okny, Ukr.]—d. Oct. 5, 2009, New

Brunswick, N.J.), was a pioneer in several fields of mathematics; his work in integral geometry provided the mathematical foundations for computed tomography (used in medical imaging), and his representation theory became the foundation used by physicists working with quantum mechanics. Among his most important results are the Gelfand representation of a Banach algebra, the Gelfand-Naimark theorem on C^* -algebras, and the Bernstein-Gelfand-Gelfand resolution for representation of simple Lie groups. In 1958, when his son Aleksandr was stricken with leukemia, Gelfand developed an interest in cell biology and was involved in establishing the Institute of Biological Physics of the Academy of Sciences of the U.S.S.R. Gelfand took an interest in mathematics education and set up correspondence programs in both the Soviet Union and the U.S. He was a recipient of the Order of Lenin (three times), the Kyoto Prize (1989), and the Leroy P. Steele Prize for Lifetime Achievement of the American Mathematical Society (2005).

George, Eddie (EDWARD ALAN JOHN GEORGE, BARON GEORGE OF ST. TUDY IN THE COUNTY OF CORNWALL; “STEADY EDDIE”), British economist and central banker (b. Sept. 11, 1938, Carshalton, near London, Eng.—d. April 18, 2009, St. Tudy, Cornwall, Eng.), as the outspoken inflation-fighting governor (1993–2003) of the Bank of England (BOE), guided the U.K. central bank to independence (1997) and thus full control over the country's monetary policy without undue political influence from the elected government. After studying economics at Emmanuel College, Cambridge, George served briefly in the Royal Air Force. He joined the BOE in 1962 and worked mainly in its international section. He was seconded to the Bank of International Settlements in the mid-1960s and the International Monetary Fund in the early 1970s. George was promoted to BOE executive director in 1982 and to deputy governor in 1990. In 1991 George faced criticism for his role in the collapse of the Bank of Credit and Commerce International when an official inquiry uncovered a series of failures in the BOE's systems of supervision and communication. He reestablished his reputation by his adept handling of the U.K.'s embarrassing withdrawal from the European exchange-rate mechanism in September 1992. His reward was promotion to

BOE governor in July 1993; he retired in 2003 at the end of his second five-year term. George was knighted in 2000 and made a life peer in 2004.

Gibson, Henry (JAMES BATEMAN), American actor and comedian (b. Sept. 21, 1935, Germantown, Philadelphia, Pa.—d. Sept. 14, 2009, Malibu, Calif.), won audiences over with his sly deadpan delivery as a placid reciter of ridiculous self-penned poetry in the 1960s television variety show *Rowan & Martin's Laugh-in*. Gibson also enjoyed a long movie and television career as a character actor and comic, appearing, most notably, in such Robert Altman-directed films as *The Long Goodbye* (1973) and the country-music masterpiece *Nashville* (1975) and such screen comedies as *The Nutty Professor* (1963), *The Blues Brothers* (1980), and *Wedding Crashers* (2005).

Ginzburg, Vitaly Lazarevich, Russian physicist and astrophysicist (b. Oct. 4 [Sept. 21, Old Style], 1916, Moscow, Russia—d. Nov. 8, 2009, Moscow), won the Nobel Prize for Physics in 2003 for his pioneering work in the 1950s on superconductivity. He shared the award with Alexey A. Abrikosov of Russia and Anthony J. Leggett of Great Britain. Ginzburg was also noted for his work on theories of radio wave propagation, radio astronomy, and the origin of cosmic rays. In addition, he was a member of the team that worked under physicist Igor Tamm to develop the first Soviet thermonuclear bomb; the bomb's design, first proposed by Andrey Sakharov in 1948 and refined by Ginzburg in 1949, was tested on Aug. 12, 1953. Ginzburg received the State Prize of the Soviet Union in 1953 and the Lenin Prize in 1966.

Goody, Jade Cerisa Lorraine, British reality television celebrity (b. June 5, 1981, London, Eng.—d. March 22, 2009, Upshire, Essex, Eng.), turned a stint in 2002 on the British reality TV show *Big Brother* into a lucrative high-profile public life, which was abruptly cut short by her equally public struggle with cervical cancer.

Gottschalk, Alfred, American rabbi and religious scholar (b. March 7, 1930, Oberwesel, Ger.—d. Sept. 12, 2009, Cincinnati, Ohio), as one of the principal institutional leaders within Reform Judaism, ordained the first women rabbis in the U.S. and Israel and oversaw the creation and development of



American rabbi and religious scholar
Alfred Gottschalk

the United States Holocaust Memorial Museum. As a Jewish child in Nazi Germany, Gottschalk was witness to pervasive anti-Semitic intimidation, and in 1939 he fled with his family to the U.S. He studied at Brooklyn (N.Y.) College (B.A., 1952) and Hebrew Union College—Jewish Institute of Religion, which, two years after his rabbinical ordination (1957), assigned him to direct its Los Angeles branch. In 1965 Gottschalk received a Ph.D. from the University of Southern California. Six years later he was named president of Hebrew Union, where he preserved its reputation as the intellectual locus of Judaism's liberal Reform movement until his retirement in 2000. A tireless reformer, he founded (1968) the School of Jewish Communal Service in Los Angeles and later served (2000–03) as president of the Museum of Jewish Heritage, New York City.

Granger, Sir Clive William John, Welsh economist (b. Sept. 4, 1934, Swansea, Wales—d. May 27, 2009, San Diego, Calif.), was corecipient (with the American economist Robert F. Engle) of the Nobel Prize in Economic Sciences in 2003 for his development of techniques for analyzing time series data with common trends. Granger attended the University of Nottingham (B.A., 1955; Ph.D., 1959), where he became a lecturer in statistics in the mathematics department. He spent some three decades (1974–2003; emeritus from 2003) as a professor at the University of California, San Diego.

Granger's books cover such subjects as time series analysis and forecasting, statistical theory, and applied statistics. In his seminal work, conducted in the 1970s and '80s, he developed concepts and analytic methods to establish meaningful relationships between non-stationary variables, such as exchange rates and inflation rates. Fundamental to his methods was his discovery that a specific combination of two or more nonstationary time series could be stationary, a combination for which he invented the term *cointegration*. Through his cointegration analysis, Granger showed that the dynamics in exchange rates and prices, for example, are driven by a tendency to smooth out deviations from the long-run equilibrium exchange rate and short-run fluctuations around the adjustment path. Despite spending most of his career in the U.S., Granger retained his British citizenship and was granted a knighthood in 2005.

Green, Archie (AARON GREEN), Canadian-born American folklorist (b. June 29, 1917, Winnipeg, Man.—d. March 22, 2009, San Francisco, Calif.), spent most of his lifetime gathering and preserving the songs, customs, beliefs, rituals, craft, and stories associated with union labourers, what he coined "laborlore," and successfully lobbied (1969–76) the U.S. Congress in the passage of the American Folklife Preservation Act, which resulted in the creation of the American Folklife Center (AFC) at the Library of Congress. Green specialized in occupational folklore and hillbilly music.

Greenwich, Ellie (ELEANOR LOUISE GREENWICH), American songwriter (b. Oct. 23, 1940, Brooklyn, N.Y.—d. Aug. 26, 2009, New York, N.Y.), harnessed the emotional earnestness of teenage love in a series of pop music songs that became iconic classics of the 1960s. Greenwich co-wrote such infectious girl-group hits (for the Shangri-Las, the Dixie Cups, the Crystals, and others) as "Leader of the Pack" and "Chapel of Love," but she scored her greatest successes with songwriting partner and husband Jeff Barry, who inspired her song "(Today I Met) The Boy I'm Gonna Marry" and with whom she penned "River Deep—Mountain High," "Baby I Love You," and "Be My Baby."

Grene, Marjorie (MARJORIE GLICKSMAN), American philosopher (b. Dec. 13, 1910, Milwaukee, Wis.—d. March

16, 2009, Blacksburg, Va.), was considered the founder of the philosophy of biology. Grene was known for her innovative theories on the nature of the scientific study of life and was one of the first to offer an interpretation of the philosophical meaning of random events that occur in the course of evolution. She also addressed the philosophical impacts of the inevitable increase in the understanding of evolutionary science and contributed to new ideas in epistemology—the philosophy of the nature of knowledge. Grene received a degree in zoology (1931) from Wellesley (Mass.) College and a Ph.D. in philosophy (1935) from Radcliffe College, Cambridge, Mass. In 2002 Grene became the first woman included in Southern Illinois University's Library of Living Philosophers series. Her works include *The Philosophy of Biology: An Episodic History* (2004; with David Depew).

Gwathmey, Charles, American architect (b. June 19, 1938, Charlotte, N.C.—d. Aug. 3, 2009, New York, N.Y.), was celebrated for his geometric-inspired Modernist architecture. Early in his career Gwathmey gained prominence as the youngest of five New York City-based architects (together with Michael Graves, Peter Eisenman, John Hejduk, and Richard Meier) influenced by the Modernist ideals of Swiss architect Le Corbusier; the group was called alternately the Five, the New York School, or the Whites (for the colour that dominated most of their buildings) and was the subject of the book *Five Architects* (1972). Gwathmey studied architecture at the University of Pennsylvania and Yale University (M.Arch., 1962). His meteoric rise to prominence began with the construction of his parents' home in Amagansett, N.Y., completed in 1966. The structure displayed what would become hallmarks of Gwathmey's work: bold geometric shapes wound seamlessly—and unapologetically—together. Gwathmey Siegel & Associates, the firm that he founded in 1968 with fellow architect Robert Siegel, was noted for bridging the divide between small and large projects, creating massive public buildings (especially museums) as well as private homes for exclusive clients.

Hakim, 'Abd al-'Aziz al-, Iraqi political leader (b. 1950, Al-Najaf, Iraq—d. Aug. 26, 2009, Tehran, Iran), became head of Iraq's largest Shi'ite political party after years of opposing the

regime of Saddam Hussein. Hakim was a member of a prominent clerical family that supported Shi'ite opposition political groups in Iraq and went into exile in Iran in 1980, shortly before the outbreak of the Iran-Iraq War (1980–90). In Iran, Hakim and his brother Ayatollah Muhammad Baqir al-Hakim established (1982) the Supreme Council for the Islamic Revolution in Iraq. While his brother chaired the organization, Hakim commanded its military arm, the Badr Organization, which fought with Iran in the Iran-Iraq War. Both brothers returned to Iraq shortly after the U.S.-led invasion in 2003. In July of that year, Hakim became a member of the Iraqi Governing

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Iraqi political leader 'Abd al-'Aziz al-Hakim

Council appointed by the Coalition Provisional Authority. When his brother was killed by a car bomb in August, Hakim took over the leadership of the Supreme Council for the Islamic Revolution in Iraq (from 2007, the Islamic Supreme Council of Iraq) and built the Shi'ite political coalition the United Iraqi Alliance, which came to power in the December 2005 elections for the Transitional National Assembly.

Harmel, Pierre (PIERRE-CHARLES-JOSÉ-MARIE HARMEL), Belgian statesman (b. March 16, 1911, Uccle, Belg.—d. Nov. 15, 2009, Brussels, Belg.), was briefly prime minister of Belgium (1965–66), but he was best known for promoting NATO as a peacekeeping or-

ganization in a document that became known as the Harmel doctrine. The influence of this doctrine was felt in the introduction of the 1975 Helsinki Accords, which aided in the easing of relations between the Communist bloc and the West. Harmel began his career as a lawyer and professor before entering the political realm as a UN delegate in 1949. He held a number of governmental posts before serving an eight-month term as prime minister. It was in his role as Belgium's foreign minister (1966–73) that he began to examine NATO and its objectives. His career also included stints as speaker of the Belgian Senate and minister of state. He was made a count in 1991.

Harvey, Paul (PAUL HARVEY AURANDT), American radio commentator (b. Sept. 4, 1918, Tulsa, Okla.—d. Feb. 28, 2009, Phoenix, Ariz.), enthralled some 24 million listeners via more than 1,200 radio stations throughout the U.S. with his down-to-earth conservative radio programs during a career that spanned nearly 60 years; he was dubbed “the voice of Middle America” and “the voice of the silent majority.” Harvey's no-nonsense approach to news and editorials, laced with long pauses for suspense, along with the genuine warmth and humour that he brought to human-interest stories, created a personal connection with listeners. After being discharged from the Army Air Corps in 1944, Harvey became a broadcaster at Chicago radio station WENR. In 1951 his show, *Paul Harvey News and Comment*, was syndicated by ABC. By 1976 Harvey had begun producing a new show, *The Rest of the Story*, which featured short biographical accounts of famous people whose identities were not revealed until the end of the program. In 2000 Harvey signed a 10-year, \$100 million contract. Aside from a brief hiatus in 2001 due to a throat malady, he continued to broadcast until shortly before his death. Harvey was awarded the Presidential Medal of Freedom in 2005.

Haugland, Knut Magne, Norwegian soldier and adventurer (b. Sept. 23, 1917, Rjukan, Nor.—d. Dec. 25, 2009, Oslo, Nor.), played a prominent role in the Norwegian resistance during World War II and later captured the public's imagination as a member of the fabled *Kon-Tiki* expedition. Haugland trained in the army as a radio technician and saw combat in the German invasion of Norway (1940). He was better known,

however, for his exploits as a commando in the resistance movement, in particular his role in a daring raid in 1943 on a Norwegian hydroelectric plant feared to be sought by Germany as a source of atomic power; after extensive planning, he and others successfully destroyed the facility's supply of heavy water. Haugland's feats of bravado earned him numerous decorations, including Norway's War Cross with Sword and Britain's Distinguished Service Order. Following the war, he was a radio operator on the *Kon-Tiki*, a balsa-wood raft that sailed (1947) from Peru to French Polynesia to test a theory about pre-Columbian migration patterns. Haugland resumed his military career in the ensuing decades, rising to lieutenant colonel, and served as director of both the Kon-Tiki Museum (1949–90) and the Norwegian Resistance Museum (1963–83).

Hayami, Masaru, Japanese government official (b. March 24, 1925, Kobe, Japan—d. May 16, 2009, Tokyo, Japan), as governor (1998–2003) of the Bank of Japan (BOJ), introduced striking reform to the Japanese banking system in a bid to revive the country's slumping economy. Hayami was educated at the Tokyo University of Commerce and began work at the BOJ in 1947; he remained at the central bank for 34 years and worked in New York City and London. He left the bank in 1981 and assumed a position as senior managing director at Nissho Iwai Corp., a Japanese trading firm, becoming president of the corporation three years later and then presiding (1987–94) as chairman. From 1992 to 1998, he served as chairman of the board of trustees at Tokyo Women's Christian University. In his term as governor of the BOJ, Hayami cut (1999) interest rates to zero and led the bank to buy (2002) \$24 billion in stock holdings from large commercial banks in Japan.

Hewitt, Don (DONALD SHEPARD HEWITT), American television producer (b. Dec. 14, 1922, New York, N.Y.—d. Aug. 19, 2009, Bridgehampton, N.Y.), was best known as the creator and longtime producer (1968–2004) of the compelling television newsmagazine *60 Minutes*, which combined hard-hitting investigative reporting with candid profiles and interviews of celebrities and news makers. After serving as a war correspondent in World War II, Hewitt joined (1948) CBS. He directed its first televised evening news broadcast, with

Douglas Edwards (1948–62), and Edward R. Murrow's *See It Now* (1951–58) news show. He also served (1960–65) as the first executive producer of the *CBS Evening News* featuring Walter Cronkite (*q.v.*), and he produced (1960) the first-ever televised U.S. presidential debate—a forum for Richard M. Nixon and John F. Kennedy. Hewitt was the recipient of eight Emmy Awards and an Edward R. Murrow Award (2008).

Hughes, John Wilden, Jr., American filmmaker (b. Feb. 18, 1950, Lansing, Mich.—d. Aug. 6, 2009, New York, N.Y.), captured the essence of teen angst in comedic coming-of-age tales that he wrote for the big screen and also directed, notably the iconic films *Sixteen Candles* (1984), *The Breakfast Club* (1985), and *Ferris Bueller's Day Off*

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American filmmaker John Hughes

(1986); he also captivated audiences with such comedies as *Planes, Trains and Automobiles* (1987) and wrote the screenplays for such films as *Mr. Mom* (1983), *Pretty in Pink* (1986), and three of the four Home Alone movies (1990, 1992, 1997). Other credits include screenplays written under the pseudonym Edmond Dantes. His last film as a director was *Curly Sue* (1991).

Iz the Wiz (MICHAEL MARTIN), American graffiti artist (b. Nov. 30, 1958, New York, N.Y.—d. June 17, 2009, Spring Hill, Fla.), painted his name hundreds of times on New York City subway cars, earning a reputation as one of the most

prolific graffiti artists of the 1970s and '80s. His style was marked by legible letters filled with colourful designs and often an inclusion of rock music lyrics. Iz never knew his father and grew up in foster homes in New York City after his mother was imprisoned. He began spray painting, or tagging, at age 14, and in 1975 a poster for the Broadway musical *The Wiz* inspired his name and trademark tag. He specialized in tagging the A-line subway, but he was said to have put his tag on every subway line more times than anyone else, making him an "all-city king." Iz said that in 1982 each night he painted more than 100 throw-ups (quickly done tags) and that during 1981–82 he painted at least 25 complete subway cars. In the mid-1980s Iz retired to Florida, where he suffered from financial troubles and drug abuse, but in the 1990s he resumed work in spaces approved for graffiti. His work was featured in books, documentaries, and galleries.

Jackson, Michael Joseph, American singer, songwriter, and dancer (b. Aug. 29, 1958, Gary, Ind.—d. June 25, 2009, Los Angeles, Calif.), was the most popular entertainer in the world in the early and mid-1980s. Jackson began his lifelong performance career as the youngest and most talented of five brothers known as the Jackson 5. Sporting the loudest fashions, the largest Afros, the snappiest choreography, and a youthful, soulful exuberance, the group scored (1969–70) four consecutive number one pop hits: "I Want You Back," "ABC," "The Love You Save," and "I'll Be There." Michael also topped the pop charts as a solo performer with "Ben," and "Rockin' Robin" reached number two on the charts. As Michael matured, his voice changed, family tensions arose, and a contract standoff ensued. The Jackson 5 finally broke with Motown Records, moving to Epic Records as the Jacksons. Michael's first solo effort with Epic, *Off the Wall* (1979), exceeded all expectations and became the best-selling album of the year (it had since sold more than 20 million copies) and yielded the international hit singles "Don't Stop 'til You Get Enough" and "Rock with You," both of which showcased Jackson's energetic style and capitalized on the contemporary disco dance fad. Three years later he returned with *Thriller*, a tour de force that featured an array of guest stars and elevated him to a worldwide superstar. The album captured numerous awards,

Reed Saxon/AP



The “King of Pop” Michael Jackson

including a record-setting eight Grammys; remained on the charts for more than two years; and sold more than 40 million copies, long holding the distinction of being the best-selling album in history. The album’s second single, “Billie Jean,” an electrifying dance track and the vehicle for Jackson’s trademark “moonwalk” dance, topped the pop charts, as did “Beat It,” which featured a raucous solo from famed guitarist Eddie Van Halen. Moreover, “Beat It” helped to break down the artificial barriers between black and white artists on the radio and in the emerging format of television music videos, while the electrifying 14-minute “Thriller” video (1983) became a cultural icon and set a new standard for production values in the genre. By the late 1980s Jackson was renowned worldwide as the “King of Pop.” His much-anticipated Victory reunion tour with his brothers was one of the most popular concert events of 1984. Further solo albums—notably *Bad* (1987) and *Dangerous* (1991)—solidified “Jacko’s” dominance in pop music. In 2001 he was inducted into the Rock and Roll Hall of Fame; the Jackson 5 had been inducted in 1997. Despite his professional success, Jackson’s eccentric, secluded lifestyle grew increasingly controversial in later years, clouded by allegations of child molestation in 1993, two brief marriages (one to Lisa Marie Presley [1994–96] and the other to Debbie Rowe [1996–99], the mother of two of his three children), an arrest on child molestation charges in 2003,

and finally, a financial collapse that nearly resulted in the loss of his lavish Neverland ranch.

Jagan, Janet (JANET ROSALIE ROSENBERG), American-born Guyanese politician (b. Oct. 20, 1920, Chicago, Ill.—d. March 28, 2009, Georgetown, Guyana), as president of Guyana from Dec. 19, 1997, to Aug. 11, 1999, was the country’s first white president and the first elected female president in South America. She was born into a middle-class Jewish family and attended college in Michigan. In 1942, while working as a student nurse in Chicago, she met Cheddi Jagan, a dentistry student from what was then British Guiana. The following year they were married and moved to Georgetown, British Guiana, where he set up a dental practice. They both became active in politics and cofounded (1950) the People’s Progressive Party (PPP), with a goal of gaining independence for the colony, which it achieved in 1966. She officially became a citizen of Guyana that year, having been stripped of her U.S. citizenship more than 20 years earlier because of her Marxist political views. While her husband served as prime minister (1953; 1961–64) and president (1992–97), Jagan held several cabinet posts and served in the parliament. She was also the PPP’s secretary-general for nearly 20 years. After her husband died in office, Jagan, although hesitant at first to run for the presidency, accepted the PPP’s nomination. Despite criticisms of her ethnicity and age, she defeated People’s National Congress leader Desmond Hoyte in the election on Dec. 15, 1997. Hoyte’s supporters protested the result so vehemently that, in an effort to quell the unrest, Jagan and Hoyte reached an agreement in January 1998 to hold new elections in 2000, two years earlier than required. Demonstrations continued throughout her presidency, however. In July 1999 Jagan suffered a mild heart attack, and the following month she stepped down.

Jameson, Betty (ELIZABETH MAY JAMESON), American golfer (b. May 9, 1919, Norman, Okla.—d. Jan. 31, 2009, Boynton Beach, Fla.), shot a 295 to capture the 1947 U.S. Women’s Open and thereby became the first female golfer to break 300 in a 72-hole tournament. Three years later she was one of the 13 founding members of the Ladies Professional Golf Association (LPGA); she went on to compete in LPGA events until 1970. As a professional, Jameson

won a total of 12 tournaments; she also won 14 amateur titles, including U.S. amateur championships in 1939 and 1940. In 1951 she was inducted into the Hall of Fame of Women’s Golf, and in 1967 she was one of the six original inductees of the LPGA Tour Hall of Fame. In addition, in 1999 Jameson was named to the Women’s Sports Foundation Hall of Fame.

Jarre, Maurice-Alexis, French composer (b. Sept. 13, 1924, Lyon, France—d. March 29, 2009, Malibu, Calif.), wrote the music sound tracks for more than 150 motion pictures, of which 3—*Lawrence of Arabia* (1962), *Doctor Zhivago* (1965), and *A Passage to India* (1984)—earned him the Academy Award for best original score and another 5—*Les Dimanches de Ville d’Avray* (1962; *Sundays and Cybele*), *The Message* (1976), *Witness* (1985), *Gorillas in the Mist* (1988), and *Ghost* (1990)—received nominations for the score. For many people, however, his best-known work was the balalaika-infused song “Lara’s Theme,” which was drawn from the *Doctor Zhivago* score. Jarre studied engineering at the Sorbonne before transferring to the Paris Conservatory, and he served as music director for the Théâtre National Populaire for more than a decade. His first movie sound track was for the short documentary *Hôtel des Invalides* (1952), and he was soon in demand by filmmakers on both sides of the Atlantic. Although Jarre was especially known for his lush melodies, he was sensitive to the needs of the script and often incorporated exotic motifs, ethnic instruments, and electronic effects to enhance the drama onscreen. His varied film scores include *The Longest Day* (1962), *Paris brûle-t-il?* (1966; *Is Paris Burning?*), *Ryan’s Daughter* (1970), *The Life and Times of Judge Roy Bean* (1972, including the Oscar-nominated song “Marmalade, Molasses & Honey”), *The Man Who Would Be King* (1975), *Die Blechtrommel* (1979; *The Tin Drum*), *The Year of Living Dangerously* (1982), *Dead Poet’s Society* (1989), and *A Walk in the Clouds* (1995). He also composed symphonic music and scores for such television films as *Uprising* (2001). Jarre was an officer of the Legion of Honour, and in February 2009 he was awarded the Berlin Film Festival’s Golden Bear for Lifetime Achievement.

Jeanne-Claude (JEANNE-CLAUDE DENAT DE GUILLEBON), French environmental artist (b. June 13, 1935,

Dominic Favre—Keystone/AP



French environmental artist Jeanne-Claude

Casablanca, Mor.—d. Nov. 18, 2009, New York, N.Y.), was originally described as the publicist and business manager for her artist husband, Christo, but from 1994 she received equal billing with him in all creative and administrative aspects of their work, notably their controversial outdoor sculptures and huge temporary displays of fabrics and plastics. Jeanne-Claude was born in Morocco, where her father was a general in the French army. She received (1952) a bachelor's degree in Latin and philosophy from the University of Tunis. In 1958 she met Christo Javacheff, who was already working in Paris as an artist; the next year she left her then husband to marry Christo. In 1964 the pair relocated to New York City. Christo and Jeanne-Claude's first joint works included *Dockside Packages* (1961; Cologne, Ger.) and *Iron Curtain—Wall of Oil Drums* (1962; Paris). Their best-known "wrapped" projects involved such natural and man-made features as a 2.4-km (1.5-mi) span of coastline in Little Bay near Sydney (draped with 90,000 sq m [1,000,000 sq ft] of synthetic fabric in 1969), the Pont Neuf (bridge) in Paris (covered in beige cloth in 1985), and Berlin's Reichstag (parliament) building (wrapped in metallic silver fabric in 1995). In an ambitious 1991 project, the couple installed 1,340 giant blue umbrellas across the Sato River valley in Japan and 1,760 giant yellow ones in

Tejon Pass, California. *The Gates, Central Park, New York City, 1979–2005*, built in 2005 along 37 km (23 mi) of walkway in Central Park, featured 7,503 steel gates standing 5 m (16 ft) high and decorated with saffron-coloured cloth panels. Most of the duo's installations were documented in print and on film.

Johansson, Ingemar (JENS INGEMAR JOHANSSON; "HAMMER OF THOR"), Swedish boxer (b. Sept. 22, 1932, Göteborg, Swed.—d. Jan. 30, 2009, Kungsbäck, Swed.), was world heavyweight boxing champion from June 26, 1959, when he scored a third-round knockout against the heavily favoured titleholder, Floyd Patterson of the U.S., until he was, in turn, knocked out by a revitalized Patterson in the fifth round of their rematch on June 20, 1960. Johansson lost a second rematch on March 13, 1961. He represented Sweden at the 1952 Helsinki Olympic Games but was disqualified in his semi-final bout against American Ed Sanders; Johansson rarely threw a punch during the fight, and the referee felt that the boxer was not giving his best. (Not until 1982 did the International Olympic Committee award him the silver medal.) In December 1952 Johansson turned professional. He won the European heavyweight title in 1956 against Francesco Cavicchi, and in 1958 he scored a one-round knockout over Eddie Machen, a leading American heavyweight, before facing Patterson the next year. Johansson won the European heavyweight championship again in 1962 against Dick Richardson, forfeited the title in 1963 for failing to defend it, and then retired in 1963 with a record of 26 wins (17 by knockouts) and 2 losses—to Patterson, the only defeats in his professional career.

Jones, Jack (JAMES LARKIN JONES), British trade union leader (b. March 29, 1913, Liverpool, Eng.—d. April 21, 2009, London, Eng.), as general secretary (1969–78) of the Transport and General Workers' Union (TGWU) and thus a central figure in the Trade Unions Congress (TUC), guided one of the world's largest trade unions, which in 1978 had a membership of some two million workers. Jones's power was so great, especially during Labour Prime Minister Harold Wilson's second government (1974–76), that he earned the nickname "Emperor Jones" for his extraordinary control of pro-labour regulations and parliamentary legislation. In the 1970s Jones supported the con-

troversial Social Contract, which proffered wage restraints in partnership with the government, and he deplored the widespread strikes during the so-called Winter of Discontent (1978–79) that led to the election in 1979 of Conservative Prime Minister Margaret Thatcher. Jones was made MBE in 1950 and appointed a Companion of Honour in 1978. His autobiography, *Union Man*, was published in 1986.

Jones, Jennifer (PHYLIS LEE ISLEY), American actress (b. March 2, 1919, Tulsa, Okla.—d. Dec. 17, 2009, Malibu, Calif.), lit up movie screens in the 1940s and '50s with her luminous performances in roles that alternated between fresh-faced naifs and tempestuous vixens. She won (1943) a best actress Academy Award for her star-making turn as a French peasant girl (St. Bernadette of Lourdes) in *The Song of Bernadette* (1943). Jones attended the American Academy of Dramatic Arts in New York City, and after appearing in a series of bit movie parts, she landed an audition with Hollywood mogul David O. Selznick, who signed her to a contract and promoted her as a rising star. Following the success of *The Song of Bernadette*, her first leading role, Jones captured successive Oscar nominations for *Since You Went Away* (1944), *Love Letters* (1945), and *Duel in the Sun* (1946); a final nomination came for *Love Is a Many-Splendored Thing* (1955). Much of her career was molded by Selznick, whom she married

American actress Jennifer Jones



Silver Screen Collection—Hulton Archive/Getty Images

in 1949 (she divorced actor Robert Walker in 1945). After Selznick's death in 1965, she appeared in only three more films; her last movie was *The Towering Inferno* (1974).

Jones, Uriel, American musician (b. June 13, 1934, Detroit, Mich.—d. March 24, 2009, Dearborn, Mich.), provided his characteristic hard-driving beat for numerous Motown hits while playing as a member (1963–72) of the label's house studio band, the Funk Brothers. Jones's interest in music began during his troubled teenage years while at the Moore School for Boys, where he first experimented with the trombone until he found his true calling as a drummer. During the early 1960s Jones toured with Marvin Gaye's band, but his biggest success came when he was recruited by Motown to play drums for the Funk Brothers. Jones could be heard beating out the rhythm for such chart-topping hits as "Ain't Too Proud to Beg," "I Heard It Through the Grapevine," "My Girl," "Signed, Sealed, Delivered, I'm Yours," and "Ain't No Mountain High Enough." Although the studio musicians were not originally credited for their work, Jones and others were finally recognized for their contributions in the documentary film *Standing in the Shadows of Motown* (2002) and were honoured in 2004 with a Grammy Award for lifetime achievement.

Kaplicky, Jan, Czech-born architect (b. April 18, 1937, Prague, Czech. [now Czech Rep.]—d. Jan. 14, 2009, Prague), created futuristic organically inspired designs that challenged some of the most basic ideas of modern architecture. His best-known designs were for the spaceshiplike semimonocoque Media Centre at Lord's Cricket Ground in London, which in 1999 won the Royal Institute of British Architects (RIBA) Stirling Prize, and the aluminum-covered, virtually windowless Selfridges department store in Birmingham, Eng., which won a RIBA Award in 2004. In 2007 Kaplicky's undulating "blob" design won the international competition to build a Czech National Library, but the Czech government refused to fund the project.

Katzir, Ephraim (EPHRAIM KATCHALSKI), Russian-born Israeli scientist and politician (b. May 16, 1916, Kiev, Ukraine, Russian Empire [now in Ukraine]—d. May 30, 2009, Rehovot, Israel), as the fourth president of Israel (1973–78), attempted to close the wide

Ya'akov Sa'ar—GPO/Getty Images



*Israeli scientist and politician
Ephraim Katzir*

gap that existed in education and social welfare between Sephardic and Oriental Jews and Ashkenazic Jews and to promote understanding between Israeli Jews and their Arab neighbours. Katzir moved with his family to Palestine when he was nine years old. After graduating from the Hebrew University of Jerusalem, he became an assistant in the university's department of theoretical and macromolecular chemistry (1941–45). During this period he was also a research fellow at Columbia University, New York City, and was active in the preindependence Jewish underground army, Haganah, to which he became scientific adviser. In 1949 Katzir was appointed acting head of the department of biophysics in the Weizmann Institute of Science at Rehovot, and he later became its director. A recognized authority on proteins, he was the first Israeli elected (1966) to the U.S. National Academy of Sciences. From 1966 to 1968 he was chief scientific adviser to the Israeli Ministry of Defense. Katzir was a member of the ruling Labour Party, and in 1973 he was elected president of Israel in a secret ballot of the Knesset (parliament).

Kell, George Clyde, American baseball player (b. Aug. 23, 1922, Swifton, Ark.—d. March 24, 2009, Swifton), was a slugging third baseman who played for 15 seasons (1943–57) for a succession of teams in the American League (AL), including the Philadelphia Athletics, the Detroit Tigers, the Boston Red Sox, the Chicago White Sox, and the Baltimore Orioles, and amassed a ca-

reer batting average of .306; in each year from 1946 to 1953 he topped .300, and in 1949 he edged out Ted Williams for the AL batting title. Kell, who also was named to 10 AL All-Star teams, was inducted into the Baseball Hall of Fame in 1983. After he retired as a player, he served (1959–96, with the exception of 1964) as the easygoing radio and television announcer for the Tigers.

Kelton, Elmer, American novelist (b. April 29, 1926, Andrews, Texas—d. Aug. 22, 2009, San Angelo, Texas), penned dozens of westerns, notably *The Good Old Boys* (1978; filmed 1995), that were recognized for their sharply drawn characters and historical verisimilitude. Kelton served (1944–46) in the U.S. Army before receiving a journalism degree (1948) from the University of Texas at Austin. The son of a cowman, he marked his debut as a fiction writer with *Hot Iron* (1956), about cattle ranching in Texas, and his many subsequent novels earned him numerous prizes, including the National Cowboy Hall of Fame's Western Heritage Award (four times) and the Western Writers of America's Spur Award (seven times); in 1995 the latter group also voted him the best western author of all time.

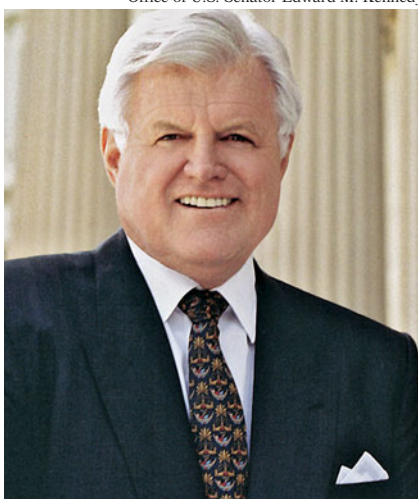
Kemp, Jack French, Jr., American politician and football player (b. July 13, 1935, Los Angeles, Calif.—d. May 2, 2009, Bethesda, Md.), after an illustrious career with the American Football League (AFL), became one of the country's leading conservative politicians following his election in 1970 to the U.S. House of Representatives; he represented suburban Buffalo, N.Y., for nine terms (1971–89) and was the Republican nominee for vice president in 1996. Earlier, Kemp was a standout quarterback on the football team at Occidental College in Los Angeles, where he earned a B.A. (1957). After brief stints with various professional teams, Kemp signed (1962) with the Buffalo Bills of the AFL. He led the Bills to the AFL championship in 1964 and again in 1965, when he also won the league's most valuable player award. He was named seven times to the AFL All-Star team and retired from the game in 1969 as the AFL's all-time leader in passing yards with 21,130.

Kenan, Amos (AMOS LEVINE), Israeli journalist, writer, and artist (b. May 2, 1927, Tel Aviv, British Palestine—d. Aug. 4, 2009, Tel Aviv, Israel), was a member of the Lehi (Stern Gang)

paramilitary group that fought for Israeli independence from the U.K., but he was strongly influenced by the anti-religious Canaanite movement that campaigned for an all-inclusive secular Israel based on “Hebrew” culture rather than a religious Jewish state. After having served in the Israel Defense Forces and been wounded in the 1948 Arab-Palestinian war, Kenan wrote (1951–52) a satiric antiestablishment column in the newspaper *Haaretz*. He lost his job when he was arrested on suspicion of planning to assassinate a government minister who was promoting a ban on driving on the Sabbath. Kenan was acquitted and in 1954 moved to Paris, where he worked as a sculptor, wrote plays, and contributed articles to French, Israeli, and American publications. Returning to Israel in 1962, he composed a column for the newspaper *Yedioth Aharonoth* and wrote more than a dozen volumes of Hebrew-language fiction, poetry, and essays. Kenan was a longtime supporter of the so-called two-state solution and in 1970 co-founded the Israeli-Palestinian Council.

Kennedy, Edward Moore (TED), American politician (b. Feb. 22, 1932, Boston, Mass.—d. Aug. 25, 2009, Hyanis Port, Mass.), was a respected U.S. senator (1962–2009), as well as a prominent figure in the Democratic Party and in liberal politics in general for more than four decades. Kennedy, the youngest child of Rose and Joseph P. Kennedy and the last surviving brother of Pres. John F. Kennedy, was also a noteworthy spokesman for the policies that had come to be associated with his family name—i.e., support for social welfare legislation and active participation in world affairs. After graduating (1956) from Harvard University, Kennedy studied at the International Law School, The Hague, and received a law degree (1959) from the University of Virginia. He campaigned for his brother John in the 1960 presidential race and two years later was elected to the president’s former Senate seat representing Massachusetts. Although an injury prevented him from campaigning actively for reelection in 1964, Kennedy was swept back into office for a full six-year term by a landslide vote. Early in 1969 he was elected Senate majority whip, and he became an early front-runner for the next Democratic presidential nomination. Then, on the night of July 18, 1969, he accidentally drove his car off an unmarked bridge on Chappaquiddick Is-

Office of U.S. Senator Edward M. Kennedy



American political icon Ted Kennedy

land, near Martha’s Vineyard, Massachusetts, and his companion in the car, 28-year-old Mary Jo Kopechne, was drowned. Kennedy was found guilty of leaving the scene of an accident. Although he was reelected to the Senate in 1970, he announced that he would not seek the presidency in 1972. He was a serious contender for the presidential nomination again in 1980 but withdrew from the race during the convention. Kennedy won reelection to eight full terms as senator; the last time in 2006, and became known as the “lion of the Senate,” serving as a leading advocate for many liberal causes, including voting rights, fair housing, consumer protection, and national health insurance. At the same time, he was recognized for his willingness to cooperate with Republicans to advance important legislation, such as the No Child Left Behind Act (2001). In May 2008 Kennedy was diagnosed with a malignant brain tumour. On March 4, 2009, he was granted an honorary British knighthood (KBE), and on August 12 he was awarded the U.S. Presidential Medal of Freedom. In the last months of his life, he completed his long-awaited memoir, *True Compass* (2009). Kennedy died just two weeks after his sister Eunice Kennedy Shriver (q.v.).

Kennedy, Sir Ludovic Henry Coverley, Scottish broadcaster and investigative journalist (b. Nov. 3, 1919, Edinburgh, Scot.—d. Oct. 18, 2009, Salisbury, Eng.), campaigned tirelessly against injustice, most notably in the areas of state-ordered execution and wrongful imprisonment. His efforts in several high-profile cases contributed

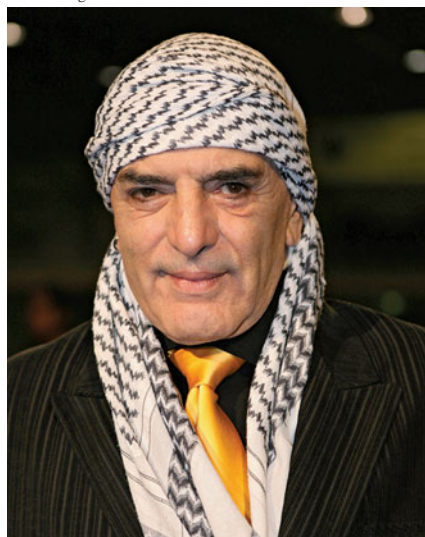
to the government’s abolishment (1965) of capital punishment in Britain. He also actively sought the legalization of assisted suicide and was a cofounder of the Voluntary Euthanasia Society (later Dignity in Dying).

Kennedy, Ted (THEODORE KENNEDY; “TEEDER”), Canadian ice hockey player (b. Dec. 12, 1925, Humberstone, Ont.—d. Aug. 14, 2009, Port Colborne, Ont.), as the tenacious centre and longtime captain of the National Hockey League’s (NHL’s) Toronto Maple Leafs, led the team to five Stanley Cup championships (in the 1944–45, 1946–47, 1947–48, 1948–49, and 1950–51 seasons). Kennedy joined the Maple Leafs in 1943 and remained with the franchise for all 14 of his seasons in the NHL. While not an outstanding skater, Kennedy compensated for his deficiencies with resourcefulness and determination and was considered by many the best face-off player in the NHL. He made the All-Star team five times and in 1955 was awarded the Hart Memorial Trophy as the NHL’s most valuable player. Kennedy retired with a career 231 goals and 329 assists, and in 1966 he was inducted into the Hockey Hall of Fame.

Khan, Ali Akbar, Indian musician and composer (b. April 14, 1922, Shibpur, East Bengal, British India [now in Bangladesh]—d. June 18, 2009, San Anselmo, Calif.), brought classical Indian music to Western audiences as one of the world’s most honoured sarod players and composers. Khan began serious study of music at age three and became an *ustad* (master) of the fretless 25-stringed sarod. Khan made his first public performance at age 13. He was the music director of All-India Radio in Lucknow, broadcasting as a solo artist and composing for orchestras, before becoming a maharaja’s court musician in 1943. In 1955 the violinist Yehudi Menuhin invited Khan to New York City, and thereafter he often performed and recorded in the West, frequently in collaboration with his brother-in-law, the composer and sitarist Ravi Shankar. Khan was the first to record full-length traditional Indian music, making it more available internationally; among his many albums are *The Forty-Minute Raga* (1968) and *Journey* (1990). As a composer he was known for his film scores—notably for Satyajit Ray’s *Devi* (1960) and the Ismail Merchant–James Ivory production *The Householder* (1963)—and as the creator of many ragas.

Khan, Feroz, Indian actor and director (b. Sept. 25, 1939, Bangalore, Karnataka state, British India—d. April 27, 2009, Bangalore, India), was a distinguished character actor, but he was best remembered as a heroic action star in a series of Bollywood “curry westerns” that earned him comparisons to American actor Clint Eastwood. Khan, the son of a Pathan Afghani immigrant and his Iranian wife, moved to Bombay (Mumbai) as a youth to pursue an acting career. He made his screen debut in *Didi* (1960) and had small roles in several movies, including

Jack Dabaghian—Reuters/Landov



Bollywood star Feroz Khan

the Hollywood film *Tarzan Goes to India* (1962), before attaining critical and popular success with the drama *Oonche log* and the sentimental romance *Arzoo* (both 1965). He received a Filmfare Awards nomination for best supporting actor for *Aadmi aur insaan* (1969) and another nomination for *International Crook* (1974). Khan also served as producer and director on some of his most accomplished films, notably the *Godfather*-inspired hit *Dharmatma* (1975), the first Hindi-language movie filmed on location in Afghanistan; *Qurbani* (1980); *Janbaaz* (1986); *Dayavan* (1988); and *Janasheen* (2003), which garnered his third Filmfare acting nomination. His last role was in *Welcome* (2007). Khan received Filmfare (2000) and Zee Cine (2008) lifetime achievement awards.

Khatibi, Abdelkebir, Moroccan educator, literary critic, and novelist (b. 1938, El Jadida, Mor.—d. March 16, 2009,

Rabat, Mor.), was a member of the angry young generation of the 1960s. The abstruse prose employed by this young generation of Maghribian authors reflected the desire to reject French culture by destroying and re-creating the French language, thus attacking the heart of the culture from within, with what Khatibi called a *littérature sauvage*. After completing his secondary education in Morocco, Khatibi pursued a degree in sociology at the Sorbonne in Paris. In his doctoral dissertation, *Le Roman maghrébin* (1968), he raised the question of how the committed writer can avoid becoming a propagandist, especially in a postrevolutionary society. His first novel, *La Mémoire tatouée* (1971), deals semiautobiographically with the typically Maghribian themes of acculturation and decolonization. Two plays, *La Mort des artistes* (1964) and *Le Prophète voilé* (1979), and the novel *Le Livre du sang* (1979), demonstrate his theoretical approach to literature. Khatibi's later works include the study *Figures de l'étranger dans la littérature française* (1987) and the novel *Un Été à Stockholm* (1990). He also wrote several sociological studies on Moroccan life.

Kim Dae-Jung, South Korean politician (b. Jan. 6, 1924?, Mokpo, Haeui Island, Korea [now in South Cholla province, S.Kor.]—d. Aug. 18, 2009, Seoul, S.Kor.), was a charismatic political opposition leader for more than three decades before serving as South Korean president (1998–2003), becoming the first opposition leader to win election to that office; Kim had lost three previous presidential bids. During his administration he was awarded (2000) the Nobel Prize for Peace for his efforts to restore democracy in South Korea and to improve relations with North Korea. Kim's “sunshine” policy allowed South Koreans to visit relatives in the North and eased rules governing South Korean investment in the country. In 1998, direct talks between the two countries resumed after a four-year hiatus, and in a June 2000 historic summit, he met with North Korean ruler Kim Jong Il. Kim became a wealthy businessman after taking over a Japanese-owned shipping company. During the Korean War (though he did not serve in the military and confessed to having adjusted his birthdate to Dec. 3, 1925, to avoid conscription), he was captured by communist forces but managed to escape. In the 1950s Kim became an ardent pro-democracy ac-

tivist. After five attempts to win elective office, Kim finally won (1961) a seat in the National Assembly, but the election was nullified following a military coup led by Major Gen. Park Chung-Hee. Kim became highly critical of Park's policies, and in 1971, a year after becoming president of the National Democratic Party, Kim ran against Park in a national presidential election. Kim lost, despite having secured more than 40% of the vote. In 1973 he was kidnapped from his hotel in Tokyo by agents of the Korean Central Intelligence Agency and was returned forcibly to South Korea, where he was placed under house arrest. In 1976 Kim was again arrested, but he was released from house arrest in 1979 only to be arrested in May 1980 on charges of sedition and conspiracy; he was sentenced to death, but Pres. Chun Doo-Hwan commuted the sentence to life imprisonment and later to 20 years. He was allowed in 1982 to seek medical treatment in the U.S., but on his return home in 1985, he was placed under house arrest. As founding leader (1995) of the political party the National Congress for New Politics, Kim won (1997) a narrow victory over ruling Democratic Liberal Party presidential candidate Lee Hoi-Chang.

Kim Sou-hwan, Stephen Cardinal, South Korean prelate (b. May 8, 1922, Taegu, Korea—d. Feb. 16, 2009, Seoul, S.Kor.), was South Korea's first Roman Catholic cardinal and an outspoken proponent of democracy during the 1970s and '80s, a time when the coun-

South Korean prelate Stephen Cardinal Kim Sou-hwan



Lee Jin-man/AP

try was led by military dictators. Kim called for democracy and denounced members of the government who trampled on the rights of citizens. In 1987 he allowed student demonstrators to take refuge in Seoul's main cathedral and refused to allow military authorities to seize the students. Kim was ordained a priest in 1951, became bishop of Masan in 1966 and archbishop of Seoul in 1968, and was elevated to cardinal in 1969.

Kiraly, Bela, Hungarian general and historian (b. April 14, 1912, Kaposvar, Hung.—d. July 4, 2009, Budapest, Hung.), led freedom fighters in the brief 1956 Hungarian uprising against Soviet forces. Kiraly graduated (1942) from the Ludovica Military Academy and served as an officer in World War II. He was captured by the Soviet army, but he escaped and walked back to Hungary. After having been promoted to general in 1950, he was arrested and given a death sentence (1951) on charges of subversion, which were widely believed to have been fabricated by the Hungarian Stalinist government. His sentence was changed to hard labour for life, but in 1956 he was one of many prisoners granted parole in an attempt to stem rising popular unrest regarding Soviet influence. Still weak from prison, Kiraly was appointed commander in chief of the National Guard and chairman of the Revolutionary Council for National Defense by Prime Minister Imre Nagy, who was negotiating for Soviet withdrawal from Hungary. Kiraly organized civilians into a fighting force, an act of political significance in spite of the inadequacy of Hungarian weaponry. The resistance lasted approximately two weeks; Soviet tanks surrounded Budapest on Nov. 4, 1956, and Kiraly and his forces fled over the Austrian border. Kiraly spent the next 33 years in the U.S. After the collapse of the communist government, he returned to Hungary, where he served (1990–94) in the National Assembly.

Kirchner, Leon, American composer (b. Jan. 24, 1919, Brooklyn, N.Y.—d. Sept. 17, 2009, New York, N.Y.), produced in his distinctive voice significant works that reflected his studies with Arnold Schoenberg and other major composers. At Harvard University (1961–89), Kirchner taught musical analysis through performance; his students—notably composer and conductor John Adams and cellist Yo Yo Ma—

remained advocates of his music. Kirchner's *String Quartet No. 3* (1966) won the 1967 Pulitzer Prize. In 2008 the Boston Symphony Orchestra premiered the composer's final work, *The Forbidden*, and in 2009 Columbia University's Miller Theatre celebrated Kirchner's 90th birthday with a retrospective in New York City.

Kolakowski, Leszek, Polish philosopher and historian of philosophy (b. Oct. 23, 1927, Radom, Pol.—d. July 17, 2009, Oxford, Eng.), began his scholarly career as an orthodox Marxist, but he later became a prominent intellectual critic of Marxism, which he described as “the greatest fantasy of our century.” Kolakowski was educated in Poland's underground school system during World War II. He studied philosophy at the Universities of Lodz (M.A., 1950) and Warsaw (Ph.D., 1953), where he taught and served as chair of the department of the history of philosophy until 1968. Kolakowski joined the communist Polish United Workers' Party (PUWP) in 1945. When he was sent to Moscow for a course for promising intellectuals, however, he became disenchanted with the Soviet Marxist system. Upon his return home, he joined the movement for democratization that led to the Polish workers' uprising of 1956. His revisionist critique of Joseph Stalin, *What Is Socialism?* (1957), was officially banned in Poland but was widely circulated nonetheless. A speech given by Kolakowski on the 10th anniversary of the uprising led to his expulsion (1966) from the PUWP; he also was dismissed (1968) from his professorship and soon afterward left Poland. In 1970 he accepted a senior research fellowship at All Souls College, Oxford, where he remained until his retirement in 1995. He also wrote on religion and the spiritual basis of culture and was the author of three plays and three volumes of stories. Among Kolakowski's many honours were the Erasmus Prize (1980), the Order of the White Eagle (Poland's highest honour; 1998), and the first John W. Kluge Prize for Lifetime Achievement in the Humanities and Social Sciences, awarded by the U.S. Library of Congress in 2003.

Kolff, Willem Johan, Dutch-born American physician (b. Feb. 14, 1911, Leiden, Neth.—d. Feb. 11, 2009, Newtown Square, Pa.), was a pioneering biomedical engineer who invented the

kidney dialysis machine and led the medical team that on Dec. 2, 1982, implanted the first artificial human heart in Barney Clark. In 1956 he devised a membrane oxygenator used in bypass surgery. His first artificial heart was implanted in a dog in 1957 and kept the animal alive for 90 minutes. Kolff was a founding member of the American Society for Artificial Internal Organs and was the recipient of more than 120 awards, notably the Albert Lasker Clinical Medical Research Award, which he shared in 2002. In addition, Kolff designed other artificial organs, including eyes, ears, and limbs, until his retirement in 1997.

Kramer, Jack (JOHN ALBERT KRAMER), American tennis player (b. Aug. 1, 1921, Las Vegas, Nev.—d. Sept. 12, 2009, Los Angeles, Calif.), won the All-England (Wimbledon) singles (1947) and men's doubles (1946 and 1947), captured the U.S. singles (1946–47), men's doubles (1940–41, 1943, 1947), and mixed doubles (1941) titles, and in 1946 and 1947 was on the victorious American Davis Cup teams. He also triumphed at the 1948 U.S. pro championship. Bothered by an arthritic back from 1952, Kramer eventually ceased competing and became a tennis promoter. He was instrumental in the organization of the Association of Tennis Professionals, a union for men players, and became (1972) its first executive director. Kramer also worked as a television analyst and authored several books, including the autobiography *The Game: My 40 Years in Tennis* (1979; co-written with Frank Deford). Kramer was named to the International Tennis Hall of Fame in 1968.

Krebs, Edwin Gerhard, American biochemist (b. June 6, 1918, Lansing, Iowa—d. Dec. 21, 2009, Seattle, Wash.), was awarded (with Edmond H. Fischer) the 1992 Nobel Prize for Physiology or Medicine. Krebs and Fischer discovered reversible protein phosphorylation, which is a biochemical process that regulates the activities of proteins in cells and thus governs countless processes that are necessary for life. Krebs earned a medical degree (1943) from Washington University, St. Louis, Mo., before conducting (1946–48) research there under the biochemists Carl and Gerty Cori. In 1948 Krebs joined the biochemistry faculty at the University of Washington at Seattle, where he became a full professor in 1957. In 1968 he moved

to the University of California, Davis, but he returned in 1977 to the University of Washington. Krebs and Fischer also showed that phosphorylase is inactivated by the removal of a phosphate group; this process is catalyzed by enzymes called phosphatases.

Kristol, Irving William, American essayist, editor, and publisher (b. Jan. 22, 1920, Brooklyn, N.Y.—d. Sept. 18, 2009, Arlington, Va.), was best known as an intellectual founder and leader of the neoconservative movement in the United States. He was the son of Jewish European immigrants. Kristol graduated with a degree in history (1940) from the City College of New York, where he was a member of a Trotskyist student organization. He married Gertrude Himmelfarb, later a distinguished historian, in 1942. After serving in the U.S. Army (1944–46), he was managing editor (1947–52) of *Commentary*, cofounder and coeditor of the English journal *Encounter* (1953–58), and editor of *The Reporter* (1959–60). In 1960 he was hired as an editor by Basic Books, Inc., and shortly thereafter became its executive vice president. He was most closely identi-

fied with the journal *The Public Interest*, which he cofounded (1965) with sociologist Daniel Bell. He later served as Henry R. Luce Professor of Urban Values (1969–87) at New York University and John M. Olin Distinguished Fellow (1988–99) at the American Enterprise Institute, a conservative think tank. Kristol was an avowed enemy of secular liberalism, which he blamed for causing alienation and moral degeneracy among American youth during the 1960s. His championing of supply-side economics and conservative moral values, his aggressive anticommunism, and his insistence on using U.S. power to shape the world “in accord with our national interests” greatly influenced the domestic and foreign policies of the Ronald Reagan, George H.W. Bush, and George W. Bush administrations. In 2002 Kristol was awarded the Presidential Medal of Freedom.

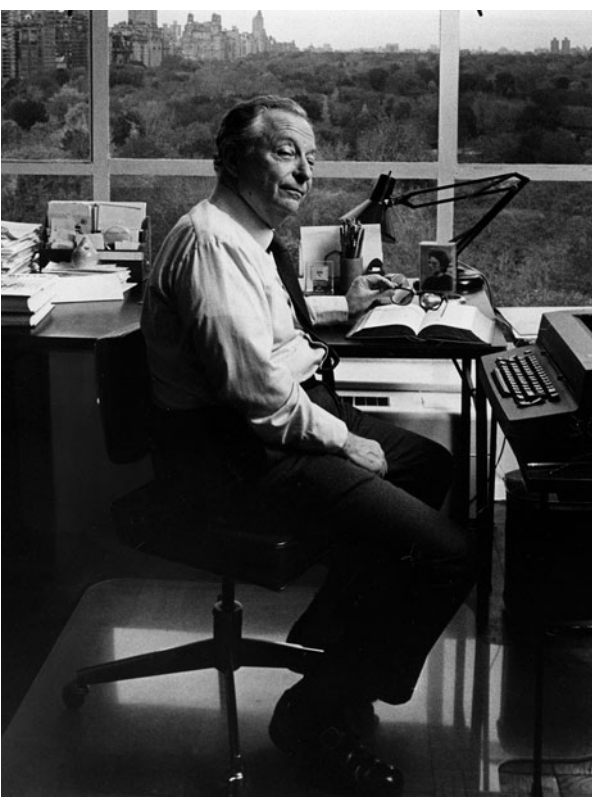
Kunzel, Erich, Jr., American conductor (b. March 21, 1935, New York, N.Y.—d. Sept. 1, 2009, Bar Harbor, Maine), brought orchestral music to national audiences with a showman’s flair. He led the much-recorded Cincinnati Pops Orchestra from its founding in 1977, and he conducted the National Symphony Orchestra in annual televised patriotic concerts from the lawn of the U.S. Capitol on Memorial Day and July 4. His sold-out concerts were renowned as variety shows featuring arrangements of show tunes and movie themes with costumed performers and theatrical lighting effects. He was awarded the National Medal of Arts in 2006.

Kurgapkina, Ninel, Russian ballerina (b. Feb. 13, 1929, Leningrad, Russia, U.S.S.R. [now St. Petersburg, Russia]—d. May 8, 2009, St. Petersburg), danced as lead soubrette for the Kirov Ballet (now Mariinsky Ballet) for more than three decades. After Kurgapkina graduated (1947) from the Vaganova Ballet Academy, she joined the Kirov Ballet, where she quickly became a featured soloist. She was the first partner of ballet stars Mikhail Baryshnikov and Rudolf Nureyev. With Nureyev she danced as Kitri in *Don Quixote*, as Princess Aurora in *The Sleeping Beauty*, and as Odette-Odile in *Swan Lake*. Throughout her career Kurgapkina was known for her vivacious charm and stunning technical precision, especially in leaps. She retired at age 52. Kurgapkina was named a People’s Artist of the U.S.S.R. in 1974.

Lang, Pearl (PEARL LACK), American dancer and choreographer (b. May 29, 1921, Chicago, Ill.—d. Feb. 24, 2009, New York, N.Y.), was a sterling member of the Martha Graham Dance Company and the first dancer whom Graham allowed to perform some of her own roles. Lang displayed her dancing talent at an early age and created her own dance when she was 10 years old. By the time she reached 16, she had choreographed and danced to Mozart’s serenade *Eine kleine Nachtmusik*. She went on to study (1938–41) at the University of Chicago in a special program for gifted students. Lang joined (1941) the Martha Graham Dance Company in New York City, but she left (1952) to form her own company, the Pearl Lang Dance Theatre. Some of her best-known performances include the productions *Diversion of Angels* (1948), in which she danced the role of the Woman in Red; *Shirah* (1960); *Appalachian Spring* (1974), in which she took Graham’s role; and Broadway musicals, such as *Carousel* (1945). Lang also taught at Yale University and the Juilliard School, New York City.

Laugerud García, Kjell Eugenio, Guatemalan politician (b. Jan. 24, 1930, Guatemala City, Guat.—d. Dec. 9, 2009, Guatemala City), served (1974–78) as president of Guatemala. His election in March 1974 was accompanied by violence, political assassinations, and accusations of fraud. Upon being inaugurated on July 1, he announced an economic austerity program. He launched a colonization program to settle landless peasants in the Petén region. Throughout his administration he conducted a vigorous campaign to reestablish Guatemalan sovereignty over neighbouring Belize but was hindered by international opposition. In 1977 he broke diplomatic relations with Panama over this issue. Following the disastrous earthquake of 1976, Laugerud obtained international loans, managed the distribution of relief supplies, and maintained order with efficiency. The political unrest that accompanied his election, however, continued to grow during the next four years. The May 1978 massacre of more than 100 indigenous peasants at Panzós in Alta Verapaz tainted Laugerud’s reputation at the end of his term. Amnesty International repeatedly condemned the actions of the White Hand, a right-wing civilian death squad with some paramilitary elements, and charged that Laugerud tacitly condoned the terrorism.

Neoconservative leader Irving Kristol



Keith Meyers—The New York Times/Redux

Lawrence, Andrea Mead, American skier (b. April 19, 1932, Rutland, Vt.—d. March 31, 2009, Mammoth Lakes, Calif.), was the first American Alpine skier to win two gold medals in a single Winter Olympics. At the 1952 Games in Oslo, she easily won the giant slalom for her first gold medal; the second she captured in the slalom with a comeback performance. Her Olympic victories, coupled with her U.S. championship titles in the downhill, slalom, and Alpine combined in 1950, 1952, and 1955 and the giant slalom in 1953, led to her induction (1983) into the International Women's Sports Hall of Fame.

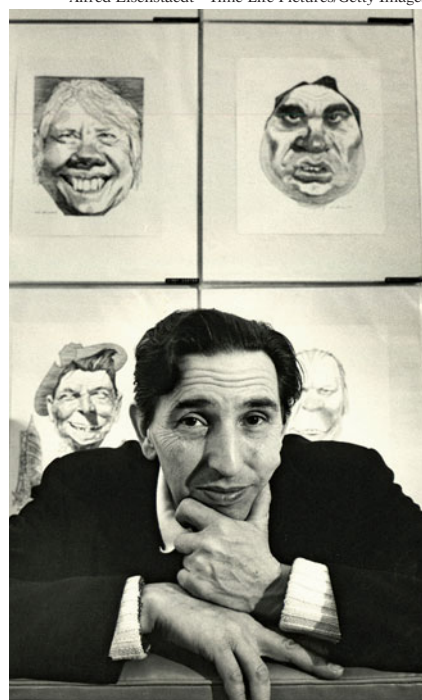
Leonard, Hugh (JOHN JOSEPH BYRNE; JOHN KEYES BYRNE), Irish dramatist (b. Nov. 9, 1926, Dalkey, County Dublin, Ire.—d. Feb. 12, 2009, Dublin, Ire.), was admired in Ireland as one of the country's best playwrights, but outside his native land he was best known for the play *Da*, a bittersweet semiautobiographical exploration of the complex relationship between a man and his recently deceased adoptive father, or "da." The play, which was first produced in 1973 in an amateur theatre in Maryland, triumphed on Broadway for almost two years (1978–80) and won the Drama Desk Award for outstanding new play and four Tony Awards, including best play. (Leonard also wrote the screenplay for the 1988 film version.) In addition, two of his other plays earned Tony nominations, the two-hander *The Au Pair Man* (produced 1973–74) and *A Life* (produced 1980–81), which featured some of the minor characters from *Da*. While working for more than a decade in the Irish civil service, he took the pen name Hugh Leonard to prevent his employer from learning about his literary aspirations. He was able to quit his job, however, after the Abbey Theatre's 1956 mounting of *The Big Birthday*. Leonard also wrote 16 plays for the Dublin Theatre Festival, notably *A Walk on the Water* (produced 1960); contributed a regular column to Ireland's *Sunday Independent* newspaper; adapted dozens of television scripts, including several miniseries based on Dickens novels; and wrote two volumes of autobiography.

Lévi-Strauss, Claude, French social anthropologist (b. Nov. 28, 1908, Brussels, Belg.—d. Oct. 30, 2009, Paris, France), was one of the preeminent ethnologists of his time and a leading

exponent of structuralism, the analysis of cultural systems (e.g., kinship and mythical systems) in terms of the structural relations between their elements. Lévi-Strauss viewed cultures as systems of communication, and he constructed models based on structural linguistics, information theory, and cybernetics to interpret them. After studying philosophy and law (1927–32) at the University of Paris, he taught in a secondary school and was associated with Jean-Paul Sartre's intellectual circle. He served as professor of sociology (1934–37) at the University of São Paulo and did field research on the Indians of Brazil. He was then visiting professor (1941–45) at the New School for Social Research in New York City, where he was influenced by the work of structural linguist Roman Jakobson. From 1950 to 1974 Lévi-Strauss was director of studies at the École Pratique des Hautes Études at the University of Paris, and in 1959 he was appointed to the chair of social anthropology at the Collège de France. In 1949 Lévi-Strauss published his first major work, *Les Structures élémentaires de la parenté* (*The Elementary Structures of Kinship*, 1969). He attained popular recognition with *Tristes tropiques* (1955; *A World on the Wane*, 1961), a literary intellectual autobiography. This was followed by such major publications as *Anthropologie structurale* (1958; *Structural Anthropology*, 1963), *La Pensée sauvage* (1962; *The Savage Mind*, 1962), and *Le Totémisme aujourd'hui* (1962; *Totemism*, 1962). His massive *Mythologiques* appeared in four volumes between 1964 and 1971. Later works include a second volume of *Anthropologie structurale* in 1973; *La Voie des masques* (1975; *The Way of the Masks*, 1982), a two-volume study of native American Northwest Coast Indians; and a collection of essays, *Le Regard éloigné* (1983; *The View from Afar*, 1985).

Levine, David, American caricaturist and artist (b. Dec. 20, 1926, Brooklyn, N.Y.—d. Dec. 29, 2009, New York, N.Y.), for nearly 45 years (1963–2007) produced poignant pen-and-ink drawings for the *New York Review of Books* (NYRB) that served as commentaries on politicians, writers, celebrities, intellectuals, and sports figures. The distinctive heads of his caricatures were usually massive and the facial expressions dour, but Levine also created figures with large bodies and small heads (Orson Welles, 1972) and enlarged other bodily features, notably Marilyn

Alfred Eisenstaedt—Time Life Pictures/Getty Images



American caricaturist and artist David Levine

Monroe's breasts (1973). Prior to working for NYRB, he created drawings for *Esquire* (about 1,000), *Time* (some 100, including a notable 1967 "Man of the Year" cover featuring Pres. Lyndon B. Johnson as a raging King Lear, and dozens of others for such magazines as *The New Yorker* and *Rolling Stone* and the newspapers the *New York Times* and the *Washington Post*. Levine's favourite subject, Pres. Richard M. Nixon, was featured in 66 of his works. Unlike his caricatures, Levine's paintings had a sublime quality. His work was in the permanent collections of the Metropolitan Museum of Art, the Library of Congress, and the National Portrait Gallery, London.

Levitt, Helen, American photographer (b. Aug. 31, 1913, Brooklyn, N.Y.—d. March 29, 2009, New York, N.Y.), captured the bustle, squalor, and beauty of everyday life in New York City in images that prominently featured children, especially the underprivileged. Levitt began her career in photography at age 18 with work in a portrait studio in the Bronx. Inspired by the works of French photographer Henri-Cartier Bresson, she purchased a 35-mm Leica camera and scoured the poor neighbourhoods of her native New York City for subject matter. About 1938 she took her portfolio to photographer Walker

Evans's studio, where she also met novelist and film critic James Agee. She struck up friendships with the two men, occasionally accompanying the former on his photo shoots in the city. Her first show, "Photographs of Children," was held at the Museum of Modern Art (MoMA) in New York in 1943. Included in this show were images from her visit in 1941 to Mexico City, where she photographed the city's street life. Levitt's book of photographs entitled *A Way of Seeing: Photographs of New York* was compiled in the late 1940s, but the book was not published until 1965—10 years after the death of Agee, who had written a glowing introduction. In the mid-1940s Levitt collaborated with Agee, filmmaker Sidney Meyers, and painter Janice Loeb on *The Quiet One*, a prizewinning documentary about a young African American boy, and with Agee and Loeb on the film *In the Street*, which captured everyday life in East Harlem. For the next decade she concentrated on film editing and directing. In 1959 and 1960 she received Guggenheim fellowships to investigate techniques using colour photography. The slides that resulted from the project, shown in 1963 at MoMA, were stolen from her apartment before they could be duplicated. Levitt focused for the rest of the 1960s on film work and resumed photography in the 1970s, with a major MoMA show in 1974.

Locklin, Hank (LAWRENCE HANKINS LOCKLIN), American country and western singer (b. Feb. 15, 1918, McLellan, Fla.—d. March 8, 2009, Brewton, Ala.), was known for his tremulous tenor voice on such chart-topping hit singles as "Send Me the Pillow You Dream On" (1949; 1958) and "Please Help Me, I'm Falling" (1960); he also helped to establish the classic Nashville Sound of the 1950s and '60s. During a career that spanned some five decades, Locklin recorded 65 albums, sold 15 million records, and produced 70 charted singles, of which 6 reached number one on the *Billboard* country singles chart.

Long, Huey, American jazz guitarist (b. April 25, 1904, Sealy, Texas—d. June 10, 2009, Houston, Texas), who played with the influential Ink Spots in a musical career that lasted more than seven decades. Long began performing professionally when he filled in (1925) as banjo player for the Frank Davis Louisiana Jazz Band. During the 1930s he moved to Chicago, where he played

big band music and jazz, performed at the 1933–34 Century of Progress world's fair, and recorded several albums. He went on tour with Fletcher Henderson in the early 1940s and, after performing at the Apollo Theatre, decided to stay in New York City. He played alongside innovative jazz and bebop musicians Charlie Parker and Dizzy Gillespie in Earl Hines's band (1943) and as the leader of his own trio. In 1945 Long became a member of the Ink Spots, replacing their second guitarist for nine months until his predecessor returned. The Ink Spots were one of the most popular African American vocal groups, best known for "If I Didn't Care."

López, Orlando ("CACHAITO"), Cuban musician (b. Feb. 2, 1933, Havana, Cuba—d. Feb. 9, 2009, Havana), was internationally renowned for his virtuoso double-bass playing in the Buena Vista Social Club, the group of veteran Cuban musicians who created a global sensation in 1997 with their self-titled Grammy Award-winning debut album; López was regarded as the heartbeat of the group and was the only original member to have performed on all of the group's recordings. He played professionally in big bands and orchestras from his teenage years. He was the nephew of legendary bass player Israel

Cuban musician Orlando "Cachaito" López



Pascal Saez/Lebrecht Music Collection

("Cachao") López—hence his nickname, "Cachaito," or "Little Cachao." López became a bassist with the Cuban national symphony in the 1950s and later taught for many years at the Guillermo Tomás Music Conservatory in Havana. He was prominently featured in the film *Buena Vista Social Club* (1999), which documented the group and the making of its 1997 album. López also achieved notable success with his 2001 solo album, *Cachaito*, which in 2002 earned a BBC Radio 3 World Music Award.

Lü Zhengcao (LÜ ZHENGYAN), Chinese general (b. Jan. 4, 1905, Haicheng, Shengjing [now Liaoning province], China—d. Oct. 13, 2009, China), was a hero of the Sino-Japanese War (1937–45) and was one of the 57 first generals designated in 1955 by the People's Republic of China. Though he was purged in 1967 during the Cultural Revolution, he was fully rehabilitated in 1974. He became chairman of the Chinese Tennis Association in 1982.

Lye, Les (LESLIE EARNEST LYE), Canadian television actor (b. Nov. 18, 1924, Toronto, Ont.—d. July 21, 2009, Ottawa, Ont.), amused audiences as the only regular adult performer on all 143 episodes (1979–90) of the Canadian children's comedy show *You Can't Do That on Television*, on which he played such memorable characters as the greasy hamburger vendor Barth and the child executioner El Capitano. He began to work in radio, notably with comic Rich Little, but in 1961 he joined an Ottawa television station as a freelance writer and performer. There he and local actor Bill Luxton created the slapstick show *Uncle Willy and Floyd*, which ran for more than 20 years (1966–88). Lye's international break came when *You Can't Do That on Television* was picked up (1981) by the American cable network Nickelodeon; it became one of that network's most popular shows and continued in reruns until 1994. In 2003 Lye, with Luxton, was awarded a lifetime achievement award by the Alliance of Canadian Cinema, Television and Radio Artists.

Makarezos, Nikolaos, Greek military leader (b. 1919, Gravia, Greece—d. Aug. 3, 2009, Athens, Greece), as a leading member of the right-wing military junta that took over Greece in 1967, held the posts of deputy prime minister and minister for coordination. He was also in charge of economic policy

making. Makarezos served in the Greek army artillery during World War II, but after the Nazis invaded the country in 1941, he escaped to Egypt with the Greek government-in-exile. After the war he remained in the military, rising to colonel. In April 1967 he and two fellow officers, Georgios Papadopoulos and Stylianos Pattakos, seized power after leading a coup in Greece, forcing the king out of the country by year's end. The ensuing dictatorship, led by Papadopoulos, imposed strict martial law on the country and was responsible for the jailing, torture, and exile of thousands until a second military coup in late 1973 removed Papadopoulos and his cohorts from power. After democracy was restored in 1974, Makarezos was sentenced to death for mutiny, but this sentence was later commuted to life imprisonment. Health problems prompted his release in 1990.

Malden, Karl (MLADEN SEKULOVICH), American actor (b. March 22, 1912, Chicago, Ill.—d. July 1, 2009, Los Angeles, Calif.), won critical acclaim for his strong character roles, ranging from psychologically intense villains to the earnest Everyman, most notably alongside Marlon Brando in *A Streetcar Named Desire* (1951) and *On the Waterfront* (1954). While performing in New York in 1946, Malden met Brando and director Elia Kazan. Malden's career took off after Kazan cast him as the naive suitor, Mitch, in *Streetcar* on Broadway and in the screen adaptation, a role that won him the Academy Award for best supporting actor (1951). Malden acknowledged that his looks, especially his bulbous twice-broken nose, would prevent him from being cast as a handsome leading man. Nevertheless, he demonstrated his versatility in more than 50 roles. He reached a new audience as the lead detective, Mike Stone, in the television show *The Streets of San Francisco* (1972–77). Malden was presented with the 2003 Screen Actors Guild's Life Achievement Award.

Manahan, Anna, Irish character actress (b. Oct. 18, 1924, County Waterford, Irish Free State—d. March 8, 2009, Waterford, Ire.), originated the demanding role of Mag Folan, the controlling mother in playwright Martin McDonagh's fierce family drama *The Beauty Queen of Leenane*; she played the role in every performance, from its first stagings at the Druid Theater in Galway, Ire., through its London premiere (1996) and subsequent tour, to its



Irish character actress Anna Manahan

Tony Award-winning Broadway production (1998), for which she was awarded a Tony for best featured actress. Manahan joined the local Waterford Dramatic Society as a girl and worked in the professional theatre almost continuously thereafter, becoming one of Ireland's most respected stage actresses; John B. Keane reportedly wrote his 1969 play *Big Maggie* specifically for her. Manahan received a Tony nomination for her 1968 Broadway debut in Brian Friel's *Lovers*, and in 1977 she won the Evening Standard award for most promising newcomer for her performance in a revival of Sean O'Casey's *The Plough and the Stars* at Britain's National Theatre. She was also a regular face on British and Irish television, including continuing roles on *The Irish R.M.* (1983–85) and *Fair City* (2004–09).

Martin, Jean, French actor (b. March 6, 1922, Paris, France—d. Feb. 2, 2009, Paris), created the role of Lucky (a characterization he claimed to have based on Parkinson disease sufferers) in the original 1953 production of Samuel Beckett's *En attendant Godot* (*Waiting for Godot*) at the Théâtre de Babylone in Paris; four years later Martin was the original Clov in Beckett's *Fin de partie* (*Endgame*) at the play's world premiere in London. His other stage appearances included the French premiere of Harold Pinter's *The Caretaker* and a 1970 revival of Beckett's one-man play *Krapp's Last*

Tape, directed by Beckett himself. While serving in the Resistance during World War II, Martin made his film debut in *Cécile est morte!* (1944). Although he was briefly blacklisted for having been one of the signatories of the Manifesto of 121 (1960) supporting Algerian independence, Martin appeared in more than 90 television programs and films.

Martino, Al (ALFRED CINI), American pop singer (b. Oct. 7, 1927, Philadelphia, Pa.—d. Oct. 13, 2009, Springfield, Pa.), scored hits in the 1950s and '60s with a number of smoothly crooned romantic ballads but was perhaps best known for his film role as Johnny Fontane, the wedding singer who uses his Mafia ties to jump-start his career, in *The Godfather* (1972). In 1948, at the encouragement of a boyhood friend, opera singer Mario Lanza, he moved to New York City to pursue a singing career. Four years later Martino broke through with "Here in My Heart," which topped the charts at number one in both the U.S. and the U.K. and won him a contract with Capitol Records. More hits followed, notably "Spanish Eyes" (1965), one of nine songs of his that reached the U.S. top 40 between 1963 and 1967 even as rock and roll had begun to dominate the radio airwaves. Though his career slowed in the 1970s, he accompanied his appearance in *The Godfather* with a recording of the film's theme song and in 1975 achieved success with a disco version of the Italian pop standard "Volare." He also reprised his role as Johnny Fontane in *The Godfather, Part III* (1990).

Martyn, John (IAIN DAVID MCGEACHY), British singer and songwriter (b. Sept. 11, 1948, New Malden, Surrey, Eng.—d. Jan. 29, 2009, Kilkenny, Ire.), incorporated folk, jazz, blues, rock and roll, reggae, electronic effects, and avant-garde elements into his music while developing a distinctive slurred vocal style. Despite ongoing struggles with alcoholism and drug abuse, Martyn released more than 20 albums, the best of which, *Solid Air* (1973), was named (2000) one of the all-time best British albums by *Q Magazine*. In 2008 the BBC Radio 2 Folk Awards presented Martyn with a lifetime achievement award, and Island Records released *Ain't No Saint*, a four-CD compilation of his music. Martyn was made OBE in the 2009 New Year's Honours list.

Maw, Nicholas (JOHN NICHOLAS MAW), British composer (b. Nov. 5, 1935, Grantham, Lincolnshire, Eng.—d. May 19, 2009, Takoma Park, Md.), embraced Romantic styles in defiance of contemporary musical trends. He was perhaps best known for the longest continual symphonic piece of music, his 96-minute *Odyssey* (1987), which took 14 years to write, and for his 2002 opera adaptation of William Styron's 1979 novel *Sophie's Choice*. Maw began composing at the age of 15 and studied at the Royal Academy of Music in London and then in Paris with French composer Nadia Boulanger and Austrian-French composer Max Deutsch. Maw's first major success was *Scenes and Arias* (1962), a passionate piece for three female vocalists singing love poems. His vibrancy as a composer came from the blending of 20th-century atonality and serial techniques that he studied at school with a revival of Romantic style influenced by German Romantic composer Richard Strauss. Maw taught in England and the U.S., notably at the University of Cambridge (1966–70) and the Peabody Institute at Johns Hopkins University (1998–2008). He continued composing operas, symphonies, and shorter pieces, and a recording of his *Violin Concerto* (1993), written for and performed by American virtuoso Joshua Bell, received a Grammy Award in 2001.

Maximova, Ekaterina (YEKATERINA SERGEYEVNA MAXIMOVA), Russian ballerina (b. Feb. 1, 1939, Moscow, Russia, U.S.S.R.—d. April 28, 2009, Moscow, Russia), awed audiences the world over with her spirited dancing. Maximova began ballet school at age 10, and in 1958 she joined the Bolshoi Theatre's ballet company as the lead dancer in Yuri Grigorovich's *The Stone Flower*. Maximova excelled in varied roles, ranging from the tragic title character in *Giselle* to the exuberant female lead Kitri in *Don Quixote* to Princess Aurora in the classically styled *The Sleeping Beauty*. The beautiful, petite, and charismatic Maximova enjoyed one of the longest-running dance partnerships with her husband, Vladimir Vasilyev; they performed with the Bolshoi, most notably in *Spartacus* (1968), and later in their own company. Maximova left the Bolshoi in 1988 to serve as a coach at other companies, but when she retired in 1994, she

returned to Moscow, where Vasilyev directed (until 2000) the Bolshoi Theatre. There she became a beloved teacher. Maximova earned such nicknames as "the baby of the Bolshoi" and "Ekaterina the Great." She was named (1973) a People's Artist of Russia.

McCourt, Frank (FRANCIS MCCOURT), American author and teacher (b. Aug. 19, 1930, Brooklyn, N.Y.—d. July 19, 2009, New York, N.Y.), was perhaps best known for the Pulitzer Prize-winning memoir *Angela's Ashes* (1996), a vivid portrayal of a Dickensian childhood amid the grinding conditions of Irish slum life. Frank was the oldest child of Irish immigrants, but the Great Depression and his father's alcoholism kept the family destitute, and when Frank was four years old, the McCourts left New York to join relatives in Limerick, Ire. The family's situation, however, failed to improve. In 1941 his father left for England, but the family never received the money he had promised to send. At age 13 McCourt dropped out of school. With funds saved from delivering telegrams, he returned (1949) to New York City, where he worked on loading docks. After military service in the Korean War, he studied English at New York University (B.A., 1957) and earned an M.A. (1967) from Brooklyn College. He taught public school for 29 years, first in vocational schools and then at the elite Stuyvesant High School in Manhattan

(1972–87). After retiring from teaching in 1987, McCourt concentrated on writing. *Angela's Ashes*, a critical and commercial success, also won the National Book Critics Circle Award, and in 1999 it was adapted into a well-received film. McCourt also penned the memoirs *Tis* (1999) and *Teacher Man* (2005).

McGoohan, Patrick Joseph, Irish actor, screenwriter, and director (b. March 19, 1928, Queens, N.Y.—d. Jan. 13, 2009, Los Angeles, Calif.), was most closely identified with two 1960s British television series: the espionage drama *Danger Man* (U.S. title *Secret Agent*; 86 episodes during 1960–61 and 1964–67) and the cult hit *The Prisoner* (17 episodes, 1967–68). In *Danger Man*, McGoohan put a new spin on the secret agent formula by refusing to allow his character, John Drake, to carry a gun or indulge in sexual dalliances. The show's success made McGoohan Britain's highest-paid TV actor. It also provided the leverage he needed to produce *The Prisoner*, an allegorical Kafkaesque series in which he portrayed Number Six, an unnamed agent (thought by many to represent Drake) who angrily resigns and is then held captive in a superficially banal place called the Village, where the mysterious unseen Number One, the ever-changing Number Two, and others try to overcome the fiercely individualistic Number Six's escape attempts and pry information from him. McGoohan's later work included the short-lived medical mystery series *Rafferty* (1977); such films as *Ice Station Zebra* (1968), *Escape from Alcatraz* (1979), and *Braveheart* (1995); the Broadway spy drama *Pack of Lies* (1985); and a record four guest-villain appearances on the American detective series *Columbo*, two of which earned him Emmy Awards.

McMahon, Ed (EDWARD PETER LEO MCMAHON, JR.), American television personality and actor (b. March 6, 1923, Detroit, Mich.—d. June 23, 2009, Los Angeles, Calif.), was the jovial sidekick of Johnny Carson, the host of *The Tonight Show* (1962–92), and was best remembered for his infectious belly laughs and booming "H-e-e-e-e-ere's Johnny!" which was the nightly tagline used to introduce the late-night star. During the 1950s he appeared as a clown on

Russian ballerina Ekaterina Maximova in *Giselle*



The Bolshoi Theater Archive/AP

the TV show *Big Top* and was hired (1957) as Carson's announcer/straight man on the game show *Who Do You Trust?* In the 1980s McMahon joined Dick Clark as a host of *TV's Bloopers & Practical Jokes* and began a long run (1983–2003) as the emcee on the TV talent show *Star Search*.

McNair, Steve, American football player (b. Feb. 14, 1973, Mount Olive, Miss.—d. July 4, 2009, Nashville, Tenn.), threw 174 touchdown passes during his 13 National Football League (NFL) seasons (1995–2008) as one of a minority of high-profile African American quarterbacks. McNair grew up in Mississippi and chose to attend the rural Alcorn State, a nearby historically black Division I-AA school where he could play quarterback, rather than serve as defensive back at a major university. He was the third NFL draft pick in 1995. McNair was selected by the Houston Oilers (later the Tennessee Titans) and played with the franchise for 11 seasons before finishing his career with the Baltimore Ravens (2006–08). He led the Titans in 2000 to Super Bowl XXXIV, where the team came back from a 16-point deficit and McNair evaded a number of defenders before completing a pass that took the Titans within a yard of the tying touchdown, only to lose to the St. Louis Rams. In the NFL McNair passed for 31,304 yd, rushed for 3,590 yd, played in three Pro Bowls, and was named joint Most Valuable Player in 2003, along with Indianapolis Colts quarterback Peyton Manning. McNair was known for his tenacity in playing through injuries and his dexterity as a scrambler or passer, with a throwing ability that earned him the nickname "Air McNair." The married McNair was found dead in a condominium alongside a woman who police believed killed him and then herself.

McNamara, Robert Strange, U.S. government official and businessman (b. June 9, 1916, San Francisco, Calif.—d. July 6, 2009, Washington, D.C.), served (1961–68) as U.S. secretary of defense and played a major role in the country's military involvement in Vietnam. McNamara served (1943–46) in the Army Air Corps during World War II, but poor vision disqualified him from combat duty; instead he developed logistic systems for bomber raids and statistical systems for monitoring troops and supplies. After the war McNamara was one of the "Whiz Kids" hired to revitalize the Ford Motor Co. His plans, in-

CBS Photo Archive/Getty Images



U.S. Secretary of Defense Robert S. McNamara

cluding the institution of strict cost-accounting methods and the development of both compact and luxury models, met with success, and McNamara rose rapidly in the corporate ranks. In 1960 he became the first person outside the Ford family to assume the presidency of the company. After just one month as Ford's president, however, McNamara resigned to join the incoming administration of Pres. John F. Kennedy as secretary of defense. In his new post McNamara successfully gained control of Pentagon operations and the military bureaucracy, encouraged the modernization of the armed forces, restructured budget procedures, and cut costs by refusing to spend money on what he believed were unnecessary or obsolete weapons systems. McNamara was also at the centre of a drive to alter U.S. military strategy from the "massive retaliation" of the Dwight D. Eisenhower years to a "flexible response," emphasizing counterinsurgency techniques and second-strike nuclear-missile capability. Though McNamara initially advocated the deepening military involvement of the U.S. in Vietnam, as early as 1965 he secretly began to question the wisdom of U.S. military escalation, and by 1967 he was openly seeking a way to launch peace negotiations. He became the government's chief spokesman for the day-to-day operations of the war and acted as Pres. Lyndon B. Johnson's principal deputy in the war's prosecution. McNamara initiated

(1967) a top-secret full-scale investigation of the American commitment to Vietnam (later released as *The Pentagon Papers*) and came out in opposition to continued bombing of North Vietnam. He left the Pentagon on Feb. 29, 1968, to serve as president (1968–81) of the World Bank.

Middleton, Stanley, British novelist (b. Aug. 1, 1919, Bulwell, Nottinghamshire, Eng.—d. July 25, 2009, Nottingham, Nottinghamshire, Eng.), was a prolific and award-winning author celebrated for his attention to minutiae. His novel *Holiday* (1974), about a vacationing lecturer, garnered him the Booker Prize, which he shared with South African Nobel laureate Nadine Gordimer. Nearly all the settings in Middleton's novels were modeled on his native Nottingham (the fictional Beechnall) and told of the intricate lives of ordinary people. Though his no-frills style of writing fell out of literary style, his large body of work—he published a book nearly every year from the 1960s through the '90s—attracted critical acclaim; in 1998 he was elected a fellow of the Royal Society of Literature. His many works include *Harris's Requiem* (1960), *A Serious Woman* (1961), *The Other Side* (1980), *Valley of Decision* (1985), *Changes and Chances* (1990), and *A Place to Stand* (1992). Middleton's final novel, *Her Three Wise Men*, was published in 2008.

Mikhalkov, Sergey Vladimirovich, Soviet writer and poet (b. Feb. 28 [March 13, New Style], 1913, Moscow, Russia—d. Aug. 27, 2009, Moscow), co-wrote and then twice rewrote his country's national anthem; he also composed popular verses for children. In the early 1940s Mikhalkov and poet Gabriel El-Registan devised lyrics praising Joseph Stalin, then Soviet prime minister, and entered them into a contest for a new national anthem; their submission was chosen. In 1977 he was asked to revise the lyrics, which he did, removing references to Stalin and adding praise for Lenin. In 2000 Russian Pres. Vladimir Putin asked for another revision, and Mikhalkov once again obliged, this time purging Lenin and adding religious overtones. Mikhalkov was equally known in Russia for his children's literature, in particular the 1935 poem *Dyadya Styopa* ("Uncle Styopa"), about a tall policeman who always does good deeds. Mikhalkov, who also wrote plays, won several state awards for his work.

Mohn, Reinhard, German businessman (b. June 29, 1921, Gütersloh, Ger.—d. Oct. 3, 2009, Steinhagen, Ger.), reversed the fortunes of his family's ailing publishing house, Bertelsmann, making it into one of the world's leading media empires. At the time of Mohn's death, Bertelsmann's holdings included magazines, television channels, and other publishing companies, including Random House and Doubleday. During World War II, Mohn served in the Wehrmacht Afrika Korps until his capture by American forces in 1943. He was held in a prisoner-of-war camp in Kansas, where he acquired English-language skills as well as knowledge of American business practices. Upon his

Bertelsmann—AFP/Getty Images



German media mogul Reinhard Mohn

release (1946), he returned home to Gütersloh and the war-damaged buildings of Bertelsmann, until then a provincial publisher primarily of religious books. Mohn in 1950 applied the American model of book clubs to the German market, offering discounted books to customers who committed to serial purchases. By the mid-1950s membership numbers of Bertelsmann's book clubs topped seven figures. Mohn stepped down from active management in 1981. He received many honours, notably Spain's Prince of Asturias Prize in 1998, the same year that he was named Entrepreneur of the Century by *Die Zeit* magazine.

Mokae, Zakes Makgona, South African actor (b. Aug. 5, 1934, Johannesburg, S.Af.—d. Sept. 11, 2009, Las Vegas, Nev.), was an award-winning black performer most closely associated with the white antiapartheid playwright Athol Fugard. Mokae, who began his career as a jazz musician, was invited by Fugard to join his interracial drama group, and in 1960 the two men appeared onstage together in the first interracial production of a play in South Africa, Fugard's *The Blood Knot*. (They reprised their roles as half brothers in a 1985 revival of the play staged at Yale University.) Mokae left South Africa in 1961 after having been banned for his appearance in *The Blood Knot*. He eventually settled in the U.S. and made his Off-Broadway debut in 1970 in Fugard's *Boesman and Lena*. Mokae earned a Tony Award in 1982 as best featured actor in a play for his Broadway performance as Sam in the world premiere of Fugard's *Master Harold . . . and the Boys*. (In 1985 he was in a made-for-television adaptation with Matthew Broderick.) Mokae received another Tony nomination in 1993 for Tug Yourgrau's *The Song of Jacob Zulu*. He appeared frequently on American television and in such films as *Cry Freedom* (1987), *A Dry White Season* (1989), *A Rage in Harlem* (1991), and *Outbreak* (1995).

Montalbán, Ricardo (RICARDO GONZALO PEDRO MONTALBÁN Y MERINO), Mexican actor (b. Nov. 25, 1920, Mexico City, Mex.—d. Jan. 14, 2009, Los Angeles, Calif.), possessed a distinctive voice and debonair persona and enjoyed a 60-year career appearing onstage, in films (notably as the villainous Khan Noonien Singh in *Star Trek II: The Wrath of Khan* [1982]), and on television, where he starred as the suave Mr. Rourke in the hit TV series *Fantasy Island* (1978–84) and earned an Emmy Award for his performance as Indian chief Satangkai in the miniseries *How the West Was Won* (1978). Montalbán made his stage debut in the New York production *Her Cardboard Lover* (1941) but rose to stardom in Mexico. His singing and dancing talents were discovered by MGM studios, which cast him in *Fiesta* (1947), *On an Island with You* (1948), *The Kissing Bandit* (1948), and *Neptune's Daughter* (1949). He appeared as a Native American in *Across the Wide Missouri* (1951), but he was more often typecast as the stereotypical Latin lover, most notably in the 1953 films *Sombrero* and *Latin Lovers*. Montalbán continued to work

well into his 80s, appearing in the films *Spy Kids 2: Island of Lost Dreams* (2002) and *Spy Kids 3-D: Game Over* (2003). In 1970 he established the nonprofit organization *Nosotros* to help aspiring Hispanic actors.

Montazeri, Hossein Ali (HUSAYN-'ALI MUNTAZIRI), Iranian cleric (b. 1922, Najafabad, Iran—d. Dec. 20, 2009, Qom, Iran), became one of the highest-ranking authorities in Shi'ite Islam; Ayatollah Montazeri (grand ayatollah after 1984) was emphatic in his defense of human rights in Iran, however, and he spent long periods under arrest during both the regime of Mohammad Reza Shah Pahlavi and the Islamic republic that he himself helped to establish. Montazeri, the son of a farmer who taught the Qur'an, began studying Arabic grammar and Persian literature at age 7, and at 12 he enrolled in theological school in nearby Esfahan. At 19 he moved to Qom, where he studied under the future Ayatollah Ruhollah Khomeini. After the shah exiled (1964) Khomeini from Iran, Montazeri helped maintain his mentor's antiregime message and campaigned for Khomeini's return. Montazeri was arrested a number of times and was often exiled within Iran. After his arrest in 1974, he was imprisoned in solitary confinement for several months and tortured. Released in 1978, he traveled to Paris, where Khomeini named him his deputy in Iran. Following the overthrow (1979) of the shah, Montazeri was instrumental in the drafting of a new constitution, and in 1985 he was designated as Khomeini's successor. Montazeri contended that human rights abuses persisted in Iran, however, and when Ali Khamenei—a junior cleric—succeeded Khomeini upon his death in 1989, Montazeri denounced Khamenei's relatively low status. Montazeri was put under house arrest from 1997 until early 2003. In 2009 he opposed the controversial election of Pres. Mahmoud Ahmadinejad.

Morrison, Sir Howard Leslie, New Zealand entertainer (b. Aug. 18, 1935, Rotorua, N.Z.—d. Sept. 24, 2009, Rotorua), was one of New Zealand's most beloved vocalists as the leader of the often humorous Howard Morrison Quartet (1956–64) and then as a solo crooner. Morrison was the son of Temuera Morrison of the All Black national rugby team and was of mixed Te Arawa Maori, Scottish, and Irish ancestry. He sang with local Maori cul-

tural groups before founding his quartet, which recorded its first single, "There's Only One of You"/"Big Man," in 1958. The group became hugely popular, performing live across the region and releasing more than a dozen singles and two albums in 1960 alone. The quartet's best-known hits included the parodies "The Battle of Waikato" (1959) and "My Old Man's an All Black" (1960). After the quartet disbanded in 1964, Morrison established a solo career as a cabaret singer and on tour in Australia, New Zealand, and parts of Asia. He was also active in Maori affairs and was the founder of the Sir Howard Morrison Education Foundation, which provided help for college-bound Te Arawa youth. Morrison was made OBE in 1976, named New Zealand's Entertainer of the Decade in 1989, and awarded a knighthood in 1990.

Mortimer, Sir John Clifford, British barrister and writer (b. April 21, 1923, London, Eng.—d. Jan. 16, 2009, near Henley-on-Thames, Oxfordshire, Eng.), wrote plays for the stage, television, radio, and motion pictures, as well as novels and autobiographical works; he was best known, however, as the creator of the crusty old British barrister Horace Rumpole, whom he featured in numerous stories and on the long-running (42 episodes, 1978–92) TV series *Rumpole of the Bailey*. Mortimer was educated at Harrow and at Brasenose College, Oxford, and published his first novel, *Charade* (1947), before he was called to the bar in 1948. In 1949 he married Penelope Ruth Fletcher (the novelist Penelope Mortimer; divorced 1972). Many of his short stories and novels drew on his legal experience, and the 1962 television production of his play *The Dock Brief* established his reputation. Mortimer wrote many other plays, including *The Wrong Side of the Park* (performed 1960) and *The Judge* (performed 1967); his adaptations include the Georges Feydeau farce *A Flea in Her Ear* (1965) and Evelyn Waugh's novel *Brideshead Revisited* (1981). Mortimer's novels include *Paradise Postponed* (1985) and *Dunster* (1992). One of his finest works is *A Voyage Round My Father* (1971), an autobiographical play about his relationship with his blind father. He was knighted in 1998.

Mountford, Ces (CECIL MOUNTFORD; "THE BLACKBALL BULLET"), New Zealand rugby player and coach (b. June 16, 1919, Blackball, South Island, N.Z.—d. July 19, 2009, Gold Coast,

Queens., Australia), was considered to be one of the best stand-off halves in the sport of rugby league. Mountford moved to Lancashire, Eng., in 1946 to play for Wigan. He scored 70 tries and 55 goals over a 210-game career with Wigan (in 1947–48 he set a season-appearance record of 54 games) and led the side to two league titles, two Challenge Cups, and five Lancashire Cups. In 1952 he moved to Warrington in Cheshire as a player-coach, but a knee injury ended his playing days after only 37 games (six tries). As Warrington's manager (1952–61), Mountford steered the team to seven trophies, including a Challenge Cup and a Lancashire Cup. After a brief sojourn back in New Zealand, he returned to England to coach (1972–73) Blackpool Borough. He later went home to New Zealand, where he managed (1979–82) the national team. Mountford was made MBE in 1987 and in 1990 was one of the inaugural inductees into the New Zealand Sports Hall of Fame.

Næss, Arne Dekke Eide, Norwegian philosopher and environmentalist (b. Jan. 27, 1912, Slemdal, Nor.—d. Jan. 12, 2009, Oslo, Nor.), was one of the originators of the concept of deep ecology, which asserted the interconnectedness and equality of all organisms and sought fundamental reorientation of human values and practices to reflect that interconnectedness. Næss's participation in the environmental movement was motivated by his interest in mountaineering (he led the first expedition to climb the 7,690-m [25,230-ft] Tirich Mir in Pakistan); his engagement with the philosophies of Benedict de Spinoza, Mohandas Gandhi, and Buddhism; and Rachel Carson's book *Silent Spring* (1962). Næss was Norway's best-known philosopher. In 1939 he was appointed professor of philosophy at the University of Oslo, where he taught until 1970. At Oslo, Næss became the centre of a group of young philosophers and social scientists that became known as the Oslo School, which applied empirical methods to ascertain the meanings of philosophical terms (what they called empirical semantics). Næss's philosophical views evolved from an early pragmatist-inflected logical empiricism, through a pluralistic view of the history of philosophy, to a version of skepticism that has been referred to as sympathetic metaskpticism. In 1958 he founded the philosophical journal *Inquiry*. Næss was involved in the Norwegian resistance to the Nazis

in World War II and was a Green Party candidate for minor political office. In 2005 he was knighted and made a Commander with Star of the Royal Norwegian order of St. Olav First Class.

Neuhaus, Max Henry, American sound artist (b. Aug. 9, 1939, Beaumont, Texas—d. Feb. 3, 2009, Maratea, Italy), created aural artworks that he termed "sound installations." Many of his most noted works were featured in New York City, among them *New Work (Underground)* 1978, which featured a persistent throbbing growl that arose from a loudspeaker positioned beneath a grate in the sculpture garden of the Museum of Modern Art, and *Times*

Don Hogan Charles—The New York Times/Redux



American sound artist Max Neuhaus, standing over the subway grates that cover his installation *Times Square*

Square, which treated passersby to a rich textural sound (reminiscent of the fading peal of church bells) that emanated from subway grates. The latter work, which debuted in 1977, was discontinued by Neuhaus in 1992 owing to lack of funding, but it was reinstated in the early 2000s after being acquired by the DIA Foundation.

Neuhaus, the Rev. Richard John, Canadian-born American cleric and theologian (b. May 14, 1936, Pembroke, Ont.—d. Jan. 8, 2009, New York, N.Y.), wielded considerable political influence as an informal adviser to U.S. Pres. George W. Bush on a range of issues, including abortion, same-sex marriage, and stem cell research, and as one of the guiding forces behind a conservative coalition of evangelical Protestants and Roman Catholics. Neuhaus was ordained into the Lutheran ministry in the early 1960s. He was actively involved in the U.S. civil rights movement, marching alongside the Rev. Martin Luther King, Jr., in Selma, Ala., and leading protests to demand the integration of New York City public schools. Neuhaus later became a noted peace activist and helped found the antiwar group Clergy and Laity Concerned About Vietnam. In the 1970s, however, Neuhaus began increasingly to shift his political activism to conservative causes. He denounced the U.S. Supreme Court's 1973 ruling in *Roe v. Wade* that legalized abortion, supported the presidential candidacy of Ronald Reagan in 1980, and attacked the secularization of American life in his 1984 book *The Naked Public Square*. Neuhaus eventually converted to Roman Catholicism and was ordained a priest in 1991. He coedited the book *Evangelicals and Catholics Together: Toward a Common Mission* (1995), which was credited with helping to establish a politically powerful alliance of churchgoers of differing faith traditions. Neuhaus wrote or edited some 30 books. His final book, *American Babylon: Notes of a Christian Exile*, appeared in 2009.

Newman, David ("FATHEAD"), American jazz and pop musician (b. Feb. 24, 1933, Corsicana, Texas—d. Jan. 20, 2009, Kingston, N.Y.), wedded the harmonic and rhythmic sophistication of bop to blues melody as the tenor-saxophone soloist (1954–64 and 1970–71) in Ray Charles's small and big bands and in subsequent reunions with Charles's bands. *Fathead: Ray Charles Presents David Newman* (1959), with Charles on piano and saxophonist Hank Crawford (q.v.), was the first of many albums that Newman led. He went on to lead jazz groups; to solo often on other jazz, rhythm-and-blues, and pop stars' recordings; and to work with jazz artists, including Crawford, Herbie Mann, and Red Garland. Newman was also a versatile alto and baritone saxophonist and flutist.

Nimeiri, Gaafar Mohamed el- (JA'FAR MUHAMMAD AL-NUMAYRI, OR NIMEIRY, OR NIMEYRI), Sudanese military leader and politician (b. Jan. 1, 1930, Wad Nubawi, Omdurman, Sudan—d. May 30, 2009, Omdurman), governed The Sudan from 1969, when he overthrew the civilian regime of Isma'il al-Azhari, until he was himself ousted in a bloodless coup in 1985. Nimeiri was credited with the negotiations that led to a settlement of a 10-year conflict in the southern Sudan region, to which he granted autonomy in 1972, but his at-

Reuters/Landov



Sudanese military leader and politician Gaafar Mohamed el-Nimeiri

tempts to promulgate measures of Islamic law (Shari'ah) in The Sudan alienated many in the predominantly Christian southern region. After graduating (1952) from the Sudan Military College, Nimeiri acted as commander of the Khartoum garrison and led campaigns against rebels in southern Sudan. He also joined in attempts to topple the government. In 1966 he graduated from the U.S. Army Command College at Fort Leavenworth, Kansas. After ousting Azhari, Nimeiri was promoted to major general and became prime minister and chairman of the Revolutionary Command Council (RCC). He put down a right-wing revolt in March 1970 but was briefly overthrown by a communist coup in July 1971. Two months later he was elected president in a plebiscite, with 98.6% of the vote. Nimeiri dissolved the RCC and established (1972) the Sudanese

Socialist Union party, of which he became president. In April 1985, while he was in the U.S., Nimeiri was overthrown by his defense minister. He sought refuge in Egypt, where he spent 14 years in exile.

Nolan, Christopher, Irish author (b. Sept. 6, 1965, Mullingar, Ire.—d. Feb. 20, 2009, Dublin, Ire.), suffered severe brain damage at birth that left him speechless and paralyzed with cerebral palsy, yet he nevertheless earned recognition as a gifted writer at an early age and at age 21 won the prestigious Whitbread Book of the Year award for *Under the Eye of the Clock* (1987). This autobiographical novel, written in the third person, tells the story of Joseph Meehan, whose life closely resembles Nolan's. During childhood Nolan began taking a drug that permitted him some control over his head and neck. At the suggestion of a physical therapist, Nolan's family made him a "unicorn stick," which they strapped to his forehead. Using the stick, he was able to peck out letters on a keyboard. In 1981 a collection of Nolan's plays, stories, poems, and autobiographical material was published as *Dam-Burst of Dreams*. After the success of *Under the Eye of the Clock*, he wrote the novel *The Banyan Tree* (1999), which took him 12 years to complete. A departure from his previous autobiographical work, the novel chronicles the life of Minnie O'Brien, a rural Irish woman born at the beginning of the 20th century. As in his previous work, Nolan's mesmerizing and melodious prose displayed his linguistic agility and his genius for coining new words and innovative turns of phrase.

Novak, Robert (ROBERT DAVID SANDERS NOVAK), American political journalist and commentator (b. Feb. 26, 1931, Joliet, Ill.—d. Aug. 18, 2009, Washington, D.C.), wrote the influential syndicated newspaper column "Inside Report" for more than 40 years and from 1980 pugnaciously espoused a conservative viewpoint on a number of political television talk shows, notably CNN's *Crossfire*. Novak worked as a political reporter for the Associated Press (1954–58) and *The Wall Street Journal* (1958–63). In 1963 Rowland Evans, Jr., recruited him to team up on a joint column, "Inside Report," for the *New York Herald-Tribune*. The column, which appeared in as many as 300 newspapers, moved to the *Chicago Sun-Times* in 1966, and Novak contin-

ued it on his own after Evans retired in 1993. In 2003 Novak ignited a firestorm of controversy with a column in which he identified Valerie Plame as a CIA operative after her husband, Joseph Wilson, had publicly asserted that the administration of Pres. George W. Bush had distorted intelligence to justify the 2003 invasion of Iraq. Novak was known for his combative demeanour on political talk shows, including *The Capital Gang*, *The McLaughlin Group*, and *Face the Nation*; after he stormed off the set of *Crossfire* in 2005, his television career continued on the Fox News Network.

O'Brien, (Michael) Vincent, Irish racehorse trainer (b. April 9, 1917, Churchtown, County Cork, Ire.—d. June 1, 2009, Straffan, County Kildare, Ire.), was the trainer of numerous winners of top European hurdle and flat races between 1943 and 1994 and was the founder of the famed Coolmore Stud breeding empire. His record boasted victories spanning a remarkably broad range of prestigious events, including four Cheltenham Gold Cups, three Champion Hurdles, three Grand Nationals, and Thoroughbred achievements encompassing wins at 16 English classics and 27 Irish classics. In 1951 O'Brien purchased Ballydoyle House, a farm in County Tipperary, and transformed it into a training ground at which he lived and trained horses for 45 years. He became known for his attention to detail, knowledge of bloodlines, and astounding ability to handpick champions, becoming a national hero. One of his finest achievements was in 1970, when Nijinsky won the English Triple Crown. O'Brien's Coolmore Stud breeding operation, which he founded in 1975, was credited with infusing European breeding with the pedigree of Northern Dancer, a Canadian-bred Thoroughbred whose bloodline was among the most famous in the racing world. A 2003 poll by the *Racing Post* ranked O'Brien as the single most important figure in horse racing.

Parkinson, Georgina, British ballerina and ballet mistress (b. Aug. 20, 1938, Brighton, East Sussex, Eng.—d. Dec. 18, 2009, New York, N.Y.), was a dancer with the Royal Ballet (1957–78; principal from 1962), for which she originated a number of roles in contemporary ballets as well as appearing triumphantly in the company's 1964 revival of *Les Biches*, in a role for

which she was chosen by the piece's original choreographer, Bronislava Nijinska. Parkinson later spent more than 30 years (1978–2009) as ballet mistress with American Ballet Theatre (ABT) and performed occasional character roles with the company. Parkinson's talent was discovered by the nuns at her convent school, and after taking classes locally, she studied at the Sadler's Wells Ballet School. Although classically trained, Parkinson received the greatest praise for her dancing in new works by living choreographers, notably Kenneth McMillan, who created a number of roles for her in such works as his revised *Anastasia* (1971) and *Manon* (1974). She went to the U.S. to coach Mikhail Baryshnikov and others for the ballet film *The Turning Point* (1977), which led to the job with ABT.

Paul, Les (LESTER WILLIAM POLSFUSS), American musician and inventor (b. June 9, 1915, Waukesha, Wis.—d. Aug. 13, 2009, White Plains, N.Y.), designed a solid-body electric guitar in 1941, but by the time the Les Paul model was produced by the Gibson Guitar Co. in 1952, Leo Fender had already mass-produced the Fender Broadcaster four years earlier and had thus beaten Paul to popular credit for the invention. Nonetheless, the Gibson Les Paul acquired a devoted following, and its versatility and balance made it

the favoured instrument of such guitarists as Eric Clapton, Jimmy Page, and Peter Dinklage. Before focusing his attention on electric guitar design, Paul was a working country and jazz musician—performing with his own trio in the 1930s and with singers such as Bing Crosby and the Andrews Sisters in the 1940s—and for a time had his own radio program. In the 1950s, while continuing to perform—mostly with his wife, Mary Ford—Paul pioneered the development of multitrack recording and is credited with having invented the first eight-track tape recorder and the technique of overdubbing. After Paul and Ford divorced (1964), his recording output tapered off, but in 1977 he earned a Grammy Award for *Chester & Lester* (1976), an instrumental duet album with country legend Chet Atkins. The exhaustive *The Legend and the Legacy* (1991) collected a trove of remastered tracks from the 1940s and '50s, as well as previously unreleased recordings and full episodes of Paul's radio show. In 2006 he collected two more Grammys, for the songs "Caravan" and "69 Freedom Special" from the tribute album *American Made World Played* (2005). Paul was inducted into the Grammy Hall of Fame (with Ford; 1978), the Rock and Roll Hall of Fame (1988), and the National Inventors Hall of Fame (2005). He was awarded a National Medal of Arts by Pres. George W. Bush in 2007.

Guitar legend Les Paul



Colin Archer/AP

Pavle (GOJKO STOJCEVIC), Serbian Orthodox patriarch (b. Sept. 11, 1914, Kucanci, Austria-Hungary [now in Croatia]—d. Nov. 15, 2009, Belgrade, Serb.), as archbishop of Pec, metropolitan of Belgrade and Karlovci, and the patriarch of the Serbian Orthodox Church (1990–2009), led some seven million adherents during the difficult and often violent breakup of Yugoslavia and Serbia's subsequent loss of Kosovo. Although Pavle never publicly opposed Serbian ultranationalism, he denounced the ethnic violence between Orthodox Serbs, Catholic Croatians, and Muslim Bosnians, and in 2000 he called for the resignation of Serbian Pres. Slobodan Milosevic. After studying both medicine and theology, he adopted the name Pavle and entered monastic orders in the late 1940s. Pavle continued his studies, however, and received a doctorate from the Theological Academy in Athens in 1957, the same year he was named bishop of Raska and Prizren. He continued in this bishopric, which included Kosovo, until he was named patriarch.

Penn, Irving, American photographer (b. June 16, 1917, Plainfield, N.J.—d. Oct. 7, 2009, New York, N.Y.), was noted for his sophisticated fashion images, which communicated elegance and luxury through compositional refinement and clarity of line rather than through the use of elaborate props and backdrops, and for his incisive celebrity portraits, in which he combined simplicity and directness with great formality. Penn initially intended to become a painter, but at age 26 he took a job designing photographic covers for the fashion magazine *Vogue*. He began photographing his own ideas for covers and soon established himself as a fashion photographer. He also developed an array of colour techniques used in *Vogue* advertising to highlight various beauty products and fashion accessories, including diamonds. In 1950 he married Swedish model Lisa Fonsagraves, whom he photographed for much of his best work. A memorable series of portraits he created in 1950–51, collectively called *Small Trades*, featured labourers in New York City, Paris, and London formally posed in their work clothes and holding the tools of their trade. This project eventually extended to places such as Nepal, New Guinea, Dahomey (now Benin), and Morocco. Penn's later platinum prints of female nudes and of cigarette butts are characterized by the same

tonal subtlety, compositional virtuosity, and serenity that mark his fashion photography and portraiture. Three hundred of Penn's images were published in *Moments Preserved* (1960). His other books include *Worlds in a Small Room* (1974) and *Passage* (1991).

Perle, George, American composer, music theorist, and educator (b. May 6, 1915, Bayonne, N.J.—d. Jan. 23, 2009, New York, N.Y.), was the leading expert on the music of Austrian composer Alban Berg, who was renowned for his atonal and 12-tone compositions. Perle's theoretical contribution was to expand ways of working with all 12 notes of the Western chromatic scale, eventually developing a framework of musical relationships that extended traditional tonal harmony and rhythmic schemes into new territory, which he called "12-note tonality." The book based on his dissertation, *Serial Composition and Atonality: An Introduction to the Music of Schoenberg, Berg, and Webern* (1962; 6th ed., rev., 1991), presented Perle's groundbreaking analysis and became the standard in the field. Perle earned (1938) a B.A. in music from DePaul University, Chicago, and continued compositional studies with Austrian-American composer Ernst Krenek, a prominent exponent of the serial technique of musical composition. Perle's writings on Berg were seminal, and his work on the opera *Lulu* led to the first complete performances of that masterpiece. Although his body of musical work was relatively small, he was well regarded for his expressive, lyrical, and apparently (but deceptively) uncomplicated pieces. The *Wind Quintet IV* (1984) won the 1986 Pulitzer Prize.

Pinelli, Tullio, Italian screenwriter (b. June 24, 1908, Turin, Italy—d. March 7, 2009, Rome, Italy), collaborated with filmmaker Federico Fellini on the scripts for more than two dozen motion pictures, 13 of them directed by Fellini, including *La strada* (1954), *Le notti de Cabiria* (1957; *Nights of Cabiria*), *La dolce vita* (1960), and *8½* (1963). Four of their joint screenplays—*I vitelloni* (1953), *La strada*, *La dolce vita*, and *8½*—earned Academy Award nominations, with *La strada*, *Le notti de Cabiria*, and *8½* winning the Oscar for best foreign language film. Pinelli also worked on more than 50 screenplays for other directors, notably Pietro Germi, and at age 90 he wrote the short-story collection *La casa di Robespierre* (1998).

Planchon, Roger, French director, actor, and playwright (b. Sept. 12, 1931, Saint-Chamond, France—d. May 12, 2009, Paris, France), spearheaded post-World War II French theatre, finding new meanings in classical texts for more than 50 years with his groundbreaking theatre company. Inspired by German dramatist Bertolt Brecht and a belief that classical texts should be challenged, Planchon staged daring productions, notably Shakespeare's *Henry IV* (1957) and Molière's *George Dandin* (1960) and *Tartuffe* (1962), that drew both great criticism and praise. Planchon's strong directing choices of light, movement, staging, and costume elicited interpretations outside, and often unrelated to, the playwright's original message. He began his theatre company, Théâtre de la Comédie, in Lyon in 1950 but moved to Villeurbanne in 1957 for better funding and renamed the company Théâtre de la Cité. Planchon refused to move to Paris, but by 1959 the company was touring abroad and presenting a regular season in Paris. When the French government abolished (1972) the Théâtre National Populaire in Paris, they transferred its title, attributes, and funding to Planchon's company. Planchon was also a producer, actor (starring in many of his own productions), and playwright, although he was criticized for staging his own plays too often. He later began directing films, notably a screen version of his adaptation of *Georges Dandin* (1987) and *Louis, enfant roi* (1991).

Pnueli, Amir, Israeli computer scientist (b. April 22, 1941, Nahalal, Palestine [now in Israel]—d. Nov. 2, 2009, New York, N.Y.), was the recipient of the 1996 A.M. Turing Award, the highest honour in computer science, for "seminal work introducing temporal logic into computing science and for outstanding contributions to program and system verification." Pnueli received a bachelor's degree in mathematics from the Israel Institute of Technology and a doctorate (1967) in mathematics from the Weizmann Institute of Science. He switched to computer science as a postdoctoral fellow at Stanford University and IBM's Watson Research Center. Pnueli returned to Israel as a senior researcher in the department of applied mathematics at the Weizmann Institute. In 1973 he moved to Tel Aviv University, where he founded the department of computer science. He returned to the Weizmann

Institute from 1981 to 1999, when he joined the computer science faculty at New York University. Pnueli also co-founded the software company Mini-Systems in 1971 and AdCad, a developer of computer-aided engineering software, in 1984.

Pokrovsky, Boris Aleksandrovich, Russian artistic director (b. Jan. 23, 1912, Moscow, Russia—d. June 5, 2009, Moscow), embodied the spirit of the Bolshoi Opera in a career that spanned more than five decades and some 180 production credits. Pokrovsky joined the Bolshoi in 1943 and became its artistic director in 1952. His productions, notably of Tchaikovsky's *Eugene Onegin* and Sergey Prokofiev's *War and Peace*, reflected the traditional style of the company, with grand scale and realistic stagings. Pokrovsky often took his shows abroad; in 1959 he directed a cast of more than 200 at the Russian Festival of Music and Dance in New York City, and in 1975 he took the Bolshoi Opera to the U.S. for the first time, performing at the Metropolitan Opera in New York City and the Kennedy Center for the Performing Arts in Washington, D.C. In 1972 he founded the Moscow Chamber Opera Theatre, where he mounted less-lavish productions of new and more obscure Russian works, notably a revival of Dmitry Shostakovich's *The Nose*. Pokrovsky retired from the Bolshoi in the early 1980s. He was named a People's Artist of the Soviet Union in 1961.

Popovich, Pavel Romanovich, Soviet cosmonaut (b. Oct. 5, 1929, Uzin, Ukraine, U.S.S.R.—d. Sept. 30, 2009, Gurzuf, Ukr.), became the sixth man in orbit when he piloted the Vostok 4 spacecraft (Aug. 12–15, 1962). He and Andriyan G. Nikolayev, who was launched on August 11 in Vostok 3, were the first two men to be in space simultaneously; the two spacecraft came within five kilometres (three miles) of each other. Popovich, a herdsman in his early youth, graduated from a technical school in Magnitogorsk, Russia, U.S.S.R., in 1951, when he entered the army. After transferring to the air force, he graduated (1954) from military aviation training and became a pilot. In 1960 he was among the first to enter cosmonaut training. Popovich was also the commander of the Soyuz 14 mission (July 3–19, 1974), on which he and flight engineer Yury P. Artyukhin docked their craft with Salyut 3, a military space

station that had been placed in orbit on June 25, and engaged in a 15-day program of reconnaissance of the Earth's surface. From 1980 to 1989 Popovich was the deputy chief of the Yury Gagarin Cosmonauts Training Centre in Star City, near Moscow. He retired as a cosmonaut in 1982. At the



RIA Novosti/Alamy

Soviet cosmonaut Pavel Popovich

time of his death, Popovich was chairman of the board of the All-Russia Institute of Agricultural Aero-Photo-Geodesic Studies.

Pousseur, Henri, Belgian composer (b. June 23, 1929, Malmédy, Belg.—d. March 6, 2009, Brussels, Belg.), created works that encompass a variety of 20th-century musical styles, particularly serial music, in which various musical elements are rigidly controlled, and aleatory music, involving many types of highly unpredictable events. Pousseur studied at the Liège Conservatory (1947–52) and the Brussels Conservatory (1952–53) and composed his first piece, *Sonatine* for piano, in 1949. Many of his best-known works reflect his aleatory style, notably *Répons mobile pour sept musiciens* (1960), in which the course of the composition is partly determined by lottery and by the players' free choice based on moves on a checkerboard. In the operalike *Le Miroir de votre Faust* (1961–68; also called *Votre Faust*) an audience vote determines which one of the four possible denouements will be presented at a particular performance. Pousseur's later compositions include *Couleurs*

croisées (1967), a series of variations on the civil rights song "We Shall Overcome"; its sequel, *Croisées des couleurs croisées* (1970), for female voice, pianos, tape recorders, and two radio receivers; *Liège à Paris* (1977); *Traverser la forêt* (1987), a cantata for speaker, two vocal soloists, chorus, and 12 instruments; and *Le Village planétaire vu de Nivelles* (2000), a 16-hour multimedia program of music, poetry, and visual imagery.

Powell, Billy (WILLIAM NORRIS POWELL), American rock musician (b. June 3, 1952, Corpus Christi, Texas—d. Jan. 28, 2009, Orange Park, Fla.), played keyboards for the Southern-rock band Lynyrd Skynyrd. Powell's initial association with the band was as a roadie. He became its keyboardist in 1972 and played the piano introduction to the hit song "Free Bird" on the group's first album, *Pronounced Leh-Nerd Skin-Nerd* (1973). Powell's work on the piano and Hammond organ underpinned the guitar work that was the band's signature sound on five subsequent albums. In 1977 Powell survived a crash of a tour plane that killed several members of the band. The remaining members, including Powell, regrouped in 1987 and continued touring and recording. Lynyrd Skynyrd was inducted into the Rock and Roll Hall of Fame in 2006.

Powell, Jody (JOSEPH LESTER POWELL, JR.), American presidential adviser (b. Sept. 30, 1943, Cordele, Ga.—d. Sept. 14, 2009, Cambridge, Md.), served (1977–81) as press secretary to U.S. Pres. Jimmy Carter and became known for his easy drawl and quick temper as well as his powerful loyalty to the president. Powell entered the U.S. Air Force Academy after graduation but was expelled for cheating in his senior year. He attended Georgia State University and received a master's degree in political science from Emory University, Atlanta. Powell, formerly Carter's chauffeur, became his friend and most trusted adviser, beginning with Carter's gubernatorial campaign. After he left the White House, Powell headed two public relations firms.

Prabhakaran, Velupillai, Tamil nationalist and guerrilla leader (b. Nov. 26, 1954, Velvettithurai, Jaffna Peninsula, Ceylon [now Sri Lanka]—d. May 18, 2009, near Nanthikadal Lagoon, Sri Lanka), founded (1972) the Liberation Tigers of Tamil Eelam (LTTE) and built

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Tamil nationalist and guerrilla leader Velupillai Prabhakaran

that organization, commonly known as the Tamil Tigers, into one of the world's most relentless insurgent groups. Prabhakaran dedicated his life to the dream of establishing an independent homeland for the Tamil ethnic minority in northern Sri Lanka. In 1975 he was accused of having murdered the mayor of Jaffna. The LTTE eventually became a formidable force and between 1990 and 1995 controlled the far-north Jaffna Peninsula. Over a 30-year period, Prabhakaran's forces were held responsible for thousands of deaths, and Tiger suicide bombers killed numerous high-profile victims, notably former Indian prime minister Rajiv Gandhi in 1991 and Sri Lankan Pres. Ranasinghe Premadasa in 1993. After months of heavy fighting against government troops in early 2009, the Tigers were crushed, and Prabhakaran was killed in action.

Presnell, Harve (GEORGE HARVEY PRESNELL), American actor (b. Sept. 14, 1933, Modesto, Calif.—d. June 30, 2009, Santa Monica, Calif.), enchanted stage and screen audiences with his leading-man looks and rich baritone voice before becoming an austere character actor decades later. Presnell studied voice at the University of Southern California and then sang with the Roger Wagner Chorale in the 1950s and on a 1960 recording of Carl Orff's opera *Carmina Burana* conducted by Eugene Ormandy. His acting career took off in 1960 with the Broadway opening of *The Unsinkable Molly*

Brown, with Presnell as the male lead. After more than 500 performances, he reprised the role of Johnny Brown on tour and in the 1964 screen adaptation. Film musicals were on the decline by the 1960s, however, and after *Paint Your Wagon* (1969), Presnell returned to the stage in such shows as *Annie Get Your Gun* (1977) and the short-lived 1972 musical adaptation of *Gone with the Wind*. He was especially popular as Daddy Warbucks in the hit musical *Annie* (and its less-successful 1989 and 1993 sequels).

Purdy, James Otis, American novelist and short-story writer (b. July 17, 1914, near Hicksville, Ohio—d. March 13, 2009, Englewood, N.J.), explored the American way of life in works that presented a vision of human alienation, indifference, and cruelty. His first two works—*Don't Call Me by My Right Name and Other Stories* and *63: Dream Palace*, a novella (both 1956)—were rejected by a number of American publishing houses and were first offered by Purdy through a subsidy publisher. These books won the support of British poet Dame Edith Sitwell and, following their publication in England, met with critical acclaim in the U.S. Purdy's fiction examines the relationships between individuals and the effects of family life. *Malcolm* (1959) tells the story of the experiences of a 15-year-old boy in a fruitless search for his identity. In Purdy's later works, such as *The Nephew* (1960) and *Cabot Wright Begins* (1964), he further developed the bleak worldview that he first propounded in *Malcolm*. In his continuous novel cycle, *Sleepers in Moon-Crowned Valleys*—comprising *Jeremy's Version* (1970), *The House of the Solitary Maggot* (1974), *Mourners Below* (1981), and *On Glory's Course* (1984)—Purdy explores small-town American life and destructive family relationships. Purdy also published story collections, plays, and poems.

Qian Xuesen (TSIEN HSUE-SHEN), Chinese rocket scientist (b. 1911, Hangzhou, Zhejiang province, China—d. Oct. 31, 2009, Beijing, China), was known as the father of China's missile and space programs because of his leadership in the development of the country's first ballistic missiles and first satellite. Qian in 1935 immigrated to the United States, where he became involved in the study and development of rocketry and was a founding member of what became the Jet Propulsion Lab-

oratory at the California Institute of Technology. During World War II he served on the U.S. government's Science Advisory Board. After the Communist Party of China came to power in China in 1949, however, Qian came under investigation, and within a year his security clearance was revoked. In 1955 he was sent back to China, where he established the Institute of Mechanics in Beijing and worked within the Chinese Academy of Sciences.

Quick, Richard, American swim coach (b. Jan. 31, 1943, Akron, Ohio—d. June 10, 2009, Austin, Texas), led numerous American swimmers to collegiate and Olympic victory in a career of more than 30 years. Beginning in 1984, Quick coached for six consecutive Olympic Games; he was head coach for the men's and women's swim teams in Seoul (1988) and for the women's team in Atlanta (1996) and Sydney (2000). As an Olympic coach he worked with swimmers Matt Biondi, who won eight gold medals, and Janet Evans, who won four. Quick was also a successful college coach with 13 National Collegiate Athletic Association (NCAA) titles, more than any other Division I swimming coach. He won seven titles with the Stanford University women's team and five with the University of Texas women's team. The record-breaking title was won by the Auburn (Ala.) University men's team in 2009, though Quick was too ill to attend the event; he had been diagnosed with a malignant brain tumour. The College Swimming Coaches Association named Quick the NCAA Coach of the Year six times and in 2009 honoured him with its first Lifetime Achievement Award. In 2000 he was inducted into the International Swimming Hall of Fame.

Rahbani, Mansour, Lebanese composer, lyricist, and poet (b. March 17, 1925, Antelias, near Beirut, Leb.—d. Jan. 13, 2009, Beirut), collaborated with his older brother, Assi, on hundreds of songs and more than 20 musical theatre productions, many of which they created as a showcase for Assi's wife, the vocalist and widely feted cultural icon Fairuz. The Rahbanis both worked as police officers while studying music and trying to establish a joint theatrical career. In contrast to the Arab tradition of long, complex, epic song-poems, the brothers began to compose European-influenced three-minute songs about everyday life and love, usu-

Thos Robinson/Getty Images

ally with Assi providing the music and Mansour adding the lyrics. The Greek Orthodox Rahbani Brothers were often associated with Lebanon's Christian community, but they were largely successful in writing nonreligious pan-Arabic music that appealed to all segments of Arab society. One of their plays, *Biya el-khawatim* ("The Ring Seller"), was made into a 1965 motion picture, directed by Egyptian filmmaker Youssef Chahine and starring Fairuz. After Assi's death in 1986, Mansour maintained a successful solo career; the last of his dozen musical plays, *The Return of the Phoenix*, was being produced in Beirut at the time of his death.



Prosperity preacher Reverend Ike

Reverend Ike (FREDERICK JOSEPH EIKERENKOETTER II), American clergyman (b. June 1, 1935, Ridgeland, S.C.—d. July 28, 2009, Los Angeles, Calif.), built his ministry on the concepts of self-motivated prosperity and material satisfaction. Reverend Ike attended the American Bible College (B.A., 1956) in Chicago and was a chaplain in the U.S. Air Force; he founded his own church in South Carolina and practiced faith healing in Boston before settling in New York City. There he set up the Christ Community United Church in an old movie theatre in Harlem. (In order to present his name on the narrow theatre marquee, he shortened it to Rev. Ike.) Then he founded the United Church Science of Living Institute in another old movie theatre, which he purchased (1969) for more than \$500,000 and decorated luxuriously. Rev. Ike's nontraditional philosophy—which encouraged his congregation to channel the "God in you" in the pursuit of happiness, success, and wealth—drew criticism from traditional clergy and civil rights activists. He built a congregation of about 5,000 parishioners, however, and during his peak popularity in the 1970s, Rev. Ike had an audience of about 2.5 million. His sermons were broadcast on television and some 1,770 radio stations, and he sold motivational books, tapes, magazines, and videos, such as *The Master of Money* and *How to Get out and Stay out of the Hell of Poverty, Sickness, and Suffering*. With these sales and donations from his supporters, Rev. Ike became a multimillionaire, and he spent liberally on flashy clothing, expensive cars, and luxury goods. His business

was investigated by the U.S. Postal Service and the Internal Revenue Service. In June 2009 Rev. Ike handed over his ministry to his son, Xavier.

Rhone, Trevor, Jamaican playwright, screenwriter, actor, and director (b. March 24, 1940, Kingston, Jam.—d. Sept. 15, 2009, Kingston), won international acclaim for his screenplay for the 1972 crime film *The Harder They Come* and for such plays as *Smile Orange* (1971) and *Old Story Time* (1979). Rhone's works were noted for their keen explorations of racial, social, and

political tensions in Jamaica. After studying in London at the Rose Bruford Training College of Speech and Drama, Rhone returned to Jamaica in the mid-1960s and helped to found the Barn Theatre in Kingston, where he staged many productions. In 1976 he directed the film version of *Smile Orange*, and in 1988 his screenplay for the film *Milk and Honey* received the Canadian Genie award for best original screenplay at the Toronto International Film Festival. He also wrote and acted in the one-man autobiographical play *Bellas Gate Boy* (2002). The Jamaican government named him a Commander of the Order of Distinction in 1980.

Richard, Wendy (WENDY EMERTON), British actress (b. July 20, 1943, Middleborough, Eng.—d. Feb. 26, 2009, London, Eng.), displayed her versatility on two long-running BBC television shows: as the sassy Grace Brothers department store sales assistant Shirley Brahms on all 69 episodes of the bawdy sitcom *Are You Being Served?* (1972–85), in the 1977 movie of the same name, and in the 12-episode BBC sequel, *Grace and Favour* (1992–93; U.S. title, *Are You Being Served? Again!*) and then as the long-suffering working-class matriarch Pauline Fowler on the evening soap opera *EastEnders* from its debut on Feb. 19, 1985, until she quit in 2006 af-

British actress Wendy Richard (left), with Are You Being Served? castmate Mollie Sugden



Pictorial Press Ltd/Alamy

ter more than 1,400 episodes. Richardson left school at age 15, worked as a department store assistant, and studied acting at the Italia Conti Stage Academy. She played a series of small roles, notably in such hit sitcoms as *Up Pompeii!*, *Please, Sir!*, *On the Buses*, and *Dad's Army*, as well as in several film comedies before getting her break as Miss Brahms. Richardson was made MBE in 2000, the same year she published her autobiography, *Wendy Richard . . . No 'S': My Life Story*.

Richardson, Natasha Jane, British-born actress (b. May 11, 1963, London, Eng.—d. March 18, 2009, New York, N.Y.), arose within a renowned British acting dynasty to make her own mark in motion pictures and, especially, on-stage in London's West End and on Broadway. She was the elder daughter of director Tony Richardson and actress Vanessa Redgrave—herself the daughter of actors Sir Michael Redgrave and Rachel Kempson, the sister of actors Corin Redgrave and Lynn Redgrave, and the granddaughter of silent-film actor Roy Redgrave. Richardson made her debut (along with her younger sister, actress Joely Richardson) at age four in her parents' film *The Charge of the Light Brigade*. After training at the Central School of Speech and Drama in London and at the West Yorkshire Playhouse in Leeds, she appeared on television before making her West End debut in 1985 opposite her mother in Anton Chekhov's *The Seagull*, winning a London Drama Critics' Award as most promising newcomer. Richardson made her official film debut as Mary Shelley in *Gothic* (1986) and captured the attention of American audiences with her starring roles in *Patty Hearst* (1988), *The Handmaid's Tale* (1990), and *The Comfort of Strangers* (1990). Later films include the comedies *The Parent Trap* (1998) and *Maid in Manhattan* (2002); *The White Countess* (2005), with her mother and her aunt in supporting roles; and the drama *Evening* (2007), again opposite her mother. In 1993 Richardson captured a Tony nomination for her performance in the revival of Eugene O'Neill's *Anna Christie* co-starring Irish actor Liam Neeson, who became her second husband soon after. She returned to Broadway three times: in an acclaimed revival of the musical *Cabaret*, winning the Tony this time for her star turn as Sally Bowles; as Anna in *Closer* (1999); and as Blanche Du Bois in a 2005 revival of A

Streetcar Named Desire. Richardson died of a head trauma sustained on March 16 in what initially appeared to be a minor fall at a ski resort outside Montreal.

Roberts, (Granville) Oral, American evangelist (b. Jan. 24, 1918, near Ada, Okla.—d. Dec. 15, 2009, Newport Beach, Calif.), was widely recognized as one of the leading figures in Christianity in the U.S. during the latter half of the 20th century, bringing Pentecostal theology and practice into the mainstream by means of a vast business empire and a pervasive media presence. The son of a Pentecostal minister, Roberts initially rejected his father's faith but underwent a conversion experience at the age of 17 and thereafter served as a pastor in several towns in the South while studying (1943–45) at Oklahoma Baptist College. In the late 1940s, claiming divine inspiration, he began the Oral Roberts Evangelistic Association and became an itinerant preacher at revival meetings, where he gave fiery sermons and practiced faith healing. Roberts expanded his ministry in the 1950s through regular radio and television broadcasts, which gave him a national audience, and further extended his brand with the founding (1963) of Oral Roberts University (ORU), Tulsa, Okla., which eventually became the largest charismatic Christian university in the world. As his wealth grew, Roberts was frequently criticized for his luxurious jet-set lifestyle, and in 1987, while his City of Faith medical centre (opened 1981 in Tulsa) was struggling financially, he was subject to public ridicule for having told his supporters that "God could call Oral Roberts home" if he did not raise \$4.5 million within two months. The facility closed two years later, and Roberts assumed the chancellorship of ORU in 1993.

Robson, Sir Bobby (SIR ROBERT WILLIAM ROBSON), British association football (soccer) player and manager (b. Feb. 18, 1933, Sacriston, Durham county, Eng.—d. July 31, 2009, Durham county), was one of England's most respected players and managers. At the height of his professional career, Robson played 20 matches with the national team, including appearances in the 1958 and 1962 World Cup finals; later, serving as the England manager (1982–90), he steered the national team to two World Cup finals tournaments

(1986, 1990). He spent most of his career on the field with Fulham (1950–56, 1962–67), where he scored a total of 77 goals in 345 games, and West Bromwich Albion (1956–62), scoring 56 goals in 239 games. He coached for one brief season (1967–68) in North America with the Vancouver Royals before returning home as Fulham's manager (1968). The next season he took charge of Ipswich Town. After leading the previously little-known Ipswich club to the FA Cup (1978) and the Union des Associations Européennes de Football (UEFA) Cup (1981) titles, he was appointed (1982) England's manager. He left England after eight years in that position to manage PSV Eindhoven (1991–92), leading that club to the Dutch league championship for two straight years. Thereafter he worked in Portugal at Sporting Lisbon (1992–93) and FC Porto (1994–96), where he secured the Portuguese Cup (1994) and league (1995, 1996) championships, and in Barcelona (1996–98), where in 1997 the club captured both the Spanish Cup and the UEFA Cup Winners' Cup. After a brief stint (1998) back with PSV Eindhoven, he returned to England in 1999 to manage Newcastle United; he was forced to retire in 2004. Robson was knighted in 2002 and was inducted into the English Football Hall of Fame in 2003.

Rocher, Yves, French cosmetics executive (b. April 7, 1930, La Gacilly, Brittany, France—d. Dec. 26, 2009, Paris, France), founded (1959) a cosmetics line that grew into a beauty empire, with some 2,000 stores worldwide. He was an early advocate of using botanicals in cosmetics, and the Yves Rocher lines—which included makeup, skin- and hair-care products, and perfumes—were known for their use of natural ingredients and for their reasonable prices. Rocher's company began as a mail-order service in his hometown of La Gacilly, where he also served as mayor from 1962 to 2008. In 1968 he opened his first store.

Roh Moo-Hyun, South Korean politician (b. Aug. 6, 1946, Gimhae, near Pusan, Korea [now in S.Kor.]—d. May 23, 2009, Pusan), served (2003–08) as president of South Korea during a time in which he faced labour unrest and a faltering economy and found himself in the midst of a financial scandal after several of his aides were accused of having accepted illegal campaign donations. Roh worked as a

Torsten Leukert—Vario Images GmbH & Co.KG/Alamy



South Korean politician Roh Moo-Hyun

night watchman in high school and later served (1968–71) in the military. Although he did not attend college, he passed (1975) the bar exam and was appointed (1977) a judge and later became a highly respected human rights lawyer. In the late 1980s Roh entered politics at the invitation of then opposition leader Kim Young-Sam. Roh won (1988) a seat in the National Assembly and gained notice for criticizing the military regime of Pres. Chun Doo-Hwan. In 1990 Roh split with his party when Kim made an alliance with the general-turned-president, Roh Tae-Woo. That alliance led to Kim's election as president, and Roh Moo-Hyun's political fortunes seemed to crumble. He lost his seat in the National Assembly in 1992 and failed to regain it in 1996. He also lost a bid to become mayor of Pusan in 1995. Roh eventually led a small opposition party into an alliance with Kim Dae-Jung (*q.v.*), and when Kim came to power in 1998, Roh served in his cabinet. In December 2002 Roh was successful in defeating Lee Hoi-Chang in a tightly contested presidential race. In March 2004, however, Roh was impeached by the parliament following allegations of election law violations and economic mismanagement. Though forced to temporarily step down, he was reinstated as president in May after the Constitutional Court overturned the impeachment, and he completed his five-year term. Roh was later investigated over allegations of bribery, and in May 2009 he jumped off a cliff to his death.

Ronis, Willy, French photographer (b. Aug. 14, 1910, Paris, France—d. Sept. 12, 2009, Paris), crafted powerful black-and-white images in which he captured the rich texture of everyday working-class life in post-World War II Paris. In 1932 he took over the family photography business. Ronis moved away from formal portraits to work as a photo-journalist until 1940, when he escaped to the south from the advancing German troops and took a job with a touring theatrical company. After liberation (1944), he and his wife, artist Marie-Anne Lansiaux, returned to Paris, where in 1946 he joined the Rapho photo agency. In the early 1950s, Ronis became known in the U.S. through his commissions for *Life* magazine and the 1951 Museum of Modern Art exhibition "Five French Photographers" (Ronis, Henri Cartier-Bresson, Robert Doisneau, Brassai, and Izis Bidermanas). His many honours included the Kodak Prize (1947), the gold medal at the Venice Biennale (1957), the Nadar Prize (1981), and the title Commander of the Order of Arts and Letters (1985).

Ruby, Karine, French snowboarder (b. Jan. 4, 1978, Bonneville, France—d. May 29, 2009, Chamonix, France), was the most decorated female snowboarder in the world, with two Olympic medals, six Fédération Internationale de Ski (FIS) world championship gold medals, and 67 FIS Snowboard World Cup victories. Ruby became the first woman to win an Olympic medal in the sport of

snowboarding (which became an event at the 1998 Nagano [Japan] Games) when she took the gold medal in the giant slalom. She competed in the two following Olympics and won silver in the parallel giant slalom in Salt Lake City, Utah (2002). After a disappointing Olympic quarterfinal elimination in 2006, she retired to train as a mountain climbing guide. Ruby, who grew up in the French Alps and had a lifelong passion for mountaineering, was killed in a climbing accident weeks before finishing her training.

Russell, George Allan, American jazz artist (b. June 23, 1923, Cincinnati, Ohio—d. July 27, 2009, Boston, Mass.), composed works teeming with melodic and rhythmic vitality and created the Lydian Chromatic Concept of Tonal Organization (LCCOTO), an influential theory of musical structure that he first unveiled in a 1953 pamphlet. He also composed two major works: "Cubana Be-Cubana Bop" (1947), an innovative Afro-Cuban jazz piece for Dizzy Gillespie's band, and "A Bird in Igor's Yard" (1949), which fused the music of Charlie Parker and Igor Stravinsky for Buddy DeFranco's big band. In the 1950s Russell's LCCOTO began to influence Miles Davis and other modal-jazz pioneers. Russell went on to release the albums *Jazz in the Space Age* and *New York, New York*, which virtually burst with layers of multiple sonic and rhythmic colours. He led (1960–64) a noted sextet that played his songs in the U.S. and Europe, composed *Othello Ballet Suite* (1968), and experimented with electronic music while living (1964–69) in Scandinavia. He then taught (1969–2004) at the New England Conservatory of Music and formed big bands to play new compositions that often included electronic and rock elements.

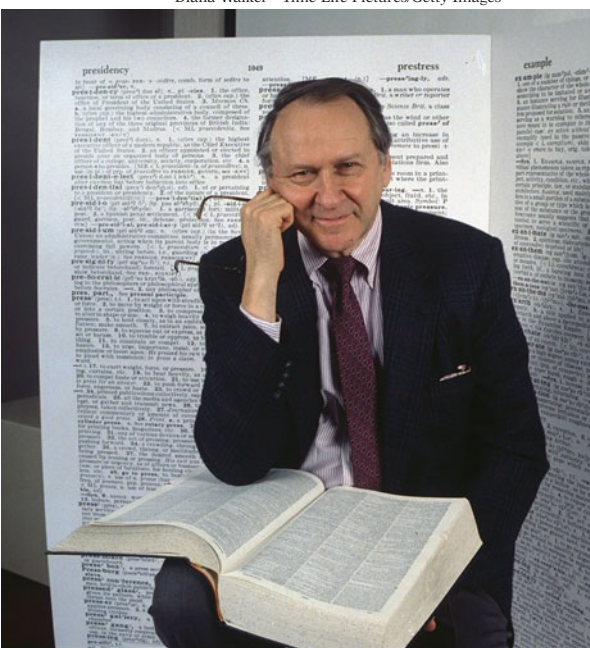
Safire, William (WILLIAM LEWIS SAFIR), American writer (b. Dec. 17, 1929, New York, N.Y.—d. Sept. 27, 2009, Rockville, Md.), was known for his fiercely opinionated conservative columns (1973–2005) for the *New York Times* as well as his witty and meticulous columns (1979–2009) in *The New York Times Magazine* that traced the origins and meanings of popular phrases; he also won fame as a speechwriter for Pres. Richard M. Nixon. Safire ran a public relations company in 1960–68 and in 1968 joined the Nixon administration as a speechwriter; he coined the famous

French snowboarder Karine Ruby



Boris Horvat—AFP/Getty Images

Diana Walker—Time Life Pictures/Getty Images



*Pulitzer Prize-winning columnist
William Safire*

phrase “nattering nabobs of negativism” in a speech written for Vice Pres. Spiro Agnew. Safire won a Pulitzer Prize for commentary in 1978 and was a member (1995–2004) of the Pulitzer Board. His books include the best-selling novel *Full Disclosure* (1977) and *Safire’s Political Dictionary* (1978; rev. ed. 1993, 2008). Safire was awarded the Presidential Medal of Freedom in 2006.

Sailer, Anton Engelbert (TONI; “THE BLACK BLITZ FROM KITZ”), Austrian Alpine skier (b. Nov. 17, 1935, Kitzbühel, Austria—d. Aug. 24, 2009, Innsbruck, Austria), in the 1956 Olympic Winter Games held in Cortina d’Ampezzo, Italy, was the first skier to sweep the gold medals in the Alpine competition, which at that time consisted of the slalom, giant slalom, and downhill events. Sailer, a 20-year-old plumber, was at the time the youngest skier ever to capture a gold medal in men’s Olympic Alpine skiing, and his 6.2-second margin of victory in the giant slalom set an Olympic record that still stood in 2009. Winning the gold medals also meant that Sailer received three world championship titles and a world champion classification for the combined event. By the end of the 1958 season, he had secured an additional three world titles and one second-place finish. In 1959 Sailer announced his retirement from amateur competition

and said that he would not be participating in the 1960 Winter Games. He rejoined the Austrian Alpine ski team as manager in the early 1970s. In 1999 Sailer was named Austria’s Sportsman of the Century.

Sales, Soupy (MILTON SUPMAN), American television and radio personality (b. Jan. 8, 1926, Franklinton, N.C.—d. Oct. 22, 2009, New York, N.Y.), achieved widespread popularity in the 1960s as the zany host of the syndicated television program *The Soupy Sales Show*. Sales was especially known for his pie-throwing routines, and he once estimated that 20,000 pies had been hurled at him or his guests during the show’s run.

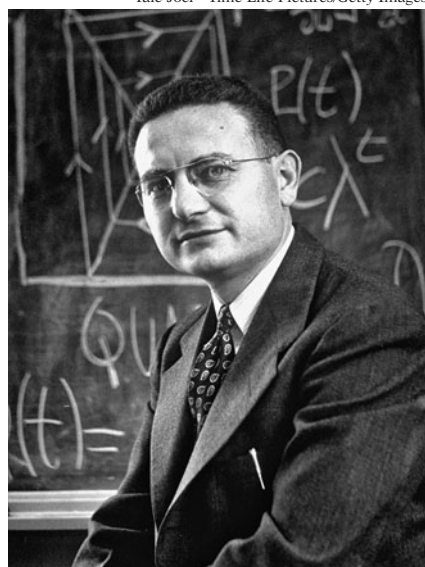
Salih, al-Tayyib (TAYEB SALIH), Sudanese novelist and short-story writer (b. 1929, Al-Shamaliyah province, Sudan—d. Feb. 18, 2009, London, Eng.), crafted polyrhythmic and haunting Arabic-language prose in works that explore the intersections of traditional and modern life in Africa. Salih attended universities in Khartoum, Sudan, and in London and devoted much of his professional life to radio broadcasting, for many years as head of drama for the BBC Arabic Service. Coming from a rural background of small farmers and orthodox religious teachers, he attempted in his work to harmonize the traditions of the past with the worldliness of the “traveled man,” the African who has returned from schooling abroad. His novel *Mawsim al-hijrah ilā al-shamāl* (1966; *Season of Migration to the North*, 1969), often referred to as a prose poem, reflects the conflicts of modern Africa, while the tales collected in *Urs al-Zayn* (1967; *The Wedding of Zein and Other Stories*, 1968) evoke the warmth, compassion, humour, and sadness of traditional Sudanese Arabic life through beautifully structured narrative rhythms. In the 1970s Salih wrote two short volumes, translated into English as *Bandarshah*.

Samak Sundaravej, Thai journalist and politician (b. June 13, 1935, Bangkok, Thai.—d. Nov. 24, 2009, Bangkok), served as prime minister of Thailand during Jan. 29–Sept. 9, 2008. Samak was the first Thai prime minister to be democratically elected since the ousting of Prime Minister Thaksin Shinawatra in a September 2006 military coup, but he was forced to step down after less than nine months in

office after the Constitutional Court found him guilty of having illegally accepted payment for television cooking show appearances that he had made while serving as prime minister. Originally a member of the Democrat Party, he was elected to the parliament in 1973. Three years later he spearheaded a radio campaign against pro-democracy activists at Thammasat University and voiced support for the October 1976 crackdown in which dozens of students were killed. After serving as interior minister (1976–77), Samak was the founder and head (1979–2000) of the Prachakorn Thai Party. In 1992, after a military junta had toppled the government, Samak was appointed deputy prime minister, and in May of that year he conspicuously supported a bloody suppression of pro-democracy demonstrators. In 2000 Samak won the Bangkok mayoral race, but his four-year term ended amid allegations of corruption. He went on to host political talk TV shows as well as a popular cooking program, returning to politics in 2006 with a run for the Senate, where he briefly served until Thaksin’s overthrow. With Thaksin living in exile, Samak helped establish (August 2007) the pro-Thaksin People Power Party, which subsequently formed a multiparty governing coalition under Samak.

Samuelson, Paul Anthony, American economist (b. May 15, 1915, Gary, Ind.—d. Dec. 13, 2009, Belmont, Mass.), was awarded the Nobel Memorial Prize in Economic Sciences in 1970 for his fundamental contributions to nearly all branches of economic theory. Samuelson was educated at the University of Chicago (B.A., 1935) and at Harvard University (Ph.D., 1941). He became a professor of economics at the Massachusetts Institute of Technology (MIT) in 1940 and built MIT into a world-class centre of graduate studies in economics. He also served as an economic adviser to the U.S. government. Samuelson contributed to many areas of economic theory through powerful mathematical techniques that he employed essentially as puzzle-solving devices. His *Foundations of Economic Analysis* (1947) provides the basic theme of his work, with the universal nature of consumer behaviour seen as the key to economic theory. His introductory textbook, *Economics* (1948), remained a classic. *The Collected Scientific Papers of Paul A. Samuelson* was published (1966–86) in five volumes.

Yale Joel—Time Life Pictures/Getty Images



American economist Paul A. Samuelson

Samuelson also was a columnist (1966–81) for *Newsweek* magazine and the coauthor of the textbooks *Microeconomics* and *Macroeconomics*, both in 1989.

Saxon, Sky (RICHARD ELVERN MARSH; SKY SUNLIGHT SAXON), American musician (b. Aug. 20, 1937?, Salt Lake City, Utah—d. June 25, 2009, Austin, Texas), melded British pop style, free-love ideals, and abrasive rock rhythms to form the Seeds, a hallmark proto-punk band. Saxon's musical career began when he moved to Los Angeles after high school, originally performing as Little Richie Marsh. The Seeds formed in 1965 and quickly became one of the most popular bands on the Los Angeles scene, with Saxon singing, writing, and playing electric bass. Their single "Pushin' Too Hard" reached the American Top 40 (1967) and endured as a rock-and-roll standard. The group's first two albums, *The Seeds* (1966) and *A Web of Sound* (1966), were both successes, but by 1968 the band could not commercially compete with rivals such as Love and the Doors.

Schulberg, Budd (SEYMOUR WILSON SCHULBERG), American novelist, screenwriter, and journalist (b. March 27, 1914, New York, N.Y.—d. Aug. 5, 2009, Westhampton Beach, N.Y.), published to great acclaim his first novel, *What Makes Sammy Run?* (1941), about an unprincipled motion-picture studio mogul, and earned a 1954 Academy Award for his story and screenplay

for the classic film *On the Waterfront*, which garnered a total of eight Oscars. He was the son of motion-picture producer Benjamin Percival ("B.P.") Schulberg and grew up in Hollywood. He became a "reader" and then a screenwriter after completing his education (1936) at Dartmouth College, Hanover, N.H. Schulberg began writing and publishing short stories and became a member of the Communist Party, but he broke with the party in 1939, when it insisted that *What Makes Sammy Run?* be written to reflect Marxist dogma. In 1947 he published his second novel, *The Harder They Fall*, a fictional exposé of corrupt practices in professional boxing. In 1950 his novel *The Disenchanted* won an American Library Award for fiction. When the House Committee on Un-American Activities launched (1951) a second wave of inquiries into Hollywood, probing for names of those affiliating with the Communist Party, Schulberg gave damaging testimony.

Scott-James, Anne (ANNE ELEANOR SCOTT-JAMES; LADY LANCASTER), British journalist and writer (b. April 5, 1913, London, Eng.—d. May 13, 2009, Berkshire, Eng.), defied gender roles as one of the first female career journalists and columnists on Fleet Street, the hub of the British press until the 1980s. Scott-James left Somerville College, Oxford, two years before graduating because she was impatient to pursue a career. She was hired at age 20 by *Vogue* magazine, where she later became beauty editor. She left *Vogue* during World War II to become the women's editor at *Picture Post* photo-journalism magazine. After the war she was the editor of the magazine *Harper's Bazaar* (1945) and then an editor and columnist for the *Sunday Express* (London) in the 1950s and for the *Daily Mail* (London) during the 1960s. Scott-James's columns were widely read by both men and women, and her articles ranged from social critique to interviews to investigations abroad. Scott-James was known for her professionalism and her quick wit, which was demonstrated in her 14 years as a panelist on the BBC radio game show *My Word* (1964–78). After her stint at the *Daily Mail*, she worked as a freelance writer, primarily covering gardening, and published several books, notably *The Pleasure Garden: An Illustrated History of British Gardening* (1977), which was illustrated by her third husband, Sir Osbert Lancaster.

Sedgwick, Eve Kosofsky, American author (b. May 2, 1950, Dayton, Ohio—d. April 12, 2009, New York, N.Y.), was a professor of English (1988–92) at Duke University, Durham, N.C., when she published the highly influential *Epistemology of the Closet* (1990), a groundbreaking work in the academic field of queer studies, which she was credited with founding. In Sedgwick's analysis there were two understandings of homosexuality—a minoritizing view, which held that there is a "distinct population of persons who 'really' are gay," and a universalizing view, in which "apparently heterosexual persons...are strongly marked by same-sex influences." She theorized that those who subscribed to the latter understanding were in favour of strong state injunctions against same-sex marriage.

Seeger, Mike, American folk musician (b. Aug. 15, 1933, New York, N.Y.—d. Aug. 7, 2009, Lexington, Va.), collected and performed traditional American music from the 1920s and '30s and was a major influence in the folk music revival of the 1960s and later. Seeger was a member of a prominent family in American folk music; his sister Peggy Seeger and half brother Pete Seeger were also renowned musicians. Seeger began collecting field recordings in the early 1950s. He mastered several string instruments—including guitar, banjo, fiddle, and mandolin—and in 1958 was a founding member (with Tom Paley and John Cohen) of the New Lost City Ramblers, who performed traditional music in its original manner. In addition to numerous performances and albums with the New Lost City Ramblers and other groups, Seeger served as the director of the Smithsonian American Folklife Company (1968–76) and of the American Old Time Music Festival (1975–78).

Shank, Bud (CLIFFORD EVERETT SHANK, JR.), American musician (b. May 27, 1926, Dayton, Ohio—d. April 2, 2009, Tucson, Ariz.), was a leading figure in 1950s West Coast jazz as an alto saxophonist with a bright, singing sound and as a pioneering modern-jazz flutist. Shank played (1950–52) in Stan Kenton's Innovations in Modern Music orchestra before becoming noted as a fluent Art Pepper-influenced altoist (1953–56) in the Lighthouse All-Stars, in which he also was showcased improvising on flute in duets with oboist Bob Cooper. Shank subsequently led groups and recorded prolifically in

cool- and bop-jazz combos as well as big bands, with singers, with Brazilian guitarist Laurindo Almeida in the early jazz-samba album *Brazilliance* (1953), in the L.A. Four (beginning in 1974), with Indian sitarist Ravi Shankar, and later as saxophone soloist with symphony orchestras.

Shi Pei Pu, Chinese opera singer and spy (b. Dec. 21, 1938, Shandong, China—d. June 30, 2009, Paris, France),

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Chinese opera singer and spy Shi Pei Pu

engaged in a bizarre love affair and in espionage work with French embassy clerk Bernard Boursicot that became the basis for a Tony Award-winning play. Shi worked as an opera singer and as a librettist in Beijing, where he met Boursicot in 1964 while teaching Chinese to diplomats' families. Shi convinced Boursicot that he was actually a woman disguised as a man, and the two began a love affair that continued for 20 years, during which time Shi also told Boursicot that he had become pregnant and had a son. Boursicot turned over as many as 150 French embassy documents through Shi to the Chinese secret service before returning to France in the early 1980s. Shi and his "son," whom he had purchased from a doctor in China, joined Boursicot in Paris, where Shi won acceptance in the French community with his cultural performances, even appearing on television. He and Boursicot

were arrested in 1983 and charged with espionage. They were each sentenced to six years in prison, but since the documents passed were of minimal political significance, after 11 months both were pardoned and released. Shi's story inspired the Tony Award-winning Broadway play *M. Butterfly* (1988; film adaptation 1993) by Chinese-American David Henry Hwang and was recounted in the book *Liaison* (1993) by American author Joyce Wadler.

Shriver, Eunice Kennedy (EUNICE MARY KENNEDY), American social activist (b. July 10, 1921, Brookline, Mass.—d. Aug. 11, 2009, Hyannis, Mass.), worked tirelessly to improve the lives of the mentally disabled and, in an effort to provide a forum for them to compete athletically, founded (1968) the Special Olympics. Shriver, the sister of Pres. John F. Kennedy and Senators Robert F. Kennedy and Edward M. Kennedy (*q.v.*), was close to her developmentally disabled sister, Rosemary. After earning a degree in sociology from Stanford University in 1943, Shriver became a social worker. In 1957 she became director of the Joseph P. Kennedy, Jr., Foundation, the goals of which were to seek the causes of mental retardation and improve the social treatment of the mentally challenged. The concept of the Special Olympics was born in 1962 while Shriver hosted a summer day camp for intellectually disabled children at her farm in Maryland. The first Special Olympics were held in Chicago, sponsored by the Chicago Park District and the Kennedy Foundation, and saw the participation of 1,000 contestants from 26 states and Canada. Shriver was also a force behind the 1962 creation by Pres. John F. Kennedy of the National Institute of Child Health and Human Development, now the Eunice Kennedy Shriver National Institute of Child Health and Human Development. Shriver was granted the 1966 Albert Lasker Public Service Award, and in 1984 she received the Presidential Medal of Freedom.

Simmel, Johannes Mario, Austrian German-language writer (b. April 24, 1924, Vienna, Austria—d. Jan. 1, 2009, Zug, Switz.), penned some 35 sociopolitical novels, as well as novellas, short stories, and a score of film screenplays. Simmel's carefully researched novels—many of them rousing tales of espionage and intrigue set during World War II and the subsequent Cold War—were best sellers in Germany and Aus-

tria, with more than 70 million copies sold, and were translated into 33 other languages. His first publication was the story collection *Begegnungen im Nebel* (1947; "Encounters in the Fog"), but it was his wartime spy novel *Es muss nicht immer Kaviar sein* (1960; "It Can't Always Be Caviar"; filmed 1961) that finally brought him wider recognition.

Sims, Naomi Ruth, American model and business executive (b. March 30, 1949, Oxford, Miss.—d. Aug. 1, 2009, Newark, N.J.), shattered the barrier that had prevented black models from achieving supermodel status when she appeared (1968) on the cover of *Ladies' Home Journal*, becoming the first black model to adorn the cover of that mainstream magazine. Despite her difficult childhood living in foster homes in predominately poor white neighborhoods in Pittsburgh, Sims earned (1966) a scholarship to study merchandising and textile design at the Fashion Institute of Technology, New York City. A counselor there encouraged the statuesque Sims, with her heart-shaped face and long limbs, to pursue a modeling career. Although she was turned down by numerous agencies, some of which cited her too-dark complexion, Sims persuaded some photographers to help her compile a portfolio. Agencies

Supermodel Naomi Sims on the cover of Life magazine in 1969



Yale Joel—Time Life Pictures/Getty Images

continued to reject her, however, even after she scored (1967) the cover of the *New York Times* fashion supplement then known as *Fashions of the Times*. Sims then made an agreement with former model Wilhelmina Cooper, who was forming her own agency, to send copies of that supplement to various advertising agencies, with the caveat that Cooper would earn a commission if agencies called her in response. Soon afterward Sims began earning weekly paychecks of \$1,000. Her star rose steadily; in addition to *Ladies' Home Journal*, she appeared on the cover of *Life* (1969) and *Cosmopolitan* (1973) magazines and did runway modeling for several top designers. After ending her modeling career (1967–73) she developed a synthetic fibre that resembled straightened black hair, and she launched the Naomi Sims Collection of wigs. The business thrived, and in 1981 Sims introduced her signature fragrance. In 1985 she launched Naomi Sims Beauty Products Ltd., which by 1989 was grossing \$5 million annually.

Snodgrass, William D(e)Witt (S.S. GARDONS), American poet (b. Jan. 5, 1926, Wilkesburg, Pa.—d. Jan. 13, 2009, Erieville, N.Y.), composed verse that was distinguished by a careful attention to form and by a relentless yet delicate examination of personal experiences. His first collection, *Heart's Needle* (1959), which won the Pulitzer Prize, is marked by careful formal control and a sensitive and solemn delineation of his experience of losing access to his daughter through divorce; that work was credited with ushering in the confessional poetry that became the hallmark of the 1970s and '80s. The collection *After Experience* (1968) continued these formal and thematic concerns. In his later work, including *Remains* (1970), *If Birds Build with Your Hair* (1979), and *D.D. Byrde Calling Jennie Wrenn* (1984), he employed free verse. In *W.D.'s Midnight Carnival* (1988) and *The Death of Cock Robin* (1989), each poem is paired with a painting by DeLoss McGraw. Other writing by Snodgrass includes numerous translations of European ballads and *In Radical Pursuit* (1975), a volume of criticism. *The Führer Bunker: A Cycle of Poems in Progress* (1977) is a collection of poems written as dramatic monologues by various Nazis who shared Adolf Hitler's last days. The complete cycle, with later additions, was published in 1995.

Söderström, (Anna) Elisabeth, Swedish soprano (b. May 7, 1927, Stockholm, Swed.—d. Nov. 20, 2009, Stockholm), was a member of the Swedish Royal Opera for more than three decades and performed regularly at London's Covent Garden, New York City's Metropolitan Opera, and other opera venues. She was also in demand for recitals until well into her 60s. Söderström was known for her superb acting and her rich creamy voice, notably in Claudio Monteverdi and Mozart roles early in her career and later in operas by Tchaikovsky, Richard Strauss, and Leos Janáček. She also excelled at contemporary works and sang in the 1988 world premiere of Dominick Argento's *The Aspern Papers*. Söderström studied at the Royal Academy of Music in Stockholm and made her professional debut in 1947 at the nearby Drottningholm Court Theatre, where she returned as artistic director (1993–96) after retiring from the stage.

Sonnenfeldt, Richard Wolfgang, German-born American interpreter (b. July 23, 1923, Berlin, Ger.—d. Oct. 9, 2009, Port Washington, N.Y.), served as the chief interpreter and sometime interrogator for American prosecutors at the post-World War II Nürnberg trials of accused Nazi war criminals. Sonnenfeldt's Jewish parents sent him to England to be educated, but in 1940 he was deported to Australia as an enemy alien. He was allowed to leave Australia, and after a harrowing journey across the ocean and three continents, he managed to reunite with his family in 1941 in Baltimore, Md., where he became a U.S. citizen and worked as an electrician. While serving as a private in the army, Sonnenfeldt was a member of the American forces that liberated the Dachau concentration camp in 1945. His bilingual fluency led to his recruitment for the trials after the war.

Sosa, Mercedes (HAYDÉE MERCEDES SOSA), Argentine folk singer (b. July 9, 1935, San Miguel de Tucumán, Arg.—d. Oct. 4, 2009, Buenos Aires, Arg.), was known as “the voice of the voiceless” for her songs that spoke of the struggle for economic and political justice. She was a leading proponent of the *nueva canción* movement of the 1960s, which used traditional music to express political themes. Sosa, who possessed a powerful and dramatic alto voice, was known as a peerless interpreter of songs written by others. Her first album, *La voz de la zafra*, appeared

in 1959, but it was her 1965 performance at Argentina's national folklore festival in Cosquín that brought her national attention and increasing popularity. After the military took power in 1976, she was subject to official harassment that culminated in the public arrest of Sosa, her band, and much of her audience at a concert in 1979. Sosa went into exile, during which time she began to expand her repertoire to include other forms of popular music; she returned to Argentina in 1982. She won Latin Grammy Awards for best folk album in 2000 for *Misa Criolla*, in 2003 for *Acústico*, in 2006 for *Corazón libre*, and in 2009 for *Cantora Vol. 1*.

Storm, Gale (JOSEPHINE OWAISSA COTTLE), American actress and singer (b. April 5, 1922, Bloomington, Texas—d. June 27, 2009, Danville, Calif.), was the vivacious star of two popular television sitcoms, *My Little Margie* (1952–55) and *The Gale Storm Show: Oh! Susanna* (1956–60); she also enjoyed a recording career with a number of chart-topping hit songs, including “I Hear You Knockin’,” “Teenage Prayer,” “Memories Are Made of This,” “Why Do Fools Fall in Love?,” “Ivory Tower,” and “Dark Moon.” Storm, who broke into show business as the winner of the Gateway to Hollywood national talent contest, also appeared in a number of films, including three with Roy Rogers, notably *Red River Valley* (1941).

Sugden, Mollie (MARY ISOBEL SUGDEN), British actress (b. July 21, 1922, Keighley, West Yorkshire, Eng.—d. July 1, 2009, Guildford, Surrey, Eng.), gained cult status on both sides of the Atlantic as ladies' wear department head Mrs. Betty Slocombe on BBC television's bawdy sitcom *Are You Being Served?* (1972–85), as well as the 1977 movie of the same name and the 12-episode BBC sequel, *Grace and Favour* (1992–93; U.S. title, *Are You Being Served? Again*). Sugden's Mrs. Slocombe delighted the show's fans with her outrageously coloured bouffant hair and makeup, ambiguous double-entendres (especially those relating to her “pussy,” Tiddles), and girlish chats with her assistant, Miss Brahms (played by Wendy Richard [*q.v.*]), as well as such deadpan catchphrases as “I am unanimous in this.” Sugden was credited with creating Mrs. Slocombe's ever-changing coiffure by dying her own hair a different vivid colour for each episode of the show's first season; she later wore

a series of incredible wigs—often multihued ones. Sugden also had continuing roles on *Hugh and I* (1962–66), *The Liver Birds* (1971–79, 1996), *Come Back Mrs. Noah* (1977–78), *That's My Boy* (1981–86), and *My Husband and I* (1987–88), the latter opposite her real-life husband, actor William Moore.

Suzman, Helen (HELEN GAVRONSKY), South African legislator and anti-apartheid activist (b. Nov. 7, 1917, Germiston, S.Af.—d. Jan. 1, 2009, Johannesburg, S.Af.), as a longtime member (1953–89) of the South African Parliament, was an outspoken advocate for the country's nonwhite majority. In 1948, when the largely Afrikaner proapartheid National Party won the national elections, Suzman joined the United Party, a moderate coalition of Afrikaners and English-speaking white South Africans. She was elected to Parliament in 1953. Six years later she and 11 other liberal MPs formed the aggressively anti-apartheid Progressive Party, but in the 1961 elections only Suzman was re-elected, and until 1974 she was the sole antiapartheid MP. Serving as an advocate for the disenfranchised, Suzman was in constant conflict with her conservative colleagues and often cast the lone vote against apartheid measures.

*South African antiapartheid activist
Helen Suzman*



Sarie—Gallo Images/Alamy

After retiring from Parliament in 1989, Suzman was president (1991–93) of the South African Institute of Race Relations, served on the Independent Electoral Commission that oversaw the country's first multiracial election in 1994, and was a member (1995–98) of the Human Rights Commission. Her dedication to human rights and democracy garnered many honours and led to the establishment of the Helen Suzman Foundation, which promoted liberal democracy.

Swayze, Patrick Wayne, American actor and dancer (b. Aug. 18, 1952, Houston, Texas—d. Sept. 14, 2009, Los Angeles, Calif.), used his New York City training with the Harkness and the Joffrey Ballet schools to captivate audiences in his breakout performance as a seductive dance instructor in the smash-hit film *Dirty Dancing* (1987) and went on to even greater acclaim as the romantic lead in the box-office sensation *Ghost* (1990); he received Golden Globe nominations for both movies, which became cult classics. He appeared briefly as Danny Zuko in the original Broadway production of *Grease* before making his film debut in *Skatetown, U.S.A.* (1979). Such films as *The Outsiders* (1983), *Red Dawn* (1984), *Road House* (1989), *Next of Kin* (1989), and *Point Break* (1991) followed. *People* magazine in 1991 selected him as one of the 50 Most Beautiful People in the World. Other film roles include *To Wong Foo, Thanks for Everything, Julie Newmar* (1995), in which Swayze played against type as a drag queen, and *Dirty Dancing: Havana Nights* (2004). On television Swayze appeared as the rebel soldier Orry Main in the two-part (1985–86) miniseries *North and South*, and in 2009, despite battling pancreatic cancer (diagnosed in January 2008), he starred in the series *The Beast*.

Taylor, Koko (CORA WALTON), American blues singer (b. Sept. 28, 1928, Bartlett, Tenn.—d. June 3, 2009, Chicago, Ill.), forged a musical career that spanned nearly half a century and earned her the nickname “Queen of the Blues.” In the early 1950s, she moved to Chicago with Robert (“Pops”) Taylor, whom she later married. She worked as a housekeeper during the day and frequented blues clubs at night. It was while singing at one of these clubs in 1963 that Taylor came to the attention of Chess Records producer Willie Dixon, who promptly signed her to that label. Tay-

James F. Quinn—MCT/Landov



“Queen of the Blues” Koko Taylor

lor was soon recording with such blues legends as Buddy Guy, Big Walter Horton, and Robert Nighthawk. Under Dixon's guidance, Taylor released a pair of albums and a number of singles for Chess, most notably the 1965 hit “Wang Dang Doodle.” That song, which thrust Taylor into the mainstream, sold more than a million copies and reached the top five on the *Billboard* rhythm-and-blues chart. With the demise of Chess in the early 1970s, Taylor moved to Alligator Records, where she recorded a string of albums over the next three decades that helped solidify her place as a preeminent female blues vocalist. She garnered eight Grammy Award nominations and collected more than two dozen Blues Music Awards. Health issues slowed her recording output in the 2000s, but Taylor's final album, *Old School* (2007), featured vocals as robust and brassy as ever.

Tellado, Corín (MARÍA DEL SOCORRO TELLADO LÓPEZ), Spanish romance novelist (b. April 25, 1927, Viavélez, Spain—d. April 11, 2009, Gijón, Spain), produced more than 4,000 popular romance novellas that were widely read in both Spain and Latin America; many were turned into radio and television serials. Tellado's stories were set in the present, and because during much of her career she was subject to draconian

censorship under the rule of Francisco Franco, they were suggestive rather than sexually explicit. She published her first novella in 1946, and the following year the Bruguera publishing house engaged her to write one short novel each week. In 1951, Tellado contracted with the Hispanic women's magazine *Vanidades* to contribute two novellas a month. After Franco's death in 1975, she published several erotic novels under pseudonyms.

Tikhonov, Vyacheslav, Russian actor (b. Feb. 8, 1928, Pavlovsky Posad, Russia, U.S.S.R.—d. Dec. 4, 2009, Moscow, Russia), appeared in dozens of films, most famously as a Soviet war hero or spy. The aristocratically handsome, quintessentially Russian actor gained international renown for his turn as Prince Andrey Bolkonsky in Sergey Bondarchuk's monumental film adaptation (1967) of Leo Tolstoy's novel *War and Peace*, which won the Academy Award for best foreign-language film in 1968. He left his job as a metalworker in 1945 to attend a state film school and made his screen debut in *Molodaya gvardiya* (1948; *The Young Guard*) while still a student. Tikhonov continued to win parts in various wartime dramas, including *Zhazhda* (1959; "Thirst"), which marked his first appearance in the oft-repeated role of a spy. In the television series *Semnadtsat mgnoveniy vesny* (1973; "Seventeen Moments of Spring"), adapted from Yulian Semyonov's novel of the same name, Tikhonov achieved cult status playing a spy masquerading as a high-ranking German officer. He was later named the People's Actor of the U.S.S.R.

Todd, Richard (RICHARD ANDREW PALETHORPE-TODD), Irish actor (b. June 11, 1919, Dublin, Ire.—d. Dec. 3, 2009, Little Humby, Lincolnshire, Eng.), earned a reputation for his intensity and force playing military men and dashing heroes in such films as *Rob Roy*, *the Highland Rogue* (1953), *The Dam Busters* (1955), and *The Hasty Heart* (1949), for which he received an Academy Award nomination for best actor. Todd, the son of an army officer, had a childhood that was split between England, India, and his native Ireland. He enrolled in drama school in the hopes of becoming a playwright but soon switched his focus to performing. He cofounded the Dundee (Scot.) Repertory Company, but his career was interrupted by World War II. In his memoirs, *Caught in the Act* (1986), Todd, a genuine war hero, compared

his experiences parachuting into Normandy on D-Day to preparing for a role onstage. After the war he won the part of the dying Scotsman in the 1945 Broadway production of *The Hasty Heart*, the same role that he would later immortalize on-screen. His skill with a Scottish accent also earned him the role of Peter Marshall, the Scottish American chaplain of the U.S. Senate, in the film biography *A Man Called Peter* (1955). He was made OBE in 1993.

Torres, José ("CHEGUI"), Puerto Rican boxer (b. May 3, 1936, Ponce, P.R.—d. Jan. 19, 2009, Ponce), reigned (1965–66) as world light heavyweight (175 lb) champion after knocking out American Wilfred (Willie) Pastrano in the ninth round on March 30, 1965; he defended his title four times before losing the last bout on Dec. 16, 1966, in a 15-round decision to Dick Tiger of Nigeria. On May 16, 1967, Torres lost a championship rematch with Tiger on another 15-round decision. In addition, Torres was a member of the 1956 U.S. Olympic boxing team and a silver medalist in the light middleweight (156.5 lb) division before turning professional in 1958. After Torres retired in 1969 with a record of 41 wins (29 by knockouts), 3 losses, and 1 draw, he stayed active in the sport, working as a journalist for boxing publications. He was president (1990–95) of the World Boxing Organization (WBO) and was inducted into the International Boxing Hall of Fame in 1997.

Toulmin, Stephen Edelston, British philosopher and educator (b. March 25, 1922, London, Eng.—d. Dec. 4, 2009, Los Angeles, Calif.), was particularly noted for his study of the history of ideas. In his work on ethics, Toulmin was concerned with describing prescriptive language—that is, imperative sentences and value judgments used for ethical statements—while holding that ethics, or the logical study of moral language, cannot be reduced to subjective or objective facts but is a unique expression of duty or right. Toulmin studied mathematics and physics at Kings College, Cambridge (B.A., 1942), and then returned to Cambridge after his World War II military service to study philosophy (M.A., 1946; D.Phil., 1948) under Ludwig Wittgenstein and John Wisdom. Toulmin lectured at the University of Oxford before becoming department head and professor at the University of Leeds (1955–59) and director (1960–64) of the Nuffield Foun-

dation's Unit for the History of Ideas. He then moved to the U.S., where he taught. Toulmin's books include *The Uses of Argument* (1958), *Human Understanding* (1972), *The Return to Cosmology: Postmodern Science and the Theology of Nature* (1982), *Cosmopolis: The Hidden Agenda of Modernity* (1990), and *Return to Reason* (2001).

Travers, Mary Allin, American folk singer (b. Nov. 9, 1936, Louisville, Ky.—d. Sept. 16, 2009, Danbury, Conn.), performed as part of the popular folk music trio Peter, Paul, and Mary, which was known for smooth harmonies and earnest, often politically tinged anthems. Despite the group's soft-edged sound, their lyrics addressed the issues of the civil rights movement, and in 1963 the trio performed at the Rev. Martin Luther King, Jr.'s March on Washington. The group's protest songs included covers of Bob Dylan's "Blowin' in the Wind" and "The Times They Are a-Changin'," and they scored hits with renditions of John Denver's "Leaving on a Jet Plane" and the Pete Seeger–Lee Hayes call to arms "If I Had a Hammer." Having studied music in her youth, Travers sang backup for Seeger and appeared in the brief Broadway

Mary Travers of the American folk-singing trio Peter, Paul, and Mary



Central Press/Getty Images

run of *The Next President*. It was her central role in the burgeoning Greenwich Village folk scene, however, that ensured her a place in musical history. Though quite shy, she began performing folk arrangements in 1961 with fellow singers Peter Yarrow and Noel Paul Stookey. The following year the group released its first album, the self-titled *Peter, Paul, and Mary*. It coasted to the top of the charts, as did the albums *Movin'* (1963) and *In Concert* (1964). Though the group disbanded in 1970, and Travers embarked on a solo career, the trio often reunited for concerts.

Tshabalala-Msimang, Manto (MANTOMBAZANA EDMIE TSHABALALA-MSIMANG), South African physician and politician (b. Oct. 9, 1940, Durban, S.A.—d. Dec. 16, 2009, Johannesburg, S.A.), as South Africa's health minister (1999–2008), earned the epithet Dr. Beetroot for her insistence that AIDS could be treated with vitamins and a diet rich in such vegetables as garlic, potatoes, and beets. Tshabalala-Msimang denied that HIV caused AIDS and actively prevented the distribution in South Africa of antiretroviral drugs, which she denounced as poison. A report from Harvard University researchers in 2008 estimated that Tshabalala-Msimang's policies, supported by South African Pres. Thabo Mbeki, resulted in more than 350,000 premature deaths from AIDS. Tshabalala-Msimang was active from an early age in the African National Congress and spent many years living in exile. After graduating (B.A., 1961) from the University of Fort Hare in Cape Province, she studied medicine at First Leningrad Medical Institute (now St. Petersburg Medical University; M.D., 1969) and pursued an advanced degree in obstetrics and gynecology (1972) at the University of Dar es Salaam, Tanz. Returning to South Africa in 1990, she was elected to Parliament in 1994 and joined the government as deputy justice minister in 1996 before being named health minister. At the time of her death, due to complications from a liver transplant in 2007, she was reportedly preparing a presentation modifying her earlier stand on AIDS and denying that she had ever opposed the use of antiretroviral drugs.

Robert Spencer—The New York Times/Redux



Pulitzer Prize-winning novelist and poet John Updike

Updike, John Hoyer, American writer (b. March 18, 1932, Reading, Pa.—d. Jan. 27, 2009, Danvers, Mass.), was renowned for his careful craftsmanship and realistic but subtle depiction of “American, Protestant, small-town, middle-class” life. After graduating (1954) from Harvard University, Updike began (1955) an association with *The New Yorker* magazine, to which he contributed editorials, poetry, stories, and criticism throughout his career. His poetry—intellectual, witty pieces on the absurdities of modern life—was gathered in his first book of verse, *The Carpentered Hen and Other Tame Creatures* (1958), which was followed by his first novel, *The Poorhouse Fair* (1958). *Rabbit, Run* (1960), considered to be one of Updike's best novels, concerns a former star athlete who is unable to recapture success when bound by marriage and small-town life and flees responsibility. Three novels, *Rabbit Redux* (1971), *Rabbit Is Rich* (1981), and *Rabbit at Rest* (1990)—the latter two of which won Pulitzer Prizes—follow the same character during later periods of his life. *Rabbit Remembered* (2001) returns to characters from those books in the wake of Rabbit's death. In addition to Harry (“Rabbit”) Angstrom, Updike often expounded upon other characters from earlier novels, omitting decades of their lives only to place them in the

middle of new adventures. *The Witches of Eastwick* (1984; filmed 1987), a black comedy about a coven of modern witches, was followed by *The Widows of Eastwick* (2008), which trails the women into old age. *Bech: A Book* (1970), *Bech Is Back* (1982), and *Bech at Bay* (1998) humorously traced the tribulations of a Jewish writer. Updike's several collections of short stories include *The Same Door* (1959), *Pigeon Feathers* (1962), *Museums and Women* (1972), and *Trust Me* (1987). *Still Looking: Essays on American Art* (2005) examines both art and its cultural presentation, and *Due Considerations* (2007) collects later commentary spanning art, sexuality, and literature. Two works were published posthumously: the book of verse *Endpoint and Other Poems* and *My Father's Tears and Other Stories*.

Upward, Edward Falaise, British writer (b. Sept. 9, 1903, Romford, Essex, Eng.—d. Feb. 13, 2009, Pontefract, West Yorkshire, Eng.), was the last surviving member of a close circle of literary friends who helped shape English literature in the 1930s; several associates—notably novelist Christopher Isherwood and poets W.H. Auden and Stephen Spender—credited Upward as a key influence on their own development. Upward was educated at Repton College, where he met Isherwood, and Corpus Christi, Cambridge (B.A., 1924; M.A., 1925). While attending Cambridge together, Upward and Isherwood crafted a series of fantastic stories set in a fictional English village called Mortmere. The often outrageous tales were widely circulated in manuscript among the pair's friends but were not published until *The Mortmere Stories* appeared in 1994. Although his first novel, *Journey to the Border*, was published by Leonard and Virginia Woolf in 1938, Upward's literary efforts were often eclipsed by his fierce leftist perspective (he had joined the Communist Party in 1932), and he did not publish again for many years. Upward's later works include *The Railway Accident and Other Stories* (1969), a trilogy of autobiographical novels (*In the Thirties* [1962], *The Rotten Elements* [1969], and *No Home but the Struggle* [1977]) that were published jointly as *The Spiral Ascent* (1977), and *A Renegade in Springtime* (2003).

Valenzuela, Ismael ("MILO"), American jockey (b. Dec. 24, 1934, McNary, Texas—d. Sept. 2, 2009, Arcadia, Calif.), won more than 130 major horse races, including the Kentucky Derby twice, during a career that spanned nearly 30 years. Valenzuela raced quarter horses as a child and won his first Thoroughbred race at age 16. In 1958 he rode Tim Tam to victories in the Kentucky Derby and the Preakness Stakes, and he matched the feat 10 years later aboard Forward Pass. Valenzuela experienced his greatest success, however, with five-time Horse of the Year honoree Kelso, which he guided to 22 wins in 35 races between 1962 and 1964. Valenzuela was elected to the National Racing Hall of Fame in 2008.

Van Bruggen, Coosje, Dutch-born American art historian and writer (b. June 6, 1942, Groningen, Neth.—d. Jan. 10, 2009, Los Angeles, Calif.), worked closely for more than three decades with her Swedish-born husband, Pop artist Claes Oldenburg, on more than 40 Large-Scale Projects, giant sculptures of everyday items, including the iconic *Batcolumn* (1977) in Chicago, *Spoonbridge and Cherry* (1988) at the Walker Art Center in Minneapolis, Minn., *Shuttlecocks* (1994) at the Nelson-Atkins Museum of Art in Kansas City, Mo., and *Flying Pins* (2000), which was commissioned by the city of Eindhoven, Neth. After having studied art history at the University of Groningen, van Bruggen was hired as an assistant curator at Amsterdam's Stedelijk Museum. She first met Oldenburg in 1970, but it was not until 1976, when she was teaching at the Academy of Fine Arts in Enschede, that the couple reconnected. They were married in 1977 and settled in New York City. Oldenburg credited van Bruggen as a full collaborator in the design of his massive sculptures from the beginning of their marriage, although her signature was not officially attached to any of the Large-Scale Projects until the University of Nevada, Las Vegas, commission *Flashlight* (1981).

Van Es, Hubert (HUGH), Dutch photojournalist (b. July 6, 1941, Hilversum, Neth.—d. May 15, 2009, Hong Kong, China), was a war photographer whose work spanned decades and included coverage of such conflicts as the Soviet invasion of Afghanistan and the Moro rebellion in the Philippines, but he was most famous for his 1975

image of evacuees lining up on a Saigon rooftop to board a helicopter at the frenzied close of the Vietnam War. Often erroneously said to show the American embassy in Saigon—in reality, it depicts an apartment building that housed the CIA station chief and his staff—the photograph came to have iconic status as an encapsulation of the futility of the U.S. war effort. From 1972 to 1975 he documented the Vietnam War for United Press International, after which he returned to Hong Kong, where he spent the rest of his life as a photojournalist in Asia.

Vandenbroucke, Frank, Belgian cyclist (b. Nov. 6, 1974, Mouscron, Belg.—d. Oct. 12, 2009, Saly, Senegal), had an unsteady career marked by early success but marred by drugs and instability that overshadowed his celebrated skill as a cyclist. Following a rural upbringing in a Belgian village—and despite a childhood injury that led to several surgeries—Vandenbroucke won his first race at the age of 17. He emerged onto the professional scene in 1994 and dominated in more than 50 races, including the Paris–Nice and Ghent–Wevelgem in 1998 and the Liège–Bastogne–Liège in 1999. That year marked his first drug arrest, by French police. Additional drug arrests, suicide attempts, and his wife's claims of domestic violence continually clouded Vandenbroucke's life, and his numerous attempts at making a comeback were repeatedly derailed. He was found dead of a pulmonary embolism.

Varennikov, Valentin Ivanovich, Russian military officer and politician (b. Dec. 15, 1923, Krasnodar *kray* [territory], Russia, U.S.S.R.—d. May 6, 2009, Moscow, Russia), was an ardent nationalist who helped lead the failed 1991 coup against Soviet Pres. Mikhail Gorbachev. Varennikov was a veteran of the Battles of Stalingrad (1942–43) and Berlin (1945) and rose to prominence during the Cold War. In 1984 he commanded Soviet forces in Afghanistan. He was seconded to oversee the cleanup of Chernobyl following the 1986 nuclear accident and then returned to Afghanistan, where he remained until Soviet forces withdrew in 1989. He was awarded the Hero of the Soviet Union and promoted to deputy defense minister. Following the 1991 coup attempt, he refused a proffered amnesty and was subsequently

acquitted of any wrongdoing. Varennikov was elected to Russia's State Duma (lower house of parliament) in 1995.

Venkataraman, Ramaswamy, Indian politician and lawyer (b. Dec. 4, 1910, Rajamadam, Madras [now Tamil Nadu], India—d. Jan. 27, 2009, New Delhi, India), was president of India from July 25, 1987, to July 25, 1992; in this largely ceremonial post, he provided relative stability amid a politically turbulent period during which he appointed three prime ministers. Venkataraman studied law at the University of Madras and in 1935 began his legal practice in Madras (now Chennai). He became involved in India's independence struggle and was consequently jailed (1942–44) by the British. After his release he practiced law, founded (1949) the *Labour Law Journal*, and helped draft newly independent India's constitution, which was adopted in 1950. Venkataraman was elected (1950) to the Provisional Parliament as a member of the Indian National Congress party. He subsequently was a member of the Lok Sabha (lower house of Parliament) during 1952–57 and from 1977 onward. From 1957 to 1967 he was minister of industry and labour for the state of Madras. Venkataraman eventually joined the central government, serving as minister of finance and industry (1980–82), minister of defense (1982–84), and vice president (1984–87) before being elected president by an electoral college.

Vieira, João Bernardo ("NINO"), Guinea-Bissauan politician (b. April 27, 1939, Bissau, Portuguese Guinea [now Guinea-Bissau]—d. March 2, 2009, Bissau), was president (1980–99 and 2005–09) of his country, but ethnic tensions, rivalries within the ruling African Party for the Independence of Guinea and Cape Verde (PAIGC), and ongoing conflict between Vieira and the military led to his temporary exile in 1999–2005 and to his eventual assassination. Vieira, a member of the minority Papel ethnic community, trained as an electrician before joining (1960) PAIGC and fighting in the liberation war against the colonial power, Portugal. After independence in 1974, he served as Guinea-Bissau's minister of defense (1974–78) and prime minister (1978–80), and in 1980 he took control in a bloodless coup against Pres. Luís Cabral. Having achieved a modicum of economic and political stabil-

ity, Vieira won the country's first multiparty presidential vote in 1994 and was reelected four years later. He was overthrown in 1999, but another coup in 2003 expedited his return from exile in Portugal. Running as an independent, Vieira was unexpectedly returned to power in the 2005 presidential poll. He survived an assassination attempt in November 2008, but on March 2, 2009, one day after the army chief of staff died in a bomb attack, Vieira was shot dead by government soldiers.

Wahid, Abdurrahman (GUS DUR), Indonesian Muslim religious leader and politician (b. Sept. 7, 1940, Denanyar,

Paula Bronstein—Newsmakers/Getty Images



Indonesian Muslim scholar and political leader Abdurrahman Wahid

East Java, Dutch East Indies [now Indonesia]—d. Dec. 30, 2009, Jakarta, Indon.), was (1999–2001) the first president of Indonesia to be elected through a vote by the People's Consultative Assembly, as opposed to the earlier, consensus-seeking process. He was a well-known scholar who opposed radical Islamism and encouraged interfaith dialogue for the promotion of world peace. Wahid's grandfathers were co-founders of the world's largest Islamic organization, the Nahdlatul Ulama

(NU). He studied the Qur'an intensively at a religious boarding school founded by his paternal grandfather and in Jakarta when his father was Indonesia's first cabinet minister for religion. Wahid earned (1963) a scholarship at Al-Azhar University in Cairo, but instead of studying more scripture, he devoured New Wave movies, read French and English books, and studied Marxism. Leaving without a degree, he moved to Baghdad, where his religious writings attracted attention. After returning to Indonesia in the early 1970s, Wahid became a scholar. He was made general chairman of the NU in 1984. He also headed the political discussion group Forum Demokrasi, which welcomed dissidents and human rights advocates. Wahid was honoured (1993) with the Magsaysay Award and was subsequently elected (1994) to lead the World Council on Religion and Peace. In 1994 President Suharto loyalists within the NU tried in vain to end Wahid's chairmanship. In the wake of the forced resignations of Suharto (1998) and his successor, Bacharuddin Jusuf Habibie (1999), Wahid was elected president, but economic and political instability, coupled with a corruption crisis in which he was implicated, led to his impeachment and removal from office in 2001.

Waller, Gordon (GORDON TRUEMAN RIVIERE WALLER), British singer (b. June 4, 1945, Braemar, Aberdeenshire, Scot.—d. July 17, 2009, Norwich, Conn.), was the lanky lower-voiced member of the pop-singing duo Peter and Gordon during the so-called musical British Invasion of the 1960s. Between 1964 and 1968, Waller and his red-haired school chum and singing partner, Peter Asher, racked up nine top 20 hit records. The duo were especially known for romantic ballads with plaintive lyrics and close vocal harmonies—including “Nobody I Know,” “I Don't Want to See You Again,” “I Go to Pieces,” “True Love Ways,” and “Woman”—with the notable exception of the novelty hit “Lady Godiva.” Their debut single, “A World Without Love” (written by Beatle Paul McCartney, as were several of their later records), reached number one on the charts in both the U.K. and the U.S. After Peter and Gordon amicably split in 1968, Asher became a successful record producer and manager, while Waller pursued a solo singing career, which included the 1972 album *Gordon* (U.S. title, . . . and Gordon) and a stint on-

stage (1973) in *Joseph and the Amazing Technicolor Dreamcoat*. He later settled in the U.S., where he ran a music publishing company.

Walters, Sir Alan Arthur, British economist, government adviser, and educator (b. June 17, 1926, Leicester, Eng.—d. Jan. 3, 2009, London, Eng.), as Prime Minister Margaret Thatcher's chief economic adviser—both unofficially (from 1976) and officially (1981–84, 1989)—formulated the monetarist economic policies that characterized Thatcher's government; he was particularly noted for his endorsement of tax increases and spending cuts in the recession budget of 1981 and for his strong opposition to Britain's joining a common European currency. Prime Minister Edward Heath in 1970 offered Walters a part-time advisory position, which ultimately led to his job with Thatcher. In 1989 Chancellor of the Exchequer Nigel Lawson, who supported a common European currency, accused Walters of interfering with his department. When Thatcher refused to dismiss Walters, Lawson resigned, as did Walters; the scandal contributed to Thatcher's fall from power a year later. Walters was knighted in 1983.

Wasserstein, Bruce, American financier (b. Dec. 25, 1947, Brooklyn, N.Y.—d. Oct. 14, 2009, New York, N.Y.), played a pivotal role in some of the largest corporate acquisitions of the 1980s and 1990s (he was involved in some 1,000 deals) and was renowned for his aggressive tactics, which were recounted, along with other such maneuvers, in the best-selling book *Barbarians at the Gate: The Fall of RJR Nabisco* (1990). While in graduate school he worked as one of Nader's Raiders (the name given to consumer activist Ralph Nader's acolytes) and became interested in corporate mergers and acquisitions while studying at the University of Cambridge. In 1972 Wasserstein joined the law firm Cravath, Swaine & Moore, but in 1976 Joseph Perella lured him to the corporate acquisitions department of First Boston. The two men became dominant players in mergers and acquisitions at First Boston and later through Wasserstein Perella, a private equity firm they founded in 1988. Perella quit in 1993, and Wasserstein sold the firm for a total of \$1.56 billion in 2001. Notorious for talking up the value of a takeover target, Wasserstein helped raise Kohlberg Kravis Roberts's 1989

buyout of RJR Nabisco to \$31 billion, earning the nickname "Bid 'em up Bruce." After moving in 2002 to Lazard Ltd., one of Wall Street's most time-honoured investment banks, he wrested control of the firm from Michel David-Weill (whose ancestors had founded Lazard in 1848), assumed the title of CEO, and in 2005 took the firm public. At the time of his death, Wasserstein was chairman of private investment firm Wasserstein & Co.

Whitmore, James, American actor (b. Oct. 1, 1921, White Plains, N.Y.—d. Feb. 6, 2009, Malibu, Calif.), won critical acclaim for his live one-man shows during the 1970s; he portrayed the title character in *Will Rogers' U.S.A.*, Harry Truman in *Give 'Em Hell, Harry!*—the film version (1975) earned him an Academy Award nomination—and Theodore Roosevelt in *Bully!* The burly Whitmore, whose roughly hewn features were ably suited to war films, earned an Oscar nomination for his portrayal of platoon sergeant Kinnie in the World War II drama *Battleground* (1949). Other film credits include *The Asphalt Jungle* (1950), *Oklahoma!* (1955), *Guns of the Magnificent Seven* (1969), *Tora! Tora! Tora!* (1970), and *The Shawshank Redemption* (1994). Whitmore also appeared on several television programs, including *The Twilight Zone*, *Gunsmoke*, *Bonanza*, *CSI: Crime Scene Investigation*, and *The Practice*, for which he won (2000) an Emmy Award as outstanding guest actor in a drama series. His first love was the theatre, however, and he earned a Tony Award as the best newcomer for his performance in the Broadway production *Command Decision* (1947).

Willoughby, Bob (ROBERT HANLEY WILLOUGHBY), American photographer (b. June 30, 1927, Los Angeles, Calif.—d. Dec. 18, 2009, Vence, France), specialized in creating portraits that captured Hollywood stars in unguarded moments, especially when they were involved in film rehearsals or relaxing backstage. His candid shots were a departure from the glamour photos that were popular during the 1950s. Early in his career Willoughby compiled (1949–54) a portfolio that profiled dancers and jazz performers. His first

Hollywood assignment, as a special photographer for Warner Bros. studios, featured Judy Garland in *A Star Is Born* (1954). He covered more than 100 films. Other favourite subjects included Audrey Hepburn (he collected her images in two books: *Audrey: An Intimate Collection* [2002] and *Remembering Audrey 15 Years Later* [2008]), Marilyn Monroe, Frank Sinatra, Dustin Hoffman, and Anne Bancroft. Willoughby's works were housed in the National Portrait Gallery, London; the Museum of Modern Art, New York City; and the Bibliothèque Nationale, Paris, among others. He lived in Ireland from 1972 until 1989 and then moved to the south of France.

Woods, Gordon, American equine reproduction specialist (b. July 14, 1952, Idaho—d. Aug. 20, 2009, Loveland, Colo.), was a leader of the team of University of Idaho and Utah State University scientists whose research led to the birth (2003) of the first equine clone—a mule named Idaho Gem. Woods also was known for his pioneering research into the use of equines as models for better understanding of human disease.

Woodward, Edward (EDWARD ALBERT ARTHUR WOODWARD), British actor (b. June 1, 1930, Croydon, Surrey, Eng.—d. Nov. 16, 2009, Truro, Cornwall, Eng.), received five Emmy Award nominations for his portrayal of a disillusioned intelligence agent turned good-guy vigilante in the American television show *The Equalizer* (1985–89). He had previously shot to fame in his native Britain playing another embittered spy on television's *Callan* (1967–72), for which he won a BAFTA in 1970. Woodward studied acting at the Royal Academy of Dramatic Art, making his stage debut in 1946. He performed Shakespeare in London and made his first appearance on Broadway in 1963, which led to his being cast in Noël Coward's long-running musical *High Spirits*.

Wyeth, Andrew Newell, American artist (b. July 12, 1917, Chadds Ford, Pa.—d. Jan. 16, 2009, Chadds Ford), was a watercolourist and worker in tempera noted primarily for his realistic depictions of the buildings, fields, hills, and people of his personal world. Wyeth's father, N.C. Wyeth, was a well-known illustrator who had studied under Howard Pyle and who, starting in 1932, served as his son's only teacher. The subject matter of Andrew Wyeth's works came almost entirely from two localities, the Brandywine Valley around Chadds Ford and the area near his summer home in Cushing, Maine. His work displays a strong linear quality, and within his limited palette—consisting mostly of earth tones—he achieved a subtly extensive range of colour. His paintings are precise and detailed, yet he moved them beyond photographic naturalism by imbuing them with a sense of subjective emotion. *Christina's World* (1948), his best-known painting, achieves a note of melancholy in its depiction of a disabled woman whom Wyeth knew seemingly trying to crawl up a hill. This work also exemplifies his use of unusual angles and his mastery of light. Between 1971 and 1985 Wyeth secretly painted Helga Testorf, his neighbour in Chadds Ford, creating hundreds of images of her, including nudes. Wyeth's first exhibition was in 1936 at the Art Alliance of Philadelphia, but his first im-

American artist Andrew Wyeth with a print of his painting *Her Room*



Bill Ingraham/AP

portant New York City show occurred in 1937 at the Macbeth Gallery, where every painting was sold. His 1967 exhibition at the Whitney Museum of American Art in New York City established a new attendance record for that institution. Other important exhibitions included a 1987 show of his "Helga pictures," organized by the National Gallery of American Art in Washington, D.C., and a 2006 retrospective at the Philadelphia Museum of Art. Wyeth was the first painter to receive the Presidential Freedom Award (1963), the first American artist since John Singer Sargent to be elected to the French Académie des Beaux-Arts (1977), the first living American artist to be elected to Britain's Royal Academy (1980), and the first artist to be awarded the U.S. Congressional Gold Medal (1990). In 2007 he was a recipient of the National Medal of the Arts.

Yang, Jerry (YANG XIANGZHONG), Chinese-born American reproductive biologist (b. July 31, 1959, Weixian, Hebei province, China—d. Feb. 5, 2009, Boston, Mass.), was a pioneer in cloning research who in 1999 succeeded in producing the first cloned farm animal in the U.S.—a Holstein calf named Amy. He was able to show that cloned animals could have a normal life span and also helped to determine that meat and dairy products from cloned animals would be safe for human consumption.

Yang Xianyi, Chinese translator and intellectual (b. Jan. 10, 1915, Tianjin, China—d. Nov. 23, 2009, Beijing, China), together with his wife, Gladys—the daughter of a British missionary to China—made a number of classical and modern Chinese works available in English. He also translated the works of such writers as Homer, Aristophanes, Jules Verne, and George Bernard Shaw into Chinese and was considered the foremost Chinese literary translator. Yang was the son of a banker. He studied classics at Merton College, Oxford, where he met his wife. In 1940 Yang returned to China with his wife, and together they began working as translators, joining the Foreign Languages Press in 1952. Yang was instrumental in founding the periodical *Chinese Literature*, a leading source of translations from the Chinese. Like many other intellectuals in China, the Yangs were arrested during the Cultural Revolution; they were held separately for four years (1968–72). Before

and after that period, they translated selected works by the first Chinese historian, Sima Qian, and stories from several periods of Chinese literature (such as *The Courtesan's Jewel Box: Chinese Stories of the Xth to XVIIth Centuries*, *Poetry and Prose of the Tang and Song*, and *A Dream of Red Mansions*), as well as a number of 20th-century works, including many by Lu Xun, Ding Ling, Guo Moruo, and Liu E. Yang's autobiography, *White Tiger*, was published in 2002.

Yankovsky, Oleg (OLEG IVANOVICH YANKOVSKY), Russian actor (b. Feb. 23, 1944, Jezkazgan, Kazakhstan, U.S.S.R. [now in Kazakhstan]—d. May 20, 2009, Moscow, Russia), won critical and commercial acclaim as one of the U.S.S.R.'s most popular figures of stage and screen. Yankovsky was admired for his ability to elicit complex emotions and to inhabit characters; his handsome features made him something of a sex symbol, a label he found insulting. He graduated from the Solonov Actors Studio in 1965 and joined the Saratov Theatre Company. Yankovsky moved to the big screen with *Shchit i mech* (1968; "Shield and Sword") and appeared in more than 70 films, notably *Tot samyi Myunkhauzen* (1979; "That Very Munchhausen"). Internationally he was perhaps best known for his work with Soviet filmmaker Andrey Tarkovsky in *Zerkalo* (1975; "The Mirror") and *Nostalghia* (1983; "Nostalgia"). Yankovsky was recognized for his ability to humanize historical figures, appearing notably as Vladimir Ilich Lenin in a stage adaptation of *Blue Horses on Red Grass* (1979). In his final film, *Tsar* (2009), he played Metropolitan Philip, the saintly adversary of the first Russian tsar, Ivan the Terrible. In 1991 Yankovsky was the last actor named a People's Artist of the Soviet Union.

Yow, (Sandra) Kay, American basketball coach (b. March 14, 1942, Gibsonville, N.C.—d. Jan. 24, 2009, Cary, N.C.), was a legendary figure in women's college basketball who served (1975–2009) as the head coach at North Carolina State University and became one of the winningest coaches in National Collegiate Athletic Association (NCAA) Division I history. She tallied a career coaching record of 737–344 over 38 seasons on the collegiate level and, at the time of her death, was one of only six Division I women's basketball coaches to have won 700 games. Aside

Robert Willett—Raleigh News & Observer/MCT/Landov



American college basketball coach
Kay Yow

from leading North Carolina State to 20 appearances in the NCAA tournament—including a berth in the Final Four in 1998—Yow was the head coach of the U.S. women's team that captured a gold medal at the 1988 Olympic Games in Seoul. She was inducted into the Naismith Memorial Basketball Hall of Fame in 2002. Yow, who waged a long battle with breast cancer, was known for her efforts to promote research and awareness of the disease, which included helping to establish the Kay Yow/WBCA Cancer Fund in 2007.

Zamecnik, Paul Charles, American molecular biologist (b. Nov. 22, 1912, Cleveland, Ohio—d. Oct. 27, 2009, Boston, Mass.), co-discovered (1956) tRNA (transfer ribonucleic acid), a molecule essential for protein synthesis, and pioneered research into antisense DNA, which selectively inhibits the activity of genes. In 1990 he co-founded Hybridon, Inc. (now Idera Pharmaceuticals), a company that specialized in the development of antisense therapeutics; he served as a member of Idera's board of directors until 2006. Zamecnik was elected to the National Academy of Sciences (1968) and received the National Medal of Science (1991) and the Albert Lasker Award for Special Achievement in Medical Science (1996).



2009 Special Reports



A child soldier (top) stands at the front line of combat in eastern Democratic Republic of the Congo. Cotton-top tamarin monkeys (middle) are shown at the Drayton Manor Theme Park and Zoo in Tamworth, Eng. On the outskirts of Peshawar, Pak., local boys (bottom) walk over the rubble of a girls' school that was destroyed in a bombing carried out by suspected Islamist militants.

Photos: (background) Shutterstock; (top) Finbarr O'Reilly—Reuters/Landov; (middle) David Jones/AP; (bottom) Mohammad Sajjad/AP



U.S. Marines (left) monitor the flight of an unmanned aerial vehicle in remote southwestern Afghanistan. Protesters (right) vent their outrage over government bailouts for corporations outside the offices of American International Group in New York City.

Photos: (left) John Moore—Getty Images; (right) Jason DeCrow/AP

Photos: (top) Gregory Bull/AP; (bottom) Oli Scarff—Getty Images

Dressed as a mariachi, a police officer (top) wears a surgical mask as a precaution against the H1N1 virus as he monitors a tourist area in Mexico City. A G-Wiz electric vehicle (bottom) sits parked at a charging bay in London's Berkeley Square.



The Great Recession



Upset over rising unemployment and a rapidly deteriorating economy, Latvians gather for an antigovernment demonstration in Riga on January 13.

by Joel Havemann

When 2009 dawned, no one knew whether the global financial crisis that had burst into full bloom the previous autumn would develop into the second Great Depression. Twelve months later, what many called the Great Recession showed signs of coming to an end, and the worst appeared to have been averted. On the whole, private economists applauded the U.S. government's response to the crisis at hand, but some of the remedies enacted there and in

other countries seemed poised to haunt the world economy in years to come.

Even if the financial crisis did not send the world back to the 1930s, it turned economic growth into contraction in many countries and slowed expansion practically everywhere else. The ripple effects of the financial crisis ranged far beyond the financial. Governments fell in Iceland and Latvia. The Chinese brushed aside pleas for more accommodating human rights and currency valuation policies. European political union was put under strain. Japan proposed

only weak measures to combat climate change.

Most of the major industrial democracies adopted domestic government programs designed to awaken their slumbering economies; the U.S. package, at \$787 billion, was the biggest. The world's economic outlook brightened as the year proceeded, however, and most countries began growing again in mid-2009 after recessions that were, for most, the deepest since the Great Depression. In a rare exception, China escaped the slump; if anything, the global recession burnished

▲ 1/8/2009 ▼ 1/26/2009 ▲ 2/6/2009 ▼ 2/17/2009 ▲ 2/27/2009

The Bank of England cuts its interest rate from 2% to 1.5%, the lowest since the bank's founding in 1694. It lowers the rate again in March, to 0.5%.

Iceland's government falls owing to the collapse of the country's economy.

It is reported that 3.6 million jobs have been lost in the U.S. since the recession began in December 2007.

Pres. Barack Obama signs a \$787 billion economic stimulus bill into law.

The U.S. reports that the economy shrank 6.2% in the final quarter of 2008, not 3.8% as previously stated.

China's apparent ambition to challenge U.S. dominance in the global economy. (See Special Report on page 174.)

The U.S. Leads the Way. The U.S. housing market was the domino that, when it fell, toppled many of the world's major economies and led the world into recession. For the first half of the decade, aggressive investing by homebuyers, mortgage lenders, Wall Street investment houses, and insurers had driven up the median price of a single-family home by almost 10% a year, with housing in some parts of the country escalating even faster. When home prices headed back down in 2007, large numbers of homeowners faced rising adjustable-rate mortgage payments and/or could no longer borrow against a rising home value to finance other expenses. By the middle of 2009, the median home price had fallen close to its 2000 level. Those with heavy investments in housing, including risky mortgage-backed securities, found them all but worthless. The government stepped in with a massively expensive bailout program in late 2008 and continuing into 2009.

The devastation to the U.S. economy spread far beyond housing. The banking industry was especially hard hit. (See Sidebar on page 219.) Altogether, 176 banks in the U.S. failed in 2009, many of them small and local. Even financially secure banks, not trusting potential borrowers to pay them back, stopped lending. Businesses—especially small and new businesses—could not find the credit that they needed to pay creditors or buy inventory or to pay their own workers, much less to hire new ones. Even short-term interest rates close to zero did not fully thaw credit markets. Businesses that relied on their customers' ability to secure loans had a rough time. Automakers General Motors (GM) and Chrysler, both of which reorganized after brief trips through bankruptcy in 2009, qualified for bailout money. The overall economic slowdown sent stock prices reeling, with the benchmark Dow Jones Industrial Average (DJIA) sinking by about 54% in the 17 months from the market high in October 2007 to the trough in March 2009.



As U.S. Transportation Secretary Ray LaHood (centre, background) looks on, Colorado Gov. Bill Ritter (right, foreground) and other officials use jackhammers during the ceremonial groundbreaking for a bicycle trail and highway reconstruction project in Lakewood, Colo., on June 30. The project was funded by the \$787 billion fiscal stimulus package passed by the U.S. Congress in February.

As 2009 began, comparisons with the Great Depression were as common as foreclosed houses in Nevada, but there was one important difference: policy makers this time had the experience of the Depression to guide them. They identified three policy areas where they vowed not to make the same mistakes that seemed to have prolonged the Depression: fiscal, monetary, and trade.

In the 1930s, national leaders generally pledged allegiance to fiscal policies based on balanced budgets. With tax revenue falling in tandem with economic growth, balancing budgets meant cutting spending just when economies needed to stimulate business expansion and job growth. This time around, however, political leaders poured money into such projects as road construction and schools. Although some governments were more aggressive than others, just about all countries joined the stimulus parade.

In 1929 the U.S. Federal Reserve Board (Fed), seeking to restrain a speculative rise in stock prices, instituted a monetary policy of tight money and high interest rates. The economy predictably contracted, and the Depression officially began that August. Neverthe-

less, the Fed further tightened its grip on the money supply in 1931, adding to the squeeze on the domestic economy. Through all of 2009, however, the Fed held the Fed Funds rate (the interest rate that banks pay each other for overnight loans) in a range of 0.0–0.25%. Most other central banks also loosened monetary policy. The Fed and many of its foreign counterparts also injected capital into banks and bought their shaky loans.

When economies go haywire, there is a natural tendency to close ranks by tightening trade policy and refraining from buying foreign goods. In 1930 the U.S. Congress enacted the Smoot-Hawley import tariffs. Many U.S. trading partners followed suit. The result was a decline in world trade volume estimated in late 1932 at about 30% and still growing, an outcome almost universally seen as having fueled the Great Depression. This time there was no such rush to protect industry at home, although worldwide trade actually dropped even more sharply in the current financial crisis than during the beginning of the Depression. This was not the result of new trade barriers; rather, the faltering global economy sapped

▲ 3/9/2009	▼ 4/22/2009	▲ 4/30/2009	▼ 6/1/2009	▲ 8/17/2009
The Dow Jones Industrial Average (DJIA) closes at 6547.05, its lowest level of the year.	The IMF projects that the world economy will shrink 1.3% in 2009, the first global contraction since World War II.	Chrysler LLC files for bankruptcy protection; after a merger with Italy's Fiat, it emerges on June 10.	General Motors, once the world's largest corporation, files for bankruptcy; it emerges on July 10.	Japan reports that its economy grew by 0.9% in the second quarter; thus, the country is no longer in recession.

demand for goods and services, whether produced at home or abroad.

The World Follows. Enlightened decision making may have blocked another Depression, but it could not prevent a great deal of misery. The financial crisis struck individual countries with an impact that depended heavily on two factors: whether local institutions had ties to the U.S. financial sector and whether the local economy depended on export sales to the West. Most of the developed countries had close financial and trade relations with the United States. Of the 33 countries that the International Monetary Fund considered to have “advanced economies,” only Australia seemed likely to avoid a period of contraction.

The dynamic economies of Asia were well positioned, and three large Asian countries—India, Indonesia, and China—escaped relatively unscathed. At least in the short run, India benefited from having isolated itself from the crosscurrents of the global economy. Japan’s economy, the largest in the world after the U.S., was fused to the West’s, and Japan marched alongside the West into recession. With a large economic stimulus package in place, however, Japan pulled out of recession in the third quarter of 2009. Fearful that strict limits on greenhouse gas emissions could cripple the economic rebound, the Japanese government proposed weaker limits than those under discussion in Europe and the U.S.

Europe, with its close financial and trade ties to the U.S., stood in sharp contrast to Asia. Even Norway, which had virtuously invested its North Sea oil revenue with considerable prudence while the U.K. was spending its windfall on government programs, could not escape recession. Norway slipped into a mild slump in late 2008 and emerged early in 2009. Most of the rest of Europe fared worse. Many countries approved economic stimulus packages to extricate themselves from recession, and many resumed economic growth, although the U.K., Spain, and others remained in recession for the first nine months of 2009. In the fourth quarter, the U.K. barely emerged from recession,

with growth of 0.1%. Reflecting fears of future inflation, the stimulus programs in Europe were smaller than those in the U.S. Perhaps more significant, the largesse stopped at national borders. Germany, France, and other wealthy European Union countries defeated Hungary’s request that the EU’s Western European members give \$240 billion to members in Eastern Europe to combat the slump.

Hardest hit were countries at the four “corners” of Europe: Iceland, Latvia, Greece, and Spain. Iceland became the first country to lose its government over the financial crisis. Iceland’s three largest banks, privatized in the early 1990s, had grown fat on securities trading, but they failed in 2008 when the financial crisis left them unable to pay a mountain of foreign obligations. The conservative prime minister resigned in January 2009 and was replaced by a leftist, Jóhanna Sigurðardóttir (see BIOGRAPHIES), who promptly recapitalized the banks.

International trade—or the sudden lack of it—was Latvia’s undoing. Latvia had boasted Europe’s strongest economic growth rate (10%) as recently as 2007. Then the tables turned, and the Latvian economy shrank at double-digit rates in 2009—possibly the worst performance in Europe, although its Baltic neighbours, Lithuania and Estonia, were not far behind. In the Latvian capital of Riga, a street demonstration in January to protest economic decline turned violent, and a month later the prime minister resigned.

In Greece, where the budget deficit reached nearly 13% of annual economic output (even greater than the 11% in the U.S.), the three credit-rating services—Fitch, Moody’s, and Standard and Poor’s—downgraded the country’s debt. At year’s end Greece had the lowest credit rating of the 16 countries in the euro zone. That made it more expensive for Greece to finance its debt, which at 130% of economic output was nearly the highest in Europe. A default on its debt would be a giant headache not only for Greece but also for the entire EU. Spain, whose budget deficit was rocketing toward 11%, was on the

same path as Greece, although less far along. Standard and Poor’s also downgraded Spain, which started at a much higher level.

The fiscal problems that put Greece and Spain on a slippery slope were common across Europe, especially among economies that had grown the most (largely on borrowed money) during the heady early years of the decade. Ireland, heretofore an EU success story, was a typical case. The Irish government, determined not to let the budget deficit reach 13%, proposed to raise taxes, cut benefits, and trim government workers’ pay.

The U.S. Response. In the United States, the government followed a two-pronged strategy to reverse the financial crisis: bail out distressed financial institutions (lest they transmit their failure to their creditors) and pump government money into the economy (to stimulate business activity when private loans were scarce). What emerged from the bailout was an extraordinary degree of government involvement in—and sometimes even majority ownership of—the private sector. Altogether, the government by late 2009 had provided an estimated \$4 trillion to keep the financial sector afloat. Many of the biggest bailout beneficiaries quickly paid the government back, and the ultimate cost of the bailout to taxpayers was estimated at “only” \$1.2 trillion.

Congress in February handed Pres. Barack Obama the first legislative triumph of his month-old presidency when it enacted a \$787 billion fiscal stimulus bill that comprised \$288 billion in tax cuts and \$499 billion in spending, most of it for public-works programs such as school construction and highway repair. Although Republicans groused that checks for much of the \$499 billion would be issued too late to do any good, the nonpartisan Congressional Budget Office said that thanks to the tax measures, about three-quarters of the full \$787 billion would be spent in 18 months. Obama claimed that the bill would create or preserve 3.5 million jobs, a figure that many of his opponents called far too optimistic.

▲ 9/1/2009	▼ 10/16/2009	▲ 10/29/2009	▼ 11/6/2009	▲ 11/13/2009
New figures reveal that unemployment in the euro zone rose in July to 9.5%, the highest in a decade.	The U.S. reports the largest budget deficit since 1945, \$1.4 trillion, or 10% of GDP.	It is reported that the U.S. economy grew 3.5% in the third quarter and has emerged from recession.	U.S. unemployment figures show an increase to 10.2% in October, the high for the year and the first double-digit rate since 1983.	The euro zone is no longer in recession, with a reported 1.6% annualized growth in the third quarter.

Congress also played a role in the bailout of failing financial institutions. At the end of 2008, Congress enacted the Troubled Asset Relief Program (TARP) authorizing the Department of the Treasury to invest up to \$700 billion by buying unproductive real-estate investments or even becoming part owners by purchasing financial company stock. The Fed, using authority that it already had, played an even bigger role. Printing more money when not enough was available, the central bank invested heavily in foundering institutions and guaranteed the value of their shaky assets. By the end of 2009, the government owned almost 80% of American International Group (AIG), the country's biggest insurer, at a cost of more than \$150 billion. It also owned 60% of GM and had a stake in some 700 banks. It initially spent \$111 billion to prop up Fannie Mae and Freddie Mac, the companies sponsored by Congress to buy mortgages from their issuers. The government promised to play no role in managing these companies and to sell its ownership stakes as soon as practical. TARP provided the Treasury with only a fraction of the funds used for the bailout, however. The Fed was responsible for the lion's share, and even the massive AIG rescue was engineered entirely outside the legislated Treasury Department program.

Reflecting public views, members of the government expressed outrage that some of the same executives who helped precipitate the financial crisis should make millions of dollars a year in salaries and bonuses. Treasury Secretary Timothy Geithner (*see* BIOGRAPHIES) appointed a "special master for executive compensation" to review the compensation packages of top financial executives at firms that received bailouts. Many of the biggest bailout beneficiaries balked at the proposed salary limits and strove to get out from under them by paying the government back.

More ominously for the financial institutions, many members of Congress marched into 2010 with a determination to regulate them more closely. The House passed a bill in 2009 that for the



A house in San Antonio, Texas, faces imminent foreclosure.

first time would bring exotic financial instruments under review by federal regulators. The bill would also establish a single agency to protect financial consumers and guarantee shareholders a chance to vote on the compensation packages of corporate executives. The Senate planned to take up the issue in 2010.

An Uncertain Future. Despite the year-end sighs of relief over the improving economy, the economic destruction had not necessarily run its course. Many banks that survived the crisis were badly bruised by the collapse of the housing market and remained less willing than before to provide the credit that greases all capitalist economies. Huge government budget deficits, designed to facilitate economic growth in the short term, loomed like dark clouds on the horizon, threatening inflation and currency devaluations. Low interest rates encouraged immediate business activity, but, like budget deficits, they could ultimately feed inflation. International trade, which suffered as countries hunkered down and adopted "me-first" policies, held below precrisis levels. In the U.S., foreclosure rates were high and rising. Nearly one house

in four was worth less than what the occupants owed on the mortgage, and similar problems in commercial real estate were mounting.

Despite this, harbingers of prosperity were not hard to find. Stock markets turned robustly upward, with the DJIA making up half of its losses by year-end 2009. Although unemployment in the U.S. reached a peak of 10.2%, its highest level since 1983, it declined to 10%, and the 2.2% annual growth rate that the economy registered in the third quarter suggested future job growth. Economists even took heart from the plight of Dubai World, a government-owned developer in Dubai, U.A.E., that could not pay back \$3.5 billion in loans by a December 14 deadline. Just in the nick of time, fellow emirate Abu Dhabi bailed out Dubai with \$10 billion. Not only was that enough to get Dubai World well beyond its immediate default date, but it also proved that not every financial cough would mean pneumonia for the global economy.

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▲ 11/30/2009

Canada's economy reportedly grew at an annualized rate of 0.4% in the third quarter and has exited recession.

▼ 12/3/2009

Gold hits a record-high \$1,217.40 an ounce.

▲ 12/14/2009

Citigroup and Wells Fargo become the last major American banks to exit the Troubled Asset Relief Program.

▼ 12/31/2009

The DJIA closes 2009 at 10,428.05, up 18.8% for the year and 59.3% from the March low; the Nasdaq composite is up 43.9% for the year. Gold closes the year at \$1,095.20, and oil closes at \$79.36.

China and the New World Order

by Janet H. Clark

On Oct. 1, 2009, Beijing marked the 60th anniversary of the founding of communist China by an exhibition of its military strength, with a huge and impressive cavalcade of Chinese-built fighter aircraft and military hardware. The Chinese space industry also was developing at a rapid pace. These technical advances—combined with China's booming economy during a worldwide downturn and its increasing visibility on the international diplomatic stage—attested to the country's strong progress toward superpower status.

In contrast to much of the world, China's economy in 2009 demonstrated extraordinary resilience with a return to rapid economic growth—expected to exceed 8.5%—which the government attributed to its version of communism in contrast to laissez-faire capitalism. Early in the year the closure of export-producing factories in the south and east coastal areas resulted in a flow of millions of workers back to rural areas. In 2008 the high cost of food and fuel had squeezed household budgets, and tight monetary and credit policies were adopted to prevent inflation and overheating. This caused a slump in China's construction industry and property markets. The government responded quickly to this in November 2008 with a stimulus package of 4 trillion yuan (about \$586 billion). Nearly half of the



Fireworks fill the sky over Beijing's Tiananmen Square during the October 1 commemoration of the 60th anniversary of the founding of the communist People's Republic of China.

package was designated for development of the country's infrastructure, much of it in the rural areas, including airports and railways, with another 25% for reconstruction of Sichuan province, which had been devastated by an earthquake in May 2008. State banks were instructed to accelerate lending. This resulted in a 164% surge in renminbi/yuan loans in the first eight months of 2009, which allowed the economy to rebound quickly in comparison with other large economies. Exports were recovering well in the second half of the year, and China looked to be on target to surpass Germany as the world's top exporter. There was growing speculation as to whether China could return to the dominant position that it held until the early 19th century, when it accounted for a third of the world's manufactured output, compared with less than a quarter in the West. A year-end free-trade deal with the Association of Southeast Asian Nations made this outcome even more likely.

China, as the world's biggest creditor, had a mutually advantageous relationship with the United States, the world's largest debtor, that had become crucial in the rebalancing of the world economy. On March 23 a statement released by Zhou Xiaochuan, governor of the People's Bank of China (PBOC), called for the U.S. dollar to be replaced as the dominant world currency by an international currency that would be un-

connected with individual countries and would remain stable over the long term. The PBOC suggested that Special Drawing Rights, created by the IMF in 1969 for use between governments and international institutions, could be used much more widely and adopted for payment in international trade and financial transactions, thereby reducing price fluctuations and the associated risks. This bold initiative was repeated in July in Italy at the annual summit of the Group of Eight (G-8) advanced countries. Members of the so-called Group of Five (China, India, Brazil, Mexico, and South Africa) emerging economies were invited to attend, and China, with India and G-8 member Russia, called for an end to dollar domination of the international monetary system. World Bank president Robert Zoellick warned that the U.S. dollar was under threat from the growing strength of the Chinese yuan and the euro. China had overtaken Japan as the U.S.'s main creditor, and Beijing expressed concern that U.S. indebtedness and falling confidence in the dollar would undermine the value of its \$800.5 billion of U.S. Treasury securities and other dollar assets, which together accounted for two-thirds of China's \$2.2 trillion foreign-exchange reserves and one-third of total world foreign-exchange reserves.

In 2009 international attention was increasingly focused on China's burgeoning overseas investments, especially in

Africa. China's investments in some oppressive regimes there evoked criticism in the West, but its reputation as Africa's "best friend" was reflected in the November Forum on China-Africa Cooperation meeting in Egypt, where Chinese Premier Wen Jiabao was warmly welcomed by more than 50 African leaders and government ministers. The World Bank welcomed China's involvement in Africa, especially when many other aid donors were in financial difficulty. Trade between China and Africa exceeded \$106 billion in 2008, and nearly 10% of China's overseas direct investment was destined for Africa. In early November 2009 alone, several multibillion-dollar deals were made in swaps of minerals for infrastructure aid, and China promised \$10 billion in cheap loans. It had given loans of up to \$20 billion by 2009 to fund Angola's post-civil war reconstruction and in return had benefited from millions of barrels of oil.

China's financial strength enabled it to take a more benign view of investments that were more risky or in hostile environments than could many other heavily indebted countries. In early November the state-owned China National Petroleum Corporation (CNPC), jointly with the U.K.'s BP, signed the largest oil deal with Iraq since the 2003 U.S.-led invasion of that country. More significant was Beijing's willingness to invest in war-torn Afghanistan, where the state-owned China Metallurgical Group



An ethnic Uighur protester (right) confronts paramilitary police during a demonstration on July 7 in Urumqi, the capital of China's Xinjiang region.

(MCC) had begun development of the Aynak copper field, believed to be one of the world's largest undeveloped copper reserves, located south of Kabul in a former al-Qaeda stronghold. MCC won the concession with a \$3 billion bid because of its promise to build a coal-based power plant and construct Afghanistan's first freight railway. In August economic ties with Myanmar (Burma) were strengthened through a \$5.6 billion gas project in the Bay of Bengal. The Shwe gas project was to supply the CNPC with gas for 30 years via a \$2 billion pipeline to China's Yunnan province border with Myanmar.

Although it had experienced impressive economic performance, China remained a low-income country, a factor that could hinder its progress toward superpower status. Despite the rapid growth of China's middle class, the gap between rich and poor continued to widen, and regional disparities contin-

ued. Badly needed improvements to the infrastructure were being accelerated in 2009, but job shortages persisted both in the rural areas and for the rapidly growing urban college-graduate workforce. A demographic time bomb also was looming as a result of China's one-child policy. The working-age population was expected to start to shrink by 2015, and it was projected that in 2050 there would be only 1.6 working-age adults to support each person over age 60, compared with 7.7 in

1975. In July the government took the first steps toward relaxing the one-child policy, but it could prove to be too little too late.

Meanwhile, China's preoccupation with its 55 official minorities was costly in time and money. These peoples accounted for only 8.5% of the 1.3 billion population but inhabited sparsely populated regions encompassing two-thirds of the land, much of it rich in natural resources, and many were located on the borders and represented a strategic threat. In July the simmering problem of the minorities was drawn to international attention by the plight of the mainly Muslim Uighur people in Xinjiang region, which was home to 20 million people from 13 major ethnic groups. Bloody rioting in 2009 in Urumqi, the capital of Xinjiang, claimed the lives of 197 people, with nearly 2,000 others injured. China's inability to fully integrate the Tibetans also remained an ongoing concern.

While 2009 marked a watershed for China's global influence, it was difficult to judge the country's longer-term aspirations. While the reputation of the U.S. was tarnished in the wake of the Iraq invasion and the collapse of many American banks, that of China had been enhanced by its rapid economic progress. For the vast majority (92%) of China's population, the willingness of the communist government to develop an increasingly capitalist economic system was not incompatible, and most Chinese citizens lived comfortably in a society that was once again being encouraged to adopt the fundamental values of Confucianism, a philosophy that demands a hierarchy and respect for authority.

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(Top) Ng Han Guan/AP;
(bottom) Steven Shaver—UPI/Landov

Mexico's Raging Drug Wars

by Jorge Chabat



Forensic investigators inspect the body of a man who had been handcuffed to a fence and shot to death by drug hitmen outside a nightclub in Juárez in August.

Though drug trafficking flourished in Mexico throughout much of the 20th century, the ever-increasing brutal violence associated with the production and trafficking of illicit drugs had by 2009 sparked the dispersal of 45,000 Mexican soldiers and 5,000 policemen across the country and attracted worldwide attention as images of beheaded corpses were featured in the international media. From December 2006 (when Felipe Calderón succeeded Vicente Fox as president of Mexico) to October 2009, some 14,000 people in the country were executed by drug traffickers, and more than 3,000 of those deaths occurred during the first half of 2009 alone. These statistics underscored the enormity of the situation and the fact that the Mexican government was at war with a very powerful enemy.

The Wave of Violence. During the 20th century Mexico was a primary source of marijuana and heroin for the U.S. market, and since the 1980s the country had served as an important transit point for South American cocaine destined for the U.S. The marked escalation in drug-related violence in the 21st century could be partly attributed to the rise to power of younger cartel leaders, more prone to violence, who took the place of their bosses when vast numbers of them were arrested in a crackdown during the Fox administration (2000–06). Another factor was the dramatic increase since the late 1990s in the consumption of illegal drugs in Mexico; as domestic consumption grew, fights between drug cartels erupted over new territories. As part of their preparations for war against other cartels, many drug-trafficking organizations hired trained mercenaries. The

Gulf cartel based in the border city of Matamoros, for example, recruited a group of former Mexican army commandos called the Zetas, who became known for their efficient use of violence. Other cartels recruited members of Central American street gangs, or *maras*, as well as former Guatemalan elite troops known as the Kaibiles.

Most of the recent killings resulted from confrontations between the cartels. Approximately 90% of those murdered were linked to the drug trade. The remainder were policemen and soldiers—some of them probably involved in drug trafficking—and a small number of civilians. The spike in violence between the cartels was one sign of the accelerating fragmentation of these organizations. The big cartels that appeared in the mid-1990s in Mexico—such as the Tijuana, Juárez, Sinaloa, and Gulf cartels—by 2009 did not exist in the same configuration. Splits occurred in all of them, with new groups emerging to challenge for control over the drug trade. This fragmentation along with the growth in the domestic market for illegal drugs led not only to more executions but also to the increasing brutality with which killings were carried out. The purpose of this cruelty was twofold: it was used to intimidate other cartels, and it created an image of extreme violence in the country that might lead to public pressure on the Mexican government to modify its antidrug strategy. Many bodies of those executed had been found with messages intended for other drug-trafficking organizations as well as for the Mexican authorities. The cartels also posted messages in public places accusing the government of having engaged in corruption or of having favoured one cartel over the others; in addition, they were said to sponsor popular protests against the presence of the army in some parts of the country. In response, the Calderón administration argued that organized crime was waging a



A Mexican marine sets afire bales of seized marijuana at a naval base in the port city of Guaymas.

propaganda war in an effort to intimidate the government into backing down from its fight against drug trafficking.

The Government's Dilemma. Over the past three years, criticism of the extreme violence and the government's use of military forces in combating drug trafficking increased. Some of Calderón's critics suggested openly or implicitly that the government should return to the policy of tolerance of—or even complicity with—drug trafficking that was for the most part adhered to by the Institutional Revolutionary Party (PRI), which ruled Mexico from 1929 to 2000. This argument was based on the fact that during those years there were lower levels of drug-related violence. It was tolerance, however, that allowed the cartels to grow to the point that they became a serious national security threat. This policy was possible in an authoritarian system in which the rule of law did not exist. A negotiation or even a simple indifference to the activities of drug traffickers would be impossible in a truly democratic system. Clearly, tolerance was not an option for the Calderón administration. Consequently, the Mexican government in the short term decided to combat drug trafficking with the few resources it had. Unfortunately, the Mexican state historically had very poor law-enforcement tools; institutions were weak, corruption was rampant, legal culture was virtually nonexistent, and human and material resources were insufficient. The Mexican government was forced to fight this war handicapped. It was precisely the weakness of the Mexican state that precipitated the high levels of violence seen during recent years. If the cost of tolerance is corruption and the

aggravation of the problem, the cost of confrontation is violence.

Calderón's Bet: Strengthening Institutions. Calderón made the fight against drug trafficking a priority of his government. Some argued that this was an easy way to secure domestic legitimacy, given his close and contested victory in the presidential elections of 2006. When he became president, however, drug traffickers controlled significant parts of the country, and there was a clear demand

With Mexican army soldiers standing guard, Eduardo Morquecho (centre), a U.S. citizen with suspected links to the Arellano Félix cartel, is displayed to the press along with drugs, guns, and equipment seized during his arrest in Tijuana in July.



from the public for a harder stance against this phenomenon. Several polls confirmed popular support for Calderón's efforts. In a poll conducted at the end of 2008, 72% of Mexicans considered the government's attempts to combat drug trafficking to be adequate. Another poll taken in July 2009, after the country's midterm elections, revealed that 51% of Mexicans believed that the government was going to win the war in the long run; only 31% thought that the drug traffickers would win. This high level of domestic support allowed Calderón to promote significant reforms of the police force and judicial system—reforms that were supported by all political parties. The proposed changes, which included the establishment of oral trials (rather than those conducted secretly through written briefs) and the strengthening of the federal police force in the hope that it could replace the army in the war on drug trafficking, promised to give the government more resources to fight organized crime.

Perspectives. If the security reforms approved over the past three years are successful, the Mexican government may be able to control the pervasive effects of drug trafficking. The goal is to transform the problem of drug trafficking into a public security issue rather than a national security threat. The final result, however, is uncertain. The main obstacle that the Mexican government faces is corruption. If the government is unable to control corruption, the Mexican war on drugs will be lost, and the temptation to go back to the policy of tolerance—despite the fact that it will likely worsen the problem—will be tremendous. If that happens, at some point Mexico and the international community will have to think of alternatives “outside the box,” such as legalizing or decriminalizing some drugs. Although in August Mexico decriminalized small-scale drug possession, this move only suggested that the government considers it pointless to prosecute small-time users; it does not mean that the legalization of drugs is imminent—a still very distant scenario. Meanwhile, the only choice that the Mexican government has is to continue to fight drug trafficking and have faith that when the judicial and police-related reforms are put into place, they will be successful.

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Pakistan's Precarious Security Situation

by Lawrence Ziring

The year 2009 was a pivotal one in the history of Pakistan. Violent events were shaking Pakistani society at its roots and occurring with increasing frequency in ever more numerous settings. A consequence of both internal and foreign circumstances, the nuclear weapons-owning country found itself struggling to cope with forces that it set in train as well as those imposed from afar. The ongoing fight against Islamic militants—notably al-Qaeda, Taliban, and Punjabi extremists—escalated, especially along the border with Afghanistan and the adjacent regions where Taliban strongholds were located: the North-West Frontier Province (NWFP) and the Federally Administered Tribal Areas (FATA). (See MAP.) An interested observer would thus need a historical perspective to understand Pakistan's long and thus far failed attempts to achieve a modicum of stability.

By the start of the 21st century, Pakistan had never known true security, which many thought might account for its long tryst with military dictatorships and the resulting stunting of its political process. Established as a predominantly Muslim but supposedly secular state in the wake of the United Kingdom's retreat from empire, Pakistan, like India, was the consequence of an outstanding South Asian personality. Mohammed Ali Jinnah shared the spotlight with Mohandas K. Gandhi in the days leading up to the partition of British India in August 1947, but unlike the Mahatma, who chose not to participate in the political process following British dispensation, Jinnah assumed the role as Pakistan's first head of state, and it was around him that the government took form. Gandhi's assassination soon after the transfer of power therefore did not have the impact on India's governance as Jinnah's death hardly a year after Pakistan's independence. Jin-



Bystanders watch as fires triggered by an exploding car bomb sweep through a busy market in Peshawar, Pak., in October. Some 80 people were killed.

nah left a power vacuum that could not be filled. Moreover, his vision of a progressive state could not be institutionalized, and the country drifted from its intended objective to a series of arbitrary maneuvers that eventually opened the way for the Pakistan army to dominate the political scene.

From the moment of independence, Pakistan found itself locked in a violent contest with India. Immediately following the transfer of power, India and Pakistan went to war over the northern Kashmir territory, and their conflict set the scene for a bitter relationship in the decades that followed. The two countries waged war again in 1965 and most significantly in 1971. Although the latter struggle was largely played out in Pakistan's Bengal province, it could not be kept from spilling over into Kashmir. Moreover, the loss of East Bengal (East Pakistan [now Bangladesh]), as a consequence of New Delhi's intervention in the Pakistan civil war, ended the original Pakistan. Humiliated by the success of Indian arms, the Pakistan army fell

back on a substitute strategy that emphasized avoiding direct conflict with its larger, more powerful neighbour but nevertheless aimed at sustaining the struggle for Kashmir through clandestine means. The Pakistan army's role in raising, equipping, and deploying jihadists for operations in Kashmir brought an end to the country's pre-civil war secular objectives. Islamist organizations, practicing obscurantist versions of religious expression and marginalized in the original Pakistan, came to assume mainstream roles in the army and throughout the country.

Still another dimension of Pakistan's security dilemma was its ties to the United States. Pakistan's membership in the Southeast Asia Treaty Organization (SEATO) in 1954 and the Baghdad Pact in 1955 (subsequently the Central Treaty Organization [CENTO] in 1958) brought the country American military assistance, ostensibly to defend the region against communist forces but in actuality to balance the threat posed by India. Moreover, although the Soviet

Union proved difficult to woo, Pakistan saw no contradiction in establishing relations with Communist China. Just as Pakistan straddled both sides in the Cold War, however, its American ally also practiced inconsistencies, most notably during the 1965 war with India, when the U.S. refused to support Pakistan. More significant, however, was Pakistan's role as a frontline state when the Soviet Union invaded neighbouring Afghanistan in 1979, and Washington, after some hesitation, judged Pakistan a proxy in its contest with Moscow. Washington's decision to abandon the region following the Soviet army's withdrawal in 1989, however, left the Pakistanis to shape their future free of U.S. interference. The consequence of this was the Pakistan army's determination not only to sustain the struggle for Kashmir but also to establish a sphere of influence over Afghanistan.

Islamabad, which continued to perceive New Delhi as its number one enemy, sought to bolster Pakistan's defenses by developing more significant capabilities along the Pakistan/Afghanistan frontier. Thus any attempt by the multiethnic and tribal Afghans to rebuild their country following the Soviet retreat was sabotaged by Pakistani military maneuvers. Moreover, the sustained chaos in Afghanistan allowed Pakistan to introduce a third force into the region, a still more virile jihadist array known as the Taliban.

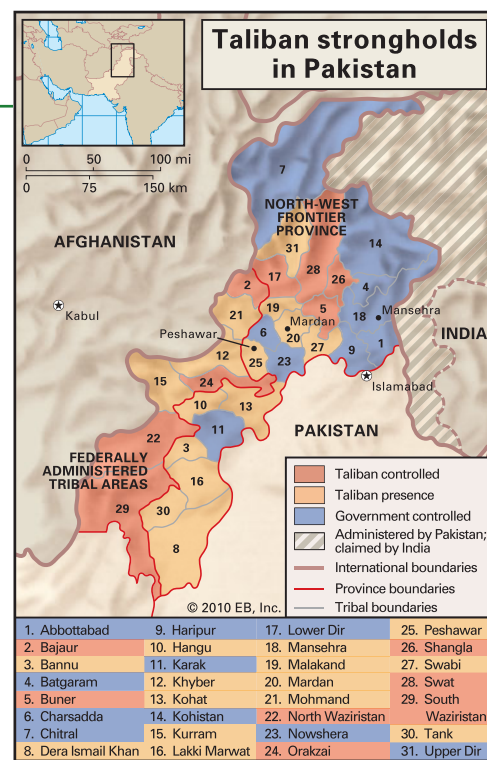
The Taliban, much of it composed of young Afghan refugees who had been educated at *madrasahs* (Islamic religious schools) in Pakistan's Pashtun border region, was organized and expanded under the direction of Pakistan's *sub rosa* Inter Services Intelligence directorate (ISI). With the aid of substantial Pakistani resources in men and weapons, the Taliban gained control over most of Afghanistan. After seizing Kabul in 1996, the Taliban declared Afghanistan an Islamic Emirate guided by ultraconservative Islamic law; Islamabad quickly recognized the new order. Pakistan appeared to have achieved its most immediate national security objective, and most important, it seemed to gain control over the Pashtun peoples domiciled on both sides of their shared border with Afghanistan. Pakistan's security, however, proved short-lived. The success of the austere Islamists and the formation of a chaste Islamic state in Central Asia drew the attention of Muslims from other parts of the world, among them Osama bin Laden and his

al-Qaeda organization. The latter, bent on forcing American influence from Islamic countries, saw in the resurrected Afghan emirate a base of operations ideally suited to press al-Qaeda's worldwide strategy.

The terrorist attacks in the U.S. on Sept. 11, 2001, were quickly traced to Afghanistan, where bin Laden and the Taliban emir had entered into cooperative and intimate association. Washington's decision to destroy the al-Qaeda/Taliban combination, however, could not be implemented without logistic support from the military government in Pakistan. Islamabad's strategy—its quest for security—therefore again ended in failure when the U.S.-promoted "war on terrorism" enveloped the very region that Pakistan had endeavoured to bring under its influence.

The first decade of the 21st century found Pakistan immersed in protracted and indecisive conflict not only on all its frontiers but also throughout the country. Pakistan achieved nuclear weapons status in 1998 but weapons of mass destruction are of little value in multidimensional struggle. Meanwhile, the loss of East Pakistan in 1971 had done nothing to improve relations between Pakistan's remaining ethnic groups. Internal conflict remained intense and unyielding in Balochistan, while the Pashtuns of the NWFP and adjoining FATA formed the bulk of the by-now rebellious Taliban. Moreover, the dominant role played by the Punjabis in Pakistani life and government remained a continuing source of enmity in Sind province as well as among the Mohajir community of Karachi. Successive failures at deeper national integration, coupled with ineffective and corrupt government and repeated military coups, left the attentive public disenchanted and prompted the vast semi-literate and undereducated population to seek salvation in spiritual experience mentored by opponents to anything resembling cosmopolitan culture.

Pakistan's economy—like its political and social institutions—was in shambles. Unable to cope with multiple domestic needs Pakistan became ever more dependent on external assistance, notably from the United States, but foreign aid does little to address a dilemma within. Moreover, American aid intertwined with Islamabad's sup-



port for the "war on terrorism." With many people fearful that the U.S. dependency diminished Pakistan's sovereignty, new strains emerged in Pakistani-American relations. No less significant, in the wake of the terrorist assault in late 2008 on Mumbai (Bombay), which was mounted from Pakistan, the stage appeared to be set for still another more deadly conflict with India. Nuclear deterrence, let alone mutually assured destruction, had limited value as policy in South Asia. Furthermore, the Kashmir dispute remained as intractable as it was in those first years following independence, and the government in Kabul resolutely opposed Islamabad's interference in Afghan affairs.

Finally the Pakistan army's direct or indirect association with terrorist organizations exposed its long-term agenda. That agenda, centred on perceived hostile forces in India and Afghanistan, reinforced the need to preserve if not enhance relations with Islamic extremists calculated to remain influential long after American forces withdraw from the region. Trapped in circumstances largely of their own making, the guardians of Pakistan's security continued to view India as their mortal enemy and thus appeared determined to perpetuate their country's deepening insecurity.

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Child Soldiers:

From Recruitment to Reintegration

by Michael Wessells

When in April 2009, 112 child soldiers who had served with the rebel National Liberation Forces (FLN) were freed following the signing of a cease-fire agreement between the FLN and the government of Burundi, the existence of modern-day child soldiers was brought forcefully into the international spotlight. Worldwide, armed forces and nongovernmental armed groups recruit and exploit children, who are defined under international law as those under 18 years of age. Though the number of child soldiers is unknown—many child recruiters successfully hide their actions, and some children lie about their age in order to join political struggles—it is estimated that at any time, there are approximately 250,000 child soldiers, many of whom are girls. Although most child soldiers are teenagers, the recruits also include children as young as six or seven years of age. Children may also be born into armed groups. For example, the Lord's Resistance Army (LRA), which abducted many children and fought against the government of Uganda, maintained military camps in southern Sudan, where its leader, Joseph Kony, sired many children who subsequently became soldiers.

Armed forces and groups recruit children for diverse reasons. Commanders often select children because they are available in large numbers and can be recruited with impunity, because they can be fashioned into effective fighters, and because commanders know that they can manipulate children easily by employing terror tactics and offering incentives for bravery and initiative in



A boy in Mogadishu, Som., is armed with an ammunition belt and a rocket-propelled grenade used by Islamist fighters in attacks against the government.

combat. Armed with small lightweight weapons, such as AK-47 assault rifles, even young children can be effective fighters. They may also serve as spies who can slip behind enemy lines without suspicion. Teenagers are often sought for their size and strength, their willingness to take risks that many adults would avoid, and their political consciousness. In Sri Lanka the Liberation Tigers of Tamil Eelam fought government forces in part by recruiting teenage girls to serve as suicide bombers.

The Recruitment of Children. Child recruitment is contextual and may involve force or decisions made by the child. The LRA forcibly recruited as many as 60,000 children by abducting and subjugating them into obedience through a regime of terror. To deter escape the LRA forced abducted children to surround recaptured escapees and

beat them to death. Forced recruitment was also used in Sierra Leone, where the opposition group Revolutionary United Front forced young people at gunpoint to join and often required children to kill members of their own villages or families.

Some children decide to join armed groups, but their choices may not be “voluntary,” since they are made in desperate circumstances and involve a mixture of “push” and “pull” factors. In Colombia, for example, a boy who has been abused in his home may leave and seek an alternate “family” in the form of an armed group. In other countries youths have been lured by propaganda and an ideology of liberation into believing that by becoming soldiers, they will help to liberate their people. In Rwanda

young Hutu were recruited into a youth militia (the Interahamwe) and were taught that Tutsi had to be eliminated; more than 800,000 people, mostly Tutsi, were killed in the 1994 genocide.

Other pull factors may include retribution, money, family ties, and power. In Liberia some children join armed groups in an effort to avenge wrongs, such as the killing of one's parents by government forces. Children may also be eager to earn money that they can send home to support impoverished families. In northern Afghanistan children frequently joined the Northern Alliance to fight the Taliban because their fathers, brothers, or uncles were members and because they regarded fighting as a matter of family honour and village protection. Some children seek power and prestige. Many children report that because they carry a gun and wear a uniform, they are treated with

a level of respect that they never enjoyed as civilians.

Inside armed groups, children play diverse roles. A common myth is that all child soldiers are fighters, when in fact many recruits serve as porters, cooks, bodyguards, and domestics, among other roles. Another myth is that all child soldiers are boys. In conflicts in countries such as Liberia and Sierra Leone, girls were recruited to serve not only as fighters but also as sex slaves, whose refusal to provide sex often led to severe punishment or death.

The Reintegration of Formerly Recruited Children. Because they have been socialized into lives as soldiers, child soldiers may themselves become a means of perpetuating violence and armed conflict. To break cycles of violence, a key priority has been to demobilize child soldiers and help them to transition or reintegrate into civilian life. Typically, this is done through a process of disarmament, demobilization, and reintegration. Having turned in their weapons (disarmament), child soldiers are demobilized by being officially stood down from armed groups. They are reintegrated through rehabilitation and work with families and communities to help them find a place in civilian society.

Rehabilitation requires attention to mental health issues that cause distress and impede reintegration. In countries

As part of her therapy, a female former child soldier in a rehabilitation camp in Bukavu, Dem. Rep. of the Congo, plays a drum.



(Bottom) Wolfgang Langenstrassen—dpa/Landov;
(top) Frank May—dpa/Landov



Former child soldiers perform a play at a refugee camp near Gulu, Ugan.

such as Liberia and Sierra Leone, where commanders had plied child soldiers with drugs to make them fearless, many former child soldiers developed problems of substance abuse. In other countries a minority of former child soldiers develop clinical problems, such as depression, anxiety, and trauma, particularly the post-traumatic stress disorder that can arise following extreme events, including exposure to deaths or active engagement in killing. Effective treatment of these problems requires specialized supports, such as counseling by well-trained psychologists or psychiatrists, few of whom are available in war zones. In addition, mental health issues may have indigenous roots. In Angola, for example, former child soldiers were terrified because they believed that they were haunted by the unavenged spirits of the people they had killed. In this case, rather than counseling, the children benefit from the services of a traditional healer, who conducts a cleansing ritual to remove their spiritual pollution.

It is often everyday social issues, however, that cause the greatest distress and the most formidable barriers to reintegration. To rectify family separation it is essential, when possible, to reunify former recruits with their families and to manage family conflicts. Nearly all former child soldiers struggle because they have lost years of education and lack the income needed to start a family or the social skills to assume the role of mother or father. Some develop unruly behaviour, while others have difficulty meeting expectations associated with ordinary living. Many former child soldiers—particularly girls—are stigmatized and called “rebels” or are viewed as aggressive troublemakers. Media ac-

counts sometimes support these stereotypes by referring to former child soldiers as a “Lost Generation.”

Effective reintegration is possible through holistic community-based supports. It is important to mobilize communities to support the livelihood, acceptance, and education of former child soldiers and to activate protection mechanisms that guard against rerecruitment or retaliation. Nevertheless, reintegration efforts are not sufficient by themselves; equal efforts should be given to prevention, particularly to ending the impunity that allows recruitment to continue.

Recognition by the international community of the serious nature of enlisting children in warfare was highlighted in 2009 when the warlord Thomas Lubanga Dyilo became the first person to be tried by the International Criminal Court. He was accused of having committed war crimes (recruiting children as soldiers in the Democratic Republic of the Congo). The UN was also at the forefront of strengthening international standards against child recruitment and urged governments to ratify the Optional Protocol on the involvement of children in armed conflict. The optional protocol, which was adopted in 2000 to augment the UN Convention on the Rights of the Child (1989), raises the minimum age of participation in hostilities from 15 years of age to 18. These efforts will succeed, however, only if all countries agree to abide by the optional protocol and thus safeguard the world's children.

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The Deeper Meaning of the Darwin-Lincoln Double Bicentennial

by Adam Gopnik

The year 2009 marked the double bicentennial of Abraham Lincoln, the 16th president of the United States and the author of the 1863 Emancipation Proclamation, which ended slavery in the rebellious Confederacy, and Charles Darwin, British naturalist and author of *On the Origin of Species by Means of Natural Selection* (1859). Born on the very same day—Feb. 12, 1809—these two icons, one of emancipation and the other of evolution, continue to stir us in the 21st century and remain contemporary in startling ways. If anything, they are more alive for us now than they were at the moment of their centenary. A hundred years ago, with civil rights unaccomplished and genetics not yet in place to explain the mechanisms of inheritance, Lincoln was perceived by many as a pious but in some ways impotent figure, and Darwinism was a speculative road, largely not taken.

Now their triumph is evident: U.S. Pres. Barack Obama cites and echoes Lincoln in most of his speeches and many of his actions, and arguments over Lincoln's faith, acts, and attitudes continue to raise temperatures and feelings. There is even more dispute about Darwin and his legacy—attempts to use Darwinism to understand not only biology but also art and literature pour out, while counterattacks from the religious-minded arraign Darwin for killing God and favouring eugenics. Alone among the great scientists, he still lends his name to the tradition that he engendered. (We still refer to Darwin and Darwinism in a way that we do not refer to Newton and Newtonianism.)

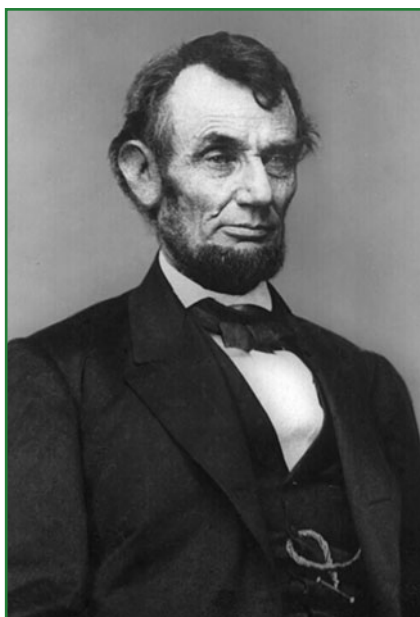
Although both Lincoln and Darwin have become the centre of polemics—surely a sign of their continuing relevance—the kinds of arguments that they inspired (and still inspire) are very different. Different controversies surrounded both men throughout the bicentennial year. With Lincoln, the most vivid arguments turned on that “piety” and the politics that it produced. Was Lincoln—in a view first formulated by critic Edmund Wilson and later popularized by writer Gore Vidal—an American Bismarck, whose choice of abolition was a merely tactical maneuver in the midst of a drive toward power? Or was he a man of fixed morality who adapted to changing realities? Was he a truly eloquent writer or merely a conventional speechmaker sanctified by memory? Fred Kaplan's recent book *Lincoln: The Biography of a Writer* (2008) helps to make the case for Lincoln's essential “literary” qualities. Harvard professor Henry Louis Gates, Jr., wrote a searching book, *Lincoln on Race and Slavery* (2009), and hosted an equally searching public television documentary, *Looking for Lincoln*. Beginning with his own skepticism about Lincoln's sincerity on the race question, Gates worked his way around to the view—widely shared—that Lincoln's antislavery views, though they may have begun without a clear vision of equality, ended with such a vision and were consistently courageous for their time. John Stauffer's *Giants: The Parallel Lives of Frederick Douglass and Abraham Lincoln* (2008) emphasizes Lincoln's moral education at the hands of the great African American abolitionist. Others tried to argue, on the whole

rather feebly, that Lincoln was really just a politician—as though eloquence and politics are alien to each other. Indeed, Lincoln did not simply become a politician as a young man in Illinois; he became an antislavery politician, and the Republican Party that he came to head was not just a gathering of different-minded individuals but rather a group created with the sole purpose of coalescing antislavery opinion into a single unit—from radical abolitionists to those who regretted the existence of slavery but could see no immediate way to end it everywhere in the country. In any case, to segregate Lincoln's work as a word maker from his work as a politician is historically absurd. Lincoln became a plausible candidate for president because—and only because—of his reputation as an orator; his political life and his writing life were one.

Darwin has been the subject of another kind of assault. Where once left-wing critics attacked his attitudes for being too easily taken hostage by right-wing ideas of social order and hierarchy, now religious fundamentalists attempt, in well-funded and heavily hyped films and books, to insist that Darwin was a racist and that his ideas even influenced Nazism (which was, in point of historical fact, utterly hostile to his notion of a single family of man). In this regard, the most important study of Darwin to appear in the bicentennial year was that of his British biographers Adrian Desmond and James Moore in their book *Darwin's Sacred Cause: How a Hatred of Slavery Shaped Darwin's Views on Human Evolution* (2009). In it, they establish what had long been known to Darwin scholars, though not

in such detail: that Darwin's commitment to abolition and the antislavery cause—derived in part from his Wedgwood ancestors—was an essential piece of the background to his evolutionary theory. He believed that the family of man was unified, not separately created (or divided into good white “Adamic” and lesser brown “pre-Adamic” types, as many theologians insisted). The central insight of evolutionary theory—that the story of life, from first microbe to finished man, is one—was part of his abolitionist heritage. Darwin, courteous by nature, gave a respectful hearing to his cousin Francis Dalton's eugenicist ideas (as he did, for that matter, to the ideas of Karl Marx), but in his own work he explicitly and unequivocally rejected those first stirrings of social Darwinism, emphasizing instead the role of culture in fostering humane progress and that of the instinct of sympathy in making certain that human groups continued to care for the helpless. Darwin was certainly a “Europeanist,” who believed that the liberal culture of his time was better than tribal culture, but he thought that those differences were the result of an increase in the spread of social sympathy rather than something inborn or natural only to one race. Both Darwin and Lincoln emerged from their bicentennial trials as men of their time with the marks of their time—but as men who, on the whole, grew in moral understanding as they aged and came to embrace the kindest and wisest ideas

Abraham Lincoln

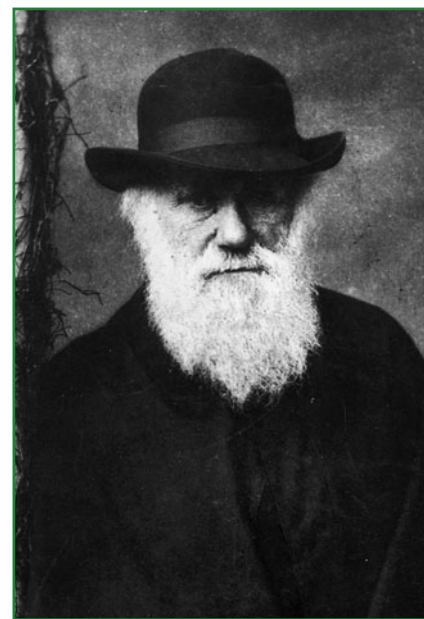


about human equality that their time offered.

Yet, although the polemics about them are importantly different, the two men are still worth taking together. It is (as I meditated at length in my own long essay *Angels and Ages*) not a simple parallel in life but a common liberal temperament—a modern turn of mind—that melds them together. There was not some kind of secret magic connecting these two very disparate figures but rather a field of new feelings and voices that connected many of the liberal voices of the day, including John Stuart Mill, Ralph Waldo Emerson, George Eliot, and William James.

One might propose three common elements that gave this temperament a shape. First, they shared a taste for argument from below, rather than insistence from above. Darwin and Lincoln both began their great works not with grand principle and moral exhortation but with simple evocations of homely evidence. Lincoln's great antislavery speech, his Cooper Union address of 1860—the speech that “made him president”—begins with a modest and even tedious invocation of the acts of the 39 signers of the Constitution: had they voted on national questions regarding the extensions of slavery? By the time the long answer has been reached—yes, they did—Lincoln has demonstrated that slavery is a national, not a regional question, and then the question becomes: is it right or wrong? Darwin had begun his epoch-making *Origin of Species* not with the “cosmic question” that he would solve but with an almost absurdly homely description of the breeding of dogs and pigeons. Darwin's argument is more than an analogy—his point is similar to (and as cosmic as) Newton's contention that a boy throwing a ball and the motions of the planets follow the same rules, even if one is volitional and one is not.

Second, both Lincoln and Darwin practiced the habit, at times exasperating to their admirers, of sympathetic summary. The ability to enter into an opponent's argument without contempt or sarcastic bitterness was common to them both. Darwin did not merely articulate his opponents' arguments against evolution; in every case he anticipated them and refuted them in advance. This is not merely instrumental, or a sign of softness—Lincoln went to war; Darwin annihilated a thousand years of biblical literalism—but it is a sign of sureness and part of the liberal inheritance.



Charles Darwin

Finally, they shared a tragic sense of life that did not paralyze their capacity for moral action. Both men rejected organized religion and searched for some other way to understand the presence of pain and suffering in the world; they sought some other model—for Lincoln, a kind of private providentialism; for Darwin, a stoical resignation and contemplation of the power of time—to make sense of mortality. They were stoics but not cynics.

These three elements—argument from below, from evidence; sympathetic summary; and an ability to recognize the man-made nature of morality without succumbing to meaninglessness or searching for false comfort—are the touchstones, the key notes of the liberal temperament, and the real event of the bicentennial was to see how Darwin and Lincoln helped to set them. In the politics of the newly inaugurated President Obama and in the efflorescence of evolutionary arguments, Darwin and Lincoln persist as central figures of liberal civilization—the civilization in which scientific progress and democratic politics are, as British natural philosopher Sir Karl Popper showed half a century ago, deeply and permanently intertwined.

Adam Gopnik is a staff writer for The New Yorker magazine and is the author of *Angels and Ages: A Short Book About Darwin, Lincoln, and Modern Life*, among other books.

Woodstock Remembered:

The 40th Anniversary

by Chris Salewicz

A free concert to mark the 40th anniversary of a cultural and musical phenomenon—the legendary rock festival known as Woodstock—being organized by Michael Lang, one of the original promoters in 1969, to take place in Brooklyn, N.Y., in August 2009 was canceled just days prior to the event but an anniversary concert featuring Woodstock alumni including Richie Havens and Country Joe McDonald at the Bethel Woods Center for the Arts, at the original site, was a success. Other performers included Big Brother and the Holding Company, Canned Heat, and Levon Helm.

The Woodstock Music and Art Fair, the largest mass celebration of the alternative values of the 1960s, took place in extreme climatic conditions on Aug. 15–18, 1969, at a natural amphitheatre in upstate New York. The event's name was in tribute to the deified Bob Dylan, whose home was in the arts community of Woodstock, 113 km (70 mi) from the festival site. After efforts to hold the festival close to the actual town of Woodstock had been stymied, the organizers—Lang, Artie Kornfeld, John Roberts, and Joel Rosenman—secured land outside the town of Bethel.

Local dairy farmer Max Yasgur was the owner of the 240-ha (600-ac) plot on which half a million young people braved the elements to watch an extraordinary star-studded music lineup; Yasgur would become sanctified in the



Woodstock festivalgoers enjoy the music despite the rainy conditions.

public's perception as a personification of the alleged utopian values of the decade. Posters for the event promised "Three Days of Peace and Music." The genesis of Woodstock, however, took place amid the establishment surroundings of a leafy golf course on Long Island: meeting over a game of

golf, Roberts and Rosenman, a pair of affluent young men attracted to the age's "underground" lifestyle, bankrolled the festival, a project they conceived as merely a business opportunity.

Ultimately, this "Aquarian Exposition" (another of the poster's claims, attributed to Lang, the festival's groovy front man) was a tribute to hippie capitalism: the promoters sold approximately \$1.4 million in tickets and paid the artists a total of \$150,000. (Jimi Hendrix was the highest-paid.) Later, *Woodstock* (1970), the Academy Award-winning feature documentary film of the "counterculture festival," was a worldwide box-office hit, turning Cocker, Ten Years After, Sly and the Family Stone, and Santana into international stars and boosting the careers of John Sebastian, the Who, and Crosby, Stills, Nash and Young.

Despite the business plan of the organizers, by late July members of hard-core American alternative society had begun arriving at the festival site. The Merry Pranksters, the counterculture legends who were the alumni of author Ken Kesey, turned up in their famous psychedelic bus. Aware that the Pranksters' presence was proof of the festival's credibility, the Woodstock organizers ignored what would become a major problem. There was further counterculture involvement: Abbie Hoffman, late of the Chicago Seven trial and the leader of New York City's hard-left politicians, set up a printing press; he published a daily newspaper informing



Jimi Hendrix

festivalgoers where to find food and water and how to deal with the physical excrement that was being created. Further integrity was provided by the arrival of the Hog Farm (the longest-running hippie commune in the U.S.), a self-styled “mobile, hallucination-extended family,” who brought with them literally tons of muesli and bulgar wheat, as well as truckloads of assorted vegetables and fruit.

A week before the festival was set to begin, most of the venue seemed in readiness. Unaccountably, the turnstiles and gates were not ready for operation, which created a considerable problem. By the night of August 13, about 50,000 people had arrived, mostly without tickets, and entered for free; by the end of the next day, the crowd had doubled in size. On the morning of August 15, a young man was killed, accidentally driven over by a tractor.

By the afternoon of August 15, all roads within a 32-km (20-mi) radius of Woodstock were utterly blocked; the organizers summoned up to 16 helicopters. By Friday evening the festival audience was 500,000 strong, eagerly awaiting the first act, unaware that electricity had yet to be fully piped to the stage. To maximize the limited power, acoustic acts were summoned. The first artist to play was Richie Havens, opening the event as a solo performer only because he had been able to fit into the four-seater helicopter that was all that was available at the time for taking acts to the site. “FREE-

DOM,” Havens exulted into the microphone, “FREEDOM!.....FREEDOM!.....FREEDOM!”

Armed with only an acoustic guitar, Country Joe McDonald was cajoled into following Havens onstage. Hanging out backstage, not booked to perform, was Sebastian, formerly of the Lovin’ Spoonful. Asked to play, Sebastian went out in front of the crowd and provided one of the key moments of the event. Joan Baez delivered another acoustic triumph. Later that evening there was a fierce rainstorm—though nothing compared with what was yet to come.

The spirit of the event was inculcated in the 8:00 AM Saturday morning wake-up call over the sound system. “Good morning. Last night was really groovy, and today is going to be even better. We have one of the biggest cities in the United States, and we ought to be proud of ourselves. And everything’s OK and we’re on top of it. The rest of the world thinks that we’re having trouble, but we’re not. And within 15 minutes we’re going to be distributing these bags to everybody to help clear up.” With the site in danger of being overrun by garbage, the audience worked as one to eliminate this health hazard. By now, the music was in full flow, with triumphant performances from Creedence Clearwater Revival, the Who—briefly interrupted by a stage protest from Hoffman—and the Grateful Dead.

Joe Cocker



Jerry Garcia of the Grateful Dead

Sly and the Family Stone sealed the day’s glory with a mind-blowing show.

By mid-morning of August 17, the weather was extremely hot. At midday, however, as Cocker and the Grease Band delivered a memorable set, fat clouds rolled in and the heavens opened, transforming Yasgur’s land into an ocean of mud. As though adversity was being turned to advantage, the mud became a feature of the festival, with festivalgoers playing mud-sliding games. That morning Gov. Nelson Rockefeller had declared the festival a disaster area; it was his intention, he stated, to send in the National Guard and remove the entire audience. Urgent negotiations with the governor’s staff resulted in his decision to assist the festivalgoers: a field hospital and medical teams were sent in by U.S. army helicopters. Meanwhile, Crosby, Stills, Nash and Young, performing live for only the second time, delivered a set of almost transcendent bliss.

Woodstock came to a close on Monday morning, August 18, following Hendrix’s performance of his interpretation of “The Star-Spangled Banner.” His rendition of the U.S. national anthem was etched into the memories of the remaining 25,000 people in the audience and provided the conclusion of a remarkable experience.

Chris Salewicz, a former writer for the New Musical Express magazine, is the author of more than a dozen books and has chronicled popular culture.

UAVs Crowd the Skies

by Peter Saracino

A little-known but important milestone in modern warfare was reached in 2009: in that year the U.S. Air Force trained more operators of unmanned aerial vehicles (UAVs) than it did pilots. In an age when war is increasingly dominated by robots, the U.S. military alone fields at least 7,000 of these machines, which are either remotely guided by a human using a radio link or self-guided by preprogrammed flight plans. Interest in UAVs is global, however. More than 60 manufacturers in at least 40 countries are now servicing a market that is expected to exceed tens of billions of dollars over the next decade. It is not surprising, then, that Quentin Davies, the U.K.'s minister for defense equipment and support, predicted in July 2009 that the world is now witnessing the last generation of manned combat aircraft and that by 2030 UAVs will have displaced them.

A Growing Technology. UAVs, also called remotely piloted vehicles (RPVs) or unmanned aircraft systems (UASs), are aircraft without a pilot onboard. Fixed-wing UAVs resemble "smart weapons" such as cruise missiles, but they are superior because they return to their base after a mission and can be reused. Also, UAVs have two decisive advantages over manned aircraft: their use does not risk the lives of aircrews, and they can loiter over areas of interest longer than most types of aircraft with human pilots. The current generation of UAVs varies in size from small propeller-driven hand-launched models such as the German army's Aladin to jet-powered intercontinental-range craft such as the U.S. Air Force's RQ-4 Global Hawk. Prices range from a few hundred thousand dollars for small models to well over \$100 million for a Global Hawk.

UAVs first took to the skies during World War II with radio-controlled target drones, and they continued to develop slowly through the Vietnam era, when film cameras were mounted onto jet-powered drones for photoreconnaissance missions. Truly modern UAVs did not begin to appear over battlefields



A soldier from the U.S. 1st Infantry Division prepares an RQ-11 Raven miniature unmanned aerial vehicle for a mission to search for weapons caches in Kunar province, Afg., April 10, 2009.

until the 1980s, when a number of technical advancements made them much more effective. Advanced composite materials made for lighter, stronger airframes, and improved electronics permitted the development of high-resolution TV and infrared cameras. Also, full implementation of the Global Positioning System (GPS) in the 1990s made it possible to navigate UAVs with a precision that was previously unattainable.

UAVs began to garner media attention during NATO's intervention in the Yugoslav civil war of the 1990s. In 1995 the U.S. Air Force put the RQ-1 Predator into service for airborne surveillance and target acquisition. With its pusher propeller driven by a four-cylinder gasoline engine, the Predator could cruise at 140 km/h (87 mph), stay aloft for up to 16 hours, and reach altitudes of 7,600 m (25,000 ft). Predators flying over Yugoslavia, for example, tracked troop movements, monitored refugees, and marked targets so that manned aircraft could attack them with laser-guided bombs.

The Predator remains the most widely used battlefield UAV operated by the United States. The entire system consists of the vehicle itself (with built-in radar, TV and infrared cameras, and laser designator), a ground-control station, and a communication suite to link the two by satellite. Though pilotless, the Predator is operated by approximately 55 personnel, including a pilot operator and a sensor operator as well as intelligence, maintenance, and launch and recovery specialists. The current version, designated the MQ-1, went into service in 2001 armed with two laser-guided AGM-114 Hellfire missiles, giving the UAV the ability to attack targets as well as identify them. The first time a Predator made a confirmed kill was in Yemen in 2002, when one operated by the CIA destroyed a vehicle carrying six members of al-Qaeda. A turboprop-powered version of the Predator, called the MQ-9 Reaper, is significantly larger and has a greater payload. The Reaper has been operational since 2007 with U.S. forces and is also used by Britain's Royal Air Force.

The Limits of High Technology. UAV technology may be sophisticated, but it is still in its infancy. By 2009 some 65 Predators (each costing \$4 million) had crashed, including at least 3 in 2009. Of those crashes, 36 were attributed to human error. Since UAVs are not yet completely autonomous, their operators must display great skill in judging distance and speed when landing, a task made more difficult by a slight delay in signal transmission between the UAV and the ground-control station. Moreover, there are occasional technical glitches, such as the one that occurred in September 2009 when a Reaper on a combat mission over Afghanistan could no longer be controlled and had to be shot down by U.S. warplanes.

Successful attacks by UAVs depend upon the accuracy and timeliness of intelligence. This principle was demonstrated in 2009 when an al-Qaeda military planner was believed to have been killed by an American UAV in September but suddenly appeared in a media interview in October. Also, high-tech weapons may win engagements on the battlefield, but they cannot solve political problems—and on occasion they may even aggravate them. In July 2009 the Brookings Institution think tank estimated that for every militant killed by a UAV in Afghanistan and Pakistan, approximately 10 civilians were also killed, a situation that was alienating the local population and turning them against the United States and its NATO allies. UAV use also raises issues of accounta-



A U.S. Air Force MQ-1 Predator unmanned aerial vehicle prepares to land at Balad Air Base, Iraq, after a combat mission. Two television cameras are mounted on the underside of its fuselage.

bility. According to the nongovernmental organization Human Rights Watch, Israeli UAVs unlawfully killed at least 29 Palestinian civilians during the Gaza incursion in late 2008 and early 2009 because UAV operators allegedly failed to verify that targets were combatants.

Future Uses in War and Peace. Most UAVs remain dedicated to what the military calls ISTAR—intelligence, surveillance, target acquisition, and reconnaissance. For example, American UAVs began patrolling off the coast of Somalia in October 2009 in order to provide early warning of pirate vessels approaching merchant ships and to guide naval forces. However, the number of potential uses for UAVs is growing. In August

2009 the U.S. Marine Corps awarded contracts to Boeing and a joint venture between Lockheed Martin and Kaman to develop cargo UAVs that would be capable of delivering supplies to troops on the battlefield. The goal is to demonstrate how such UAVs could reduce risk and expense in logistics. Currently it is expensive to operate ground supply convoys on the poor roads and in the back country of Afghanistan; also, convoys must be heavily guarded, and they continually run risks from roadside bombs and ambushes.

Besides these military uses, UAV technology is attracting interest from police forces and other civilian agencies. For example, the U.S. Customs and Border Patrol has been using the Predator to patrol the Mexico-U.S. border since 2005 and the Canada-U.S. border since early 2009, and two maritime-patrol variants are scheduled to be operational in 2010. UAVs are also being developed for use in search-and-rescue operations to help locate survivors and deliver emergency supplies to them. In addition, UAVs are being evaluated for their potential in assessing damage suffered from disasters such as hurricanes, forest fires, and maritime oil spills.

As robotic vehicles become more commonplace, UAVs can be expected to be used wherever possible to minimize threats to personnel and to do tasks that exceed human strength and endurance. If current trends continue, UAVs could one day evacuate casualties from the heat of battle and mount round-the-clock surveillance missions for months and maybe even years at a time.

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The pilot (left) and sensor operator (right) of a U.S. Air Force MQ-1 Predator unmanned aerial vehicle perform function checks at Balad Air Base, Iraq, before handing control of the vehicle to personnel stationed in the United States.



Electric Cars

Gear Up

by Lee Hudson Teslik



German Chancellor Angela Merkel and Chinese State Councilor Dai Bingguo arrive in electric cars for a meeting at a Group of Eight summit in L'Aquila, Italy, on July 10.

In retrospect, 2009 may come to be seen as a year in which the movement toward electric automobiles gained momentum. This sudden gathering of energy actually brought together a number of forces that had begun independently the previous year. First was a spike in oil prices, which reached \$147 per barrel in July 2008 and hovered in the \$60–\$80 range through much of 2009. Gasoline prices followed, threatening to make sport-utility vehicles (SUVs) and pickup trucks less economically viable for American consumers. Second was the severe recession that gripped first the United States and then the rest of the world in 2008 and 2009, squeezing sales of new automobiles to their lowest levels in half a century and bringing major automotive companies such as General Motors to their knees. Third was a growing international awareness of the challenges posed by climate change, which led policymakers to seek ways to reduce carbon emissions such as those produced in automobile exhaust. Finally, the electric car movement was given a lift by improvements in technology and by government commitments to help develop the

infrastructure needed to support electric vehicles.

Some Historical Perspective. Electric cars in fact are nothing new. Indeed, in the late 19th century and the first two decades of the 20th, electricity was the preferred method of powering automobiles in Western Europe and the United States. Electric motors did not have to be started manually; they were quieter than gasoline engines; and they provided a smoother ride because there were no gears to shift. But a variety of innovations and discoveries proved enough to tilt consumers toward gasoline-powered cars. Among these were the exhaust muffler, the electric starter, the discovery of underground reserves of petroleum in the United States, and, ultimately, Henry Ford's assembly-line model for producing cars cheap enough to be owned by the common man.

The internal combustion engine dominated the rest of the 20th century, its success perpetuated by low fuel prices. In addition, businesses helped to entrench gasoline-powered vehicles by establishing the infrastructure—gasoline stations—to support them. Electric vehicles, meanwhile, were sidelined. Generally more expensive than fuel-

powered alternatives, they were unable to travel long distances without recharging. Most significantly, the infrastructure needed to support a large fleet of electric cars—mainly, battery-charging facilities—did not exist. Given the dearth of electric vehicles on the road, there was little demand for infrastructure—which in turn made it even less worthwhile to produce electric cars.

During the 1990s electric vehicles briefly reentered the public sphere in response to a mandate by the California Air Resources Board (CARB) that “zero emission vehicles” make up 10% of vehicle sales in that state by 2003. General Motors introduced the first modern mass-produced electric vehicle, the EV1; Toyota followed suit with an electric version of its RAV4 SUV; and other automakers announced their own plans. By 2003, however, the vehicles had been withdrawn from production, and CARB had rescinded its stringent requirements. Critics alleged that the automakers had intentionally undermined the market for electric cars in order to protect their existing product lines—an idea popularized by the 2006 film *Who Killed the Electric Car?* Automakers responded that the programs they had worked on simply were not commercially viable at the time.

Meanwhile, Toyota and Honda introduced hybrid electric automobiles, the Prius and the Insight, to the Japanese market in 1997 and to the U.S. market by 2000. Featuring a small gasoline engine that supplemented an electric motor when necessary for added propulsion, hybrid vehicles proved popular, in part because they did not have to be plugged into the electric power grid to be recharged.

Electric Vehicles and Hybrids Today. The gathering economic forces of 2008–09 prompted renewed interest not only in hybrids but also in fully electric vehicles and so-called plug-in hybrids (models with an extra capacity to

recharge their batteries off the power grid). During his campaign for the U.S. presidency in 2008, Barack Obama promised that half of all vehicles purchased by the federal government by 2012 would be plug-in hybrids or fully electric. In August 2009 Obama, now president, announced that \$2.4 billion of his economic stimulus package had been awarded to some 48 automakers or parts manufacturers in order to increase production of electric vehicles. An additional \$400 million was aimed at developing infrastructure.

Other countries made similar efforts. China's government announced that it would provide subsidies for research and would also subsidize the purchase of electric or hybrid vehicles for use in Chinese taxi fleets and by government agencies. Britain's Prime Minister Gordon Brown said in July 2009 that he wanted all new cars sold in his country by 2020 to be electric or hybrid—though British automakers retorted that Brown's offer earlier in the year to subsidize purchases of electric vehicles would have little effect on sales.

Auto companies scrambled to capitalize on new grants and subsidies. General Motors, which by July 2009 was majority-owned by the U.S. government, announced plans to roll out its new electric car, the Chevrolet Volt, in late 2010. The Volt was an "extended range" model, one whose batteries would be recharged overnight by a plug-in connection or on the road by a small gasoline engine. Also in August, Nissan Motor Co. announced produc-

Nissan Motor Co.'s zero-emission electric car, the Leaf, is displayed in August in Yokohama, Japan. The electric vehicle, powered by a lithium-ion battery, was scheduled for release in late 2010.



The owner of an electric vehicle plugs into a charging point in London's Berkeley Square. In 2009 the British government announced plans to offer subsidies to buyers of electric or plug-in hybrid cars.

tion of the Leaf, a fully electric automobile that would boast zero tailpipe carbon emissions.

Efforts were being made on the infrastructure end as well. The mayor of London, vowing to make that city the "electric car capital of Europe," announced plans to have as many as 25,000 charging points installed in accessible areas by 2015. In Yokohama, Japan, the U.S.-based company Better Place, founded by Israeli-born entrepreneur Shai Agassi (see BIOGRAPHIES), demonstrated the prototype of an automated battery-exchange station that it intended to install throughout Israel and Denmark as part of a program to encourage a mass market for electric automobiles.

Challenges for the Future. Despite the gathering momentum of 2009, several challenges will have to be overcome if a sizable portion of the world's auto fleet is to be replaced with electric or hybrid vehicles. First, at current gasoline prices it is unclear whether fully electric vehicles can be an economically viable alternative on a broad scale.

Second is the problem of range. Given the limitations of current battery capacities, and given current technologies that partly recharge batteries by using energy produced while braking, electric vehicles at this time are best suited for stop-and-go, short-range city driving. Before fully electric vehicles can realistically be expected to replace fuel-powered cars or hybrids, charging and battery-exchange stations will have to be put in place everywhere cars are driven—not just in a few cities.

Finally, even assuming the establishment of networks of charging stations, technological problems would have to be addressed. For instance, many plug-in models take hours to recharge, whereas gasoline-powered cars take only minutes to refuel. Stations that are capable of charging car batteries rapidly are possible in theory, but they would have to be designed and operated in such a manner that they would avoid straining municipal power grids. Also, as long as electric power plants continue to run on fossil fuels such as coal, recharging fleets of plug-in electric cars will not eliminate the emission of carbon into the atmosphere.

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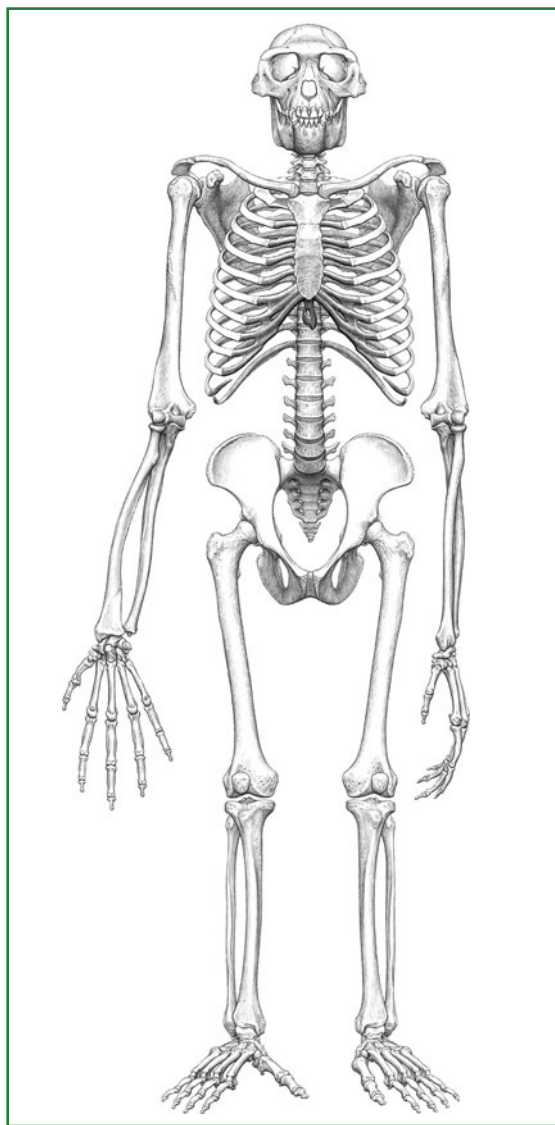
Ardipithecus:

A Hominin Ancestor for Lucy?

by Stephen L. Zegura

The long-awaited results of a monumental effort to reconstruct the skeletal biology, paleoecology, and evolutionary position of *Ardipithecus ramidus* were published at last in the Oct. 2, 2009, issue of the journal *Science*. The issue featured 11 research articles written by an international team of 47 authors and a number of related stories and online materials.

The story began on Dec. 17, 1992, with the discovery of a molar tooth, the first specimen of what would come to be known as *Ardipithecus*, at Aramis, Eth., in the Middle Awash valley, by Gen Suwa, then a graduate student at the University of California, Berkeley, working with American anthropologist Tim White. Over the next year 16 additional specimens were found, including a number of teeth, a mandibular fragment, parts of four cranial bones, and four arm bones. When information about these 4.4-million-year-old hominins (hominids) was published in 1994, they were considered a new species of *Australopithecus*, but they were more morphologically primitive than the other members of this genus. Starting in November 1994, remains of a spectacular partial skeleton were unearthed at Aramis, and the novelty of this new material necessitated a change in generic status from *Australopithecus* to *Ardipithecus*. The badly crushed and fragmented partial female skeleton nicknamed "Ardi" and many of the other 35 (or more) individuals repre-



This frontal view (reconstructed) of the skeleton of Ardipithecus ramidus, reveals some of the dramatic conclusions of years of painstaking work. This drawing of "Ardi" reveals, among other features, A. ramidus's apelike opposable big toe (hallux).

sented in the now more than 110 *Ardipithecus* specimens from Aramis

required especially painstaking excavation, preservation, and reconstruction techniques. For instance, it took three entire field seasons of surface crawling to locate and subsequently extract the pieces of Ardi's skeleton, and it took 14 pelvis and 10 cranial reconstructions before the authors were satisfied with the accuracy of their models.

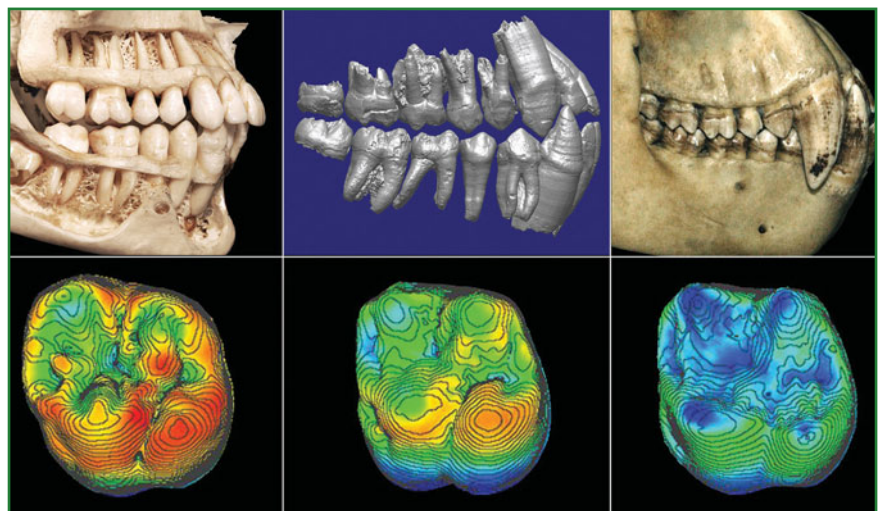
The Aramis site is one of 300 fossil-bearing localities in the Middle Awash River valley in the Afar depression. White, co-director of the Middle Awash Project, which included 70 scientists from 18 countries, had been collecting fossils in this region since 1981. Remains of eight different hominin species spanning almost six million years of evolution were uncovered there. The *A. ramidus* fossils at Aramis were very securely dated because they occurred between two key layers of volcanic tuff. Thus, the fossils were probably deposited on an alluvial floodplain during a very narrow time interval lasting from approximately 100 to 10,000 years.

A. ramidus represents a less-specialized grade of hominin organization than the fully bipedal australopithecines. For instance, judging from Ardi's mosaic-like foot skeleton, although she walked bipedally when on the ground, she retained an apelike opposable big toe (hallux) and also climbed trees. In arboreal settings she operated as a monkeylike quadruped while moving on the top of branches and bridging between branches. Her pelvis structure combined typical features of both hominins and apes. Her virtually complete hands revealed that

Ardi was not a knuckle walker like African apes. Rather, a large very flexible midcarpal joint permitted her to support nearly all of her 50-kg (110-lb) body weight on her palms when clambering along tree branches. An important evolutionary implication of Ardi's postcranial material was that the approximately seven-million-year-old hypothetical common ancestor of humans and chimpanzees was most likely not morphologically or behaviorally similar to modern African apes, as was once envisioned. That is, it was not a chimpanzee-like vertical climbing ape. Experts now believe that it was more probably a palmigrade quadrupedal climber that may have resembled some Miocene apes and the earliest hominins in its locomotor adaptations. Thus, the comparative analysis of *Ardipithecus* necessitated a complete paradigm shift.

Ardipithecus lived in a humid, cool woodland with a grassy substrate and occasional patches of open forest. The 150,000 fossil plant and animal specimens from Aramis documented the presence of browsers, fruit eaters, and leaf eaters. The remains of spiral-horned kudus, two species of monkey, various kinds of small mammals, parrots, peafowl, catfish, palm tress, fig trees, shrubs, and grasses were plentiful, whereas turtles/tortoises, crocodiles, and invertebrates were present but less abundant. Ardi was an omnivore, most likely consuming a diet of insects, small mammals, fruits, and nuts.

Ardi was only 1.2 m (4 ft) tall—short for a female hominin—but her height proved to be typical for both males and females of her genus; i.e., males in the rest of the assemblage did not have larger bones and were not taller than females, as among other hominins. Both male and female *Ardipithecus* specimens had relatively small canines with diamond-shaped crowns. No upper canine-lower premolar honing (sharpening) was present in any of the specimens. Molar enamel thickness in *Ardipithecus* was intermediate between that of later hominins (thicker) and modern African apes (thinner). The postcanine megadontia that characterized the australopithecines was absent, underscoring *Ardipithecus*'s physical inability to process a hard, abrasive diet. Ardi's cranial capacity was estimated at 300–350 cu cm (18–21 cu in), similar to many modern chimpanzees and a bit smaller than the estimate of 320–380 cu cm (19–23 cu in) for the approximately



(Top) A comparison of images of dentitions from human (left), *Ardipithecus ramidus* (middle), and chimpanzee (right), all males. (Bottom) Corresponding samples of the maxillary first molar in each. The red areas reveal thicker enamel; the blue, thinner. Contour lines map the topography of the crown and chewing surfaces.

seven-million-year-old *Sahelanthropus* from Chad, which is the oldest putative hominin in the fossil record. Ardi's face was relatively small with a projecting muzzle, especially in the midface, much like *Sahelanthropus* but unlike the extreme lower facial projection of modern apes. *Ardipithecus* lacked the large flaring cheeks of the australopithecines associated with heavy chewing but did share a short cranial base with both the australopithecines and *Sahelanthropus*. The short face (from top to bottom) also was reminiscent of *Sahelanthropus*'s face.

The numerous craniofacial similarities between *A. ramidus* and *Sahelanthropus* led to the following conjecture: that all of the preaustralopithecine hominins represented a separate grade of hominin organization. Grades are levels of functional organization usually associated with a particular adaptive zone. Thus, hominins were divided into three separate grades: (1) the *Ardipithecus* grade, (2) the australopithecine grade, and (3) the *Homo* grade. The *Ardipithecus* grade would presently contain the approximately 7-million-year-old *Sahelanthropus* cranium and associated jaw fragments and teeth; the approximately 6-million-year-old *Ororin* from Kenya known primarily from postcranial material; the 5.5-million–5.8-million-year-old *A. kadabba* teeth, cranial, and postcranial fragments also found in the Middle Awash region west of Aramis; the 11 specimens (teeth, finger bones,

and a jaw fragment) of *A. ramidus* from Gona, Eth., a site 66 km (41 mi) north of Aramis, found between 1999 and 2003 and dated at 4.32 million–4.51 million years ago; and the entire collection of 4.4-million-year-old Aramis material. All of the above fossils may actually represent a single genus (*Ardipithecus* would have priority) that contained the evolutionary forerunners of the australopithecines and occupied a distinct adaptive zone.

In terms of social behaviour and life-history strategies, inferences from *Ardipithecus*'s dental and skeletal anatomy combined with principles and theories from evolutionary biology have led to a number of assertions. Among these are the supposition that regular food carrying, pair bonding, and female ovulation concealment supposedly led to intensified male parental investment during the two million–three million-year evolutionary emergence of the *Ardipithecus* grade from the last common ancestor humans share with the chimpanzee. Increased male parental investment was seen as an important "breakthrough" adaptation for early hominins. In addition, the overall dental morphological pattern of *Ardipithecus* and the lack of pronounced sexual dimorphism in this taxon both signify that male-to-male conflict and aggression had been reduced.

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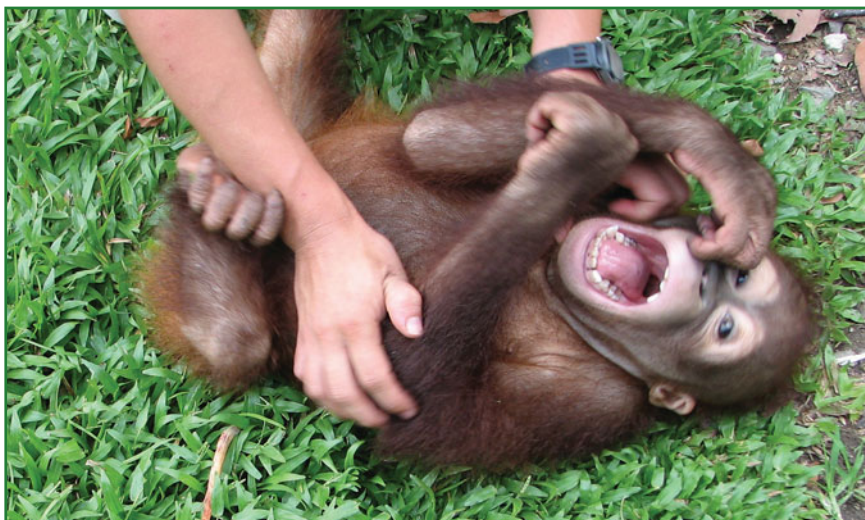
Primate Research:

A Key to Understanding What It Means to Be Human

by Lisa M. Newbern

Laughter, tantrums, and swinging are actions readily associated with human children, whereas planning for the future, tooth flossing, and music appreciation are actions typically associated with human adolescents and adults. A number of investigations of nonhuman primates, however, connected these six topics in 2009. Researchers worldwide surveyed the behaviours of nonhuman primates by analyzing the responses of great apes that were tickled, monitoring the public tantrums of young rhesus macaques (*Macaca mulatta*) and the abilities of long-tailed macaque (*M. fascicularis*) mothers to facilitate learning, observing the planning activities of a captive chimpanzee (*Pan troglodytes*), and testing the responses of chimpanzees and cotton-top tamarins (*Saguinus oedipus*) to different kinds of music. What the researchers learned further defined the connections between humans and nonhuman primates and offered additional insight into what makes humans truly unique.

According to Marina Davila Ross of the University of Portsmouth, Eng., Elke Zimmermann of the University of Veterinary Medicine Hannover, Ger., and Michael Owren of Georgia State University, who tested a hypothesis that human emotional expressions began in ancestral nonhuman primate behaviours, laughter is not unique to humans. As reported in one of the most widely publicized studies of 2009, the researchers examined the acoustics of tickle-induced vocalizations from infant and juvenile orangutans (*Pongo pygmaeus*), gorillas (*Gorilla gorilla*), chimpanzees, and bonobos (*Pan paniscus*) as well as tickle-induced laughter from human infants. Not only did they find that the origins of human laughter



A baby orangutan laughs in response to a researcher's tickling, providing evidence that laughter emerged in animals millions of years before humans evolved.

could be traced 10 million to 16 million years ago to the last common ancestor of humans and modern great apes, but they also concluded that laughter is a cross-species phenomenon.

The great apes are not the only non-human primates with humanlike displays of expression. Infant rhesus macaques were found to be expressive too, especially when they did not get what they wanted. Stuart Semple of Roehampton University, London, and his colleagues discovered that having a tantrum works to an infant's favour when potentially aggressive animals are nearby. Their mothers were found to be about twice as likely to give in to their offspring when the tantrum occurred in the presence of potentially threatening animals. This study was considered the first to demonstrate how bystanders could affect the communication between the mother macaque and infant.

Until Susannah Thorpe and Roger Holder from the University of Birming-

ham, Eng., and Robin H. Crompton from the University of Liverpool, Eng., observed how orangutans moved through trees, little was known about how animals travel through complexly structured environments. Researchers found that orangutans, the largest habitually arboreal mammal, use unique maneuvers to overcome the safety risks associated with accessing food and crossing gaps in tree crowns. The irregular movements, which include shifting from side to side and using all four limbs at once, cause a minimal disturbance to the trees and facilitate the orangutans' motion and access to food. Because orangutans remain on the verge of extinction, it is critical that scientists understand their needs, their movement limitations, and their ability to overcome the environmental challenges posed by humans and their activities. Such knowledge could form the basis for animal and environmental conservation programs.



Santino, a chimpanzee, roams around his enclosure at the Furuviik Zoo in Sweden. He was observed stockpiling stones, which he later hurled at the zoo's visitors. This behaviour was proof that apes are capable of planning for the future.

One particular zoo became well known for the behavioral study of a bad-tempered primate resident in 2009. Santino, an adult male chimpanzee, repeatedly gathered stones and concrete chips from his home at the Furuviik (Swed.) Zoo and stockpiled them in scattered areas throughout his habitat. These objects were later thrown at the zoo's visitors. In the more than 10 years Santino has been accumulating his arsenal, the zoo's animal-care staff has removed hundreds of weapon caches. According to cognitive science researcher Mathias Osvath of Lund (Swed.) University, who reported on Santino's actions, what made this study so interesting was that the chimpanzee was preparing for the future. It was observed that Santino collected the objects while he was calm; however, he threw them at zoo visitors a number of hours later during his agitated dominance displays. Such behaviour indicated that Santino was spontaneously planning for a future mental state, which suggests that chimpanzees have highly developed consciousness, a characteristic many scientists have been reluctant to attribute to nonhuman primates.

Tooth-flossing behaviour is not typically attributed to nonhuman primates. Nobuo Masataka, Hiroki Koda, and Kunio Watanabe from Kyoto University, Inuyama, Japan, and Nontakorn Urasopon of Ubon Rajathanee University in Bangkok, however, observed a group of long-tailed macaques in Thailand that used human hair or a flosslike material between their teeth. The study

was designed to investigate the proliferation of tool use throughout a population in a small group of females who were rearing infants. In this experiment floss was the tool of choice. The researchers found that the mothers' pattern of using tools changed when the infants were present; the adults paused more, repeated their actions, and spent more time on flossing activities with infants in attendance. The researchers concluded that the mothers' slow repetition and emphasis on the proper use of the floss might help their offspring

learn how to use the tool.

A different primate study conducted at the Itozu-no-Mori Park, Fukuoka, Japan, tested the responses of Sakura, an infant chimpanzee, to music. It was determined that Sakura could indeed appreciate music and preferred consonant, or harmonious, sounds to dissonant, or discordant, sounds. A team of researchers from three Japanese insti-

It was shown that cotton-top tamarin monkeys, such as this one from the Roger Williams Park Zoo in Providence, R.I., respond emotionally to music that incorporates sounds based on the pitch, tone, and tempo of their calls.



tutions—Kyushu University, the University of Shiga Prefecture, and the Itozu-no-Mori Park—used a computerized apparatus that enabled the production of consonant and dissonant music when Sakura pulled a string attached to her arm. During six weekly sessions, Sakura consistently preferred to produce consonant music for a longer period of time than dissonant music.

Halfway around the world, David Teie—a lecturer at the University of Maryland who doubles as a cellist in the National Symphony Orchestra—and Charles Snowdon of the University of Wisconsin–Madison conducted another type of music study. Using tamarin monkeys, the researchers sought to determine if music could influence the behaviour of nonhuman species. In accordance with the researchers' predictions, music specifically composed for the tamarins, which used acoustical characteristics of tamarin affiliation and threat vocalizations, had a greater behavioral effect on the animals than music composed for humans. In addition, the researchers were correct in thinking that contrasting forms of music would have appropriately contrasting behavioral effects. For example, when the researchers played fear-based or threat-based music, the monkeys' movements and social behaviour showed signs of increased arousal. Alternatively, when the researchers played affiliation-based music, the monkeys responded with decreased activity and increased calm behaviour, such as that which occurs during foraging activities.

Other studies of primates published in 2009 revealed evidence that some monkeys and apes discerned right from wrong, chimpanzees negotiated with their troopmates and constructed mental maps based on geometric coordinates to navigate their home range, bonobos used their vocalizations to rank foods, and subordinate monkeys were capable of deceiving dominant ones to garner a greater share of a particular resource. These investigations and others also indicated that humans might not be as unique as they once thought and that research with nonhuman primates would continue to provide a portal through which humans might better know and understand themselves.

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H1N1 Flu: The Pandemic

by Kara Rogers

In February 2009 a young boy in the small Gulf-coast town of La Gloria, Veracruz, Mex., fell ill with an influenza-like disease of unknown cause. Within weeks nearly 30% of the town's residents had been affected by a similar sickness, and people in nearby villages had fallen ill as well. The young boy, however, was the only individual from the region to test positive for a new strain of influenza virus—named swine influenza, or swine flu, because it contained genetic material from existing swine flu viruses. He represented the first documented case of the disease and thus became known as “patient zero.” By mid-March a sickness resembling the one from La Gloria had emerged in Mexico City, and not long after, cases of the respiratory illness were reported throughout the country. After several infected persons died, the country's health officials decided to send more than 50 patient samples to a lab in Canada for analysis. When 16 of them turned up positive for swine flu, authorities at the World Health Organization (WHO) convened an emergency meeting to assess the situation.

The newly identified virus, deemed to have significant pandemic potential (the ability to spread easily over a wide geographic area) owing to the lack of pre-existing immunity in humans, appeared in the United States in mid-April. It subsequently spread to Canada and the United Kingdom, to Europe, and to New Zealand. By June 1, WHO was reporting more than 17,400 cases and 115 deaths worldwide, and 10 days later Margaret Chan, director general of WHO, declared the swine flu outbreak a pandemic. It was the first pandemic to occur since 1968, when the Hong Kong flu claimed the lives of more than 750,000 people globally. Although the majority of individuals who became infected with swine flu experienced only mild symptoms of fever, cough, and runny nose, the rapid spread of the virus and confusion about the risk of death and which



Doctors at the Mexico City Navy Hospital wear protective gear as they tend to patients complaining of swine flu-like symptoms.

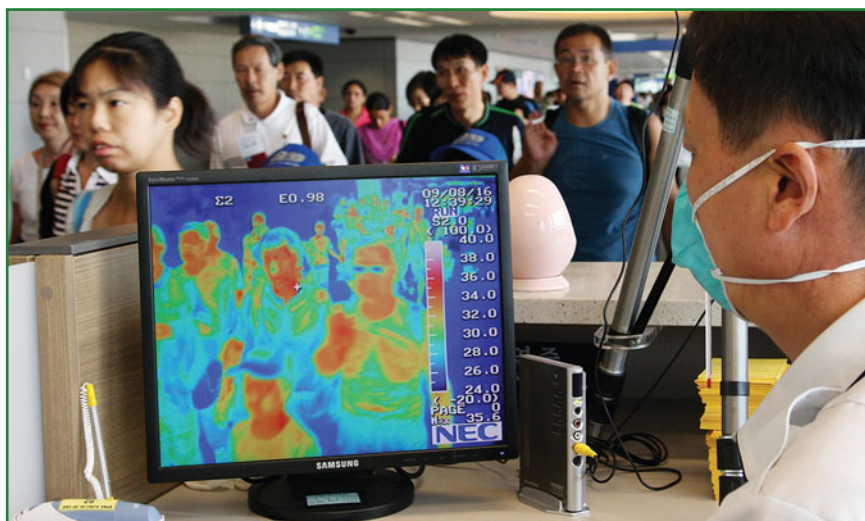
populations were most susceptible generated significant fear among the public.

The Pandemic Virus. The swine influenza virus at the root of the 2009 pandemic was a newly identified strain of influenza A subtype H1N1. Influenza A viruses are the primary cause of seasonal influenza in humans, and they are constantly evolving. One mechanism of evolution is viral reassortment—when multiple strains of influenza viruses infect a single host and recombine to give rise to a new strain. In the case of the 2009 swine flu virus, genetic material from three organisms—humans, birds, and pigs—mixed and recombined in a pig host, giving rise to a triple reassortant virus.

Similar to all other influenza viruses, swine flu also was subject to constant evolution through antigenic drift as it circulated between the Northern and Southern hemispheres. As it crossed the globe, strains carrying mutations

for drug resistance emerged, with the first strain appearing in Denmark in June and demonstrating resistance to Tamiflu (oseltamivir), one of the most effective antiviral drugs used to treat swine flu. Scientists immediately began to search for ways to overcome resistant strains. In laboratory studies, combinations of existing antiviral agents proved promising. At least one such agent was investigated clinically.

The genetic constitution of the reassortant virus rendered it more contagious than typical seasonal influenza, though it was still transmitted in typical flu fashion—via infectious droplets expelled into the air from infected persons when sneezing or coughing. The virus could survive on hard surfaces for 24 hours, providing ample opportunity to spread to another person. Individuals most susceptible to complications from infection included pregnant women, persons over age 65, children



A quarantine officer at Incheon (S.Kor.) International Airport checks a thermal camera designed to monitor body temperature. The thermal imaging system was used to screen passengers for swine flu.

under age 5, and persons suffering from chronic illness or with suppressed immunity. Actual case-fatality rates for swine flu were relatively low.

The name initially given to the virus, “swine influenza,” was fitting in several respects; the virus not only contained genetic segments from two different swine influenza viruses but also appeared to have originated on a pig farm near La Gloria. The farm belonged to Granjas Carroll de Mexico, a joint venture operation working in partnership with U.S.-owned Smithfield Foods, Inc., a major international producer of pork products. Countries such as China, Thailand, and Russia temporarily arrested the import of pigs from affected areas. The name “swine flu,” however, also created widespread confusion. For example, Egyptian Minister of Health Hatem al-Gabali ordered the slaughter of up to 400,000 of the country’s pigs, though there was no evidence that they were infected with the virus. The mandate instantly sparked riots and protests from Egyptian farmers who depended on raising and selling pigs as a source of income. In an effort to dispel confusion, WHO changed the name of the virus to influenza A (H1N1) in late April.

Global Dissemination. When the influenza A (H1N1) virus was discovered in Mexico, it was not considered of international concern. As the disease spread across Mexico City, into the United States and Canada, and overseas to Spain, the United Kingdom, and the Middle East in late April, however, WHO acknowledged that global dispersion was imminent and issued a level 5 pandemic alert. The alert served as a signal to national health agencies to finalize plans for the implementation of

control measures, such as limiting travel to and from affected regions and distributing face masks to limit disease spread, and for the acquisition and mobilization of stocks of antiviral drugs.

When the pandemic was declared in June, cases had climbed to nearly 30,000 worldwide, and the virus had spread to many regions of the world, including Southeast Asia, Scandinavia, the West Indies, and Central and South America. By early September, with the exception of several places, including Greenland, Mongolia, and some areas of Africa, swine flu was established in

A Chinese factory worker checks eggs to be used for producing inactivated influenza A (H1N1) vaccine at the plant of Sinovac Biotech Ltd., a biopharmaceutical company based in Beijing.



all parts of the world. In late December some 622,480 cases and 12,220 deaths were confirmed globally. Because not all cases and fatalities could be tracked, however, the actual figures were believed to be far greater.

Preparing for a Second Wave. Studies of past influenza pandemics revealed that outbreaks occur in waves, or alternating periods of high and low disease activity in the same region, with each “wave” representing a period of increased activity. In some cases three or more waves of illness may hit a single region. In the postpeak period of swine flu activity during the summer of 2009 in North America, cases of illness dropped off significantly. WHO issued a warning in late August, however, to countries in the Northern Hemisphere to prepare for a second pandemic wave, evidence of which began to emerge in the first week of September in the U.S., where some isolated areas experienced sudden spikes in influenza A (H1N1) activity.

When the pandemic potential of the virus was first realized in April, scientists set to work on vaccine development. In July, just four months after the isolation of the new virus, the first swine flu vaccine for humans entered clinical testing. The vaccine, however, required two shots, administered three weeks apart, which raised concerns that there was not enough time for full immunity to be established and that vaccine supplies would run out before a second wave hit. Just days later, however, single-dose vaccines emerged, and meeting global vaccine demand appeared feasible once again. A single-dose vaccine developed by Sinovac Biotech Ltd., a Chinese company, was approved in China in early September, and similar vaccines developed by other pharmaceutical companies worldwide became available shortly thereafter.

As summer turned to fall in North America, a second pandemic wave, equal to or greater in severity, seemed certain. Despite this, U.S. health officials remained confident that the virus could be contained. The generation of single-dose vaccines, WHO’s effective surveillance program, and existing global mitigation and control measures, which were repeatedly strengthened and reevaluated throughout the pandemic, served vital roles in alleviating public fears as the Northern Hemisphere headed into the winter flu season.

Kara Rogers is the Senior Editor of Biomedical Sciences for Encyclopædia Britannica.

The Autism Spectrum

by Simon Baron-Cohen

In 2009 researchers made numerous discoveries concerning the prevalence, neuropathology, and treatment of autism spectrum conditions (also known as autism spectrum disorders). Indeed, new estimates of prevalence in both the United States and the United Kingdom indicated that roughly 1 in every 100 children was diagnosed with one of these conditions. Autism is a spectrum condition—it is manifested to varying degrees of severity. At one extreme a person may have no social skills, no language skills, and major learning difficulties. At the other extreme the individual may have average or even above-average IQ and precocious vocabulary but odd social skills (e.g., being extremely self-centred). The former would receive a diagnosis of classic autism. The latter would receive a diagnosis of Asperger syndrome. Both of these are subgroups on the autistic spectrum, and those living with either condition share a strong preference for routines and repetition and are characterized by an obsessional interest in highly specific topics.

Prevalence. In the late 1990s the prevalence of autism spectrum conditions was found to have increased substantially relative to previous decades, and data published in 2009 revealed that the number of children diagnosed with these conditions was continuing to follow this same trend. A study published in December by the Autism and Developmental Disabilities Monitoring Network, a part of the U.S. Centers for Disease Control and Prevention, stated that in 2006 between 1 in 80 and 1 in 240 U.S. children had been diagnosed with an autistic condition. The study assessed the prevalence of these conditions in eight-year-olds, since this represented the age by which most affected U.S. children had been placed under a specialist's care. A similar



In a one-on-one session, a therapist works with a five-year-old boy with autism to improve his cognitive skills. During their sessions the therapist subtly switches between play and learning.

prevalence estimate, about 1 in 100 children, had been reported previously in the United Kingdom. This figure was also representative of an increase in the number of persons diagnosed with autism spectrum conditions, relative to previous decades in the United Kingdom. It remained unclear, however, whether such increases were due to the conditions' becoming more widespread or to improvements in knowledge and diagnostic procedures used to detect them.

Information on the incidence of autism spectrum disorders in other countries remained controversial. A study published early in 2009 in the *Israel Medical Association Journal* addressed the incidence of autism spec-

trum disorders in that country. The study, which represented the first comprehensive analysis of autistic disorders performed in Israel, reported that the incidence of the conditions had increased from 2 diagnosed cases in 1985 to 428 in 2004. These figures were further assessed in terms of the total number of children under age 18 who lived in the country during the time period investigated. Thus, the per capita prevalence of autism spectrum disorders in Israel in 2004 was estimated to have been 1.9 per 10,000 children. A group of researchers from the Sheba Medical Center near Tel Aviv later wrote to the journal claiming that the reported figures were underestimates. The group stated that for children born

in Israel between 2001 and 2004, the prevalence of autism spectrum disorders was about 36 per 10,000, placing the incidence of the conditions in the country closer to estimates of worldwide incidence reported in a study published in 2006 in the journal *Lancet*. The Israel figure cited by the group at Sheba Medical Center had not yet been published in a peer-reviewed journal and was based on data that the researchers had obtained from the Israel Ministry of Social Affairs.

Psychological Aspects. One of the most distinguishing characteristics of people affected by autism spectrum conditions is atypical behaviour. Such behaviour has been associated with two primary psychological aspects, empathy and systemizing. Empathy involves imagining another person's thoughts and feelings and having an appropriate emotional reaction to those feelings. Children and adults with Asperger syndrome show their empathizing difficulties on tests of emotion recognition, theory of mind, and spontaneous empathy. Theory of mind is the ability to attribute mental states to oneself or others and is regarded as the cognitive component of empathy. Emotion recognition is sometimes regarded as part of theory of mind because emotions are mental states. Often emotion-recognition deficits appear only if complex emotions are tested, though in some individuals with autism, the deficit is evident even when basic emotions are tested. This deficit can explain the difficulties in social and communicative development and in imagining others' minds.

Systemizing is the drive to analyze a system in terms of underlying rules in order to understand and predict its behaviour. People with autism spectrum conditions show precocious understanding of systems, relative to their mental age, on tests of intuitive physics or questionnaires assessing how interested a person is in different types of systems (maps, train timetables, machines, syntax, etc.). The repetitive behaviour, the desire for routines, and the need for sameness can be interpreted as being the result of a strong drive to systemize. Systemizing also requires excellent attention to detail, and individuals with autism or Asperger syndrome are relatively fast on tests of attention to detail. Adept systemizing can often explain the exceptional mental abilities possessed by some persons affected by these conditions.



An autistic child views a movie during a demonstration of magnetoencephalography (MEG). This technique can be combined with magnetic resonance imaging (MRI) to obtain information about abnormalities in brain function in individuals with autism.

Neurological Aspects. Anatomical abnormalities have been identified in different brain regions in individuals with autism. These abnormalities are not found in every case, and there are inconsistencies between studies, such that sometimes overgrowth or underdevelopment is found. The brain regions that have been reported to be atypical include the cerebellum, the corpus callosum, the hippocampus, and the amygdala. Epilepsy also occurs in a proportion of individuals with autism spectrum conditions, though the exact rate is not clear. Although in classic autism one-third of cases develop epilepsy by adolescence, in the Asperger subgroup these rates may be much lower and have not been systematically studied. In terms of neuropathology, the number of Purkinje cells (large neurons with many branching extensions) in the cerebellar cortex in people with autism is abnormally low. Abnormalities have also been reported in the density of neurons in the hippocampus, the amygdala, and other parts of the limbic system. One report also suggested a reduction in the size of cortical minicolumns, though the significance of this is unclear.

Functional neuroimaging studies of autism spectrum conditions show abnormalities in the amygdala and in the orbitofrontal and medial prefrontal cortex, among other areas. These atypical patterns of neural activity occur in relation to the empathizing deficits. Using magnetic resonance imaging (MRI), some reports have suggested that the

autistic brain involves transient postnatal macroencephaly (accelerated brain growth). For example, in a study of children diagnosed with autism, some 90% who were born with normal head circumference were found to have, by ages two to four, MRI-based brain volumes that were larger than average. Independent confirmation of these abnormal growth rates is needed.

Genetic and Hormonal Aspects. In recent years the sibling risk rate for autism has been estimated to be about 5 to 10 times higher than general population rates. That is, while 1% of children have an autism spectrum condition, the sibling recurrence rate is 5–10%. Regarding twin studies where one twin had autism, 60% of MZ (identical) pairs were found to be concordant for autism, meaning that both twins were affected. In contrast, no pairs of DZ (fraternal) twins demonstrated concordance. Genetic linkage studies have led to the implication of a number of chromosomal regions in autism. In addition, abnormalities affecting the X chromosome have been identified in association with autism, which may explain the sex ratio's being markedly biased toward males. The marked sex ratio in autism may also reflect hormonal factors. For example, studies have indicated that levels of fetal testosterone are associated with the number of autistic traits present in an individual. Within typical development, fetal testosterone is negatively correlated with the later development of eye contact, vocabulary, empathy, and social

skills. The hormone also is positively correlated with the emergence of narrow interests, systemizing, and autistic traits. Thus, the higher the levels of the hormone during fetal development, the more likely these features are to appear in early childhood.

Early Diagnosis. The earliest that classic autism has been reliably diagnosed is 18 months of age. This was shown by a screening approach known as the Checklist for Autism in Toddlers (CHAT), which tests for the absence of “joint attention behaviours,” such as pointing and gaze following, and the absence of pretend play, all of which are typically present by this age. Population-based studies have shown that CHAT, developed by the U.K.-based Autism Research Centre, has excellent specificity—children who failed on this test had an 83.3% chance of developing autism or a related pervasive developmental disorder. The approach, however, has a low level of sensitivity—it detected only two out of every five cases, mostly missing the Asperger subgroup. Revisions of CHAT are under way to further improve the technique. Asperger syndrome was found

Autistic children gather around a computer to watch a movie made with Lego toys. Lego therapy has been shown to help children with autistic disorders develop their social communication and turn-taking skills.



In programs such as PEERS (Program for the Education and Enrichment of Relational Skills), at the University of California, Los Angeles, autistic teens develop important social skills through activities such as playing games with others.

to be reliably diagnosed by age five by using a screening technique called Childhood Autism Spectrum Test (CAST).

Intervention. The most effective interventions for children on the autistic spectrum are special education, such as social skills teaching, and applied behaviour analysis (ABA), in which appropriate skills and behaviours are taught through principles of reinforcement. The key ingredients for effective early intervention are that the methods are highly structured, intensive, and individualized. Medical treatments are not usual. Indeed, there are ethical issues surrounding the notion of trying to cure autism. Although some aspects of the condition do require help (e.g., the empathy difficulties and the lack of language development), other aspects may not (e.g., the systemizing talents). For many years “treatment” in autism proceeded on the basis of an approach that was tried and tested but without any real rationale for why it should be effective. ABA is one such example. The principles behind it enable target skills to be broken down into simpler units to be acquired through shaping and mass practice. While there is some evidence for the effectiveness of ABA, the methods require external reinforcers or rewards to maintain the child’s attention and cooperation, which suggests that they are not as autism-friendly as they could be. In contrast, newer interventions have been designed to harness individuals’ areas of strength and their natural in-

terests as a means for building new skills. One example is *Mind Reading* DVD educational software, in which the individual’s natural interest in law-ful, predictable computers and in information’s being systematically organized renders the domain of emotions easier to learn about. A second example is *The Transporters* DVD animation, which relies on the child’s natural interest in the mechanical, predictable motion of vehicles to help the child attend to the film and to enable implicit learning of emotions, since these are grafted onto the vehicles. A final example is Lego therapy, which also exploits the child’s strong interest in systems (in this case, constructional systems) to encourage turn taking and social communication.

All treatments that are claimed to be useful for children or adults with autism spectrum conditions should be subjected to a scientific evaluation. This is to confirm that there are indeed benefits relative to no intervention and that there are no unwanted side effects. Web sites have been developed to help parents as well as professionals make informed decisions about which treatment option to pursue, given that these are often expensive and that new methods are announced almost annually.

Mental Health in Affected Teenagers and Adults. Teenagers and adults with Asperger syndrome often suffer from additional mental health problems, the most common being depression. Many also feel suicidal, and tragically some

are so desperate as to attempt suicide. The high levels of depression are not surprising if people with Asperger syndrome feel that they do not fit into society and feel rejected by the majority. For teenagers this may be because the peer group becomes less tolerant of those who do not fit in and because a failure to conform in the educational system can also mean underperforming academically. In adulthood, depression may be associated with the challenges of living independently or with the difficulties in securing employment if the selection is via an interview (i.e., relying on social skills). Those adults with high-functioning autism or Asperger syndrome who are fortunate to have a job may find that they either lose their jobs (e.g., through interpersonal difficulties at work) or fail to be promoted (e.g., because they cannot manage others). Such depression may therefore be secondary to the condition and may be preventable with appropriate support. Such support for teenagers may include special education, a buddy system, social skills training, and organized social groups. Support in adulthood may include sheltered employment, mentoring, advocacy, befriending, social groups for Asperger syndrome, and help with housing.

The adult Asperger community has generated its own term for those who do not have Asperger syndrome or

autism: *neurotypicals*. This is in part intended to convey that one view of autism spectrum conditions is that they are not a disease or a disorder but simply an atypical form of neurological development, akin to left-handedness. This view is less stigmatizing and makes an important political point—namely, that those individuals whose brains develop and work differently need not be judged to be inferior to the majority. They are simply “different.” This view is called the neurodiversity movement and resembles the civil rights movement that was necessary to gain equal opportunities for ethnic minorities and for women. There is much to recommend this view, since the profile of autism spectrum conditions entails not just disability but also areas of strength (e.g., in attention to detail and systemizing). Nevertheless, it is important that the disability element is not overlooked in this shift of emphasis, since the diagnosis is given only if the individual is suffering to some extent, with their autistic traits leading to significant interference in their everyday life. This diagnostic criterion is important as a yardstick of severity, since if the features of the condition are very mild, they may not require a diagnosis. This relates back to the notion of an autistic spectrum, a dimension of autistic traits that runs right through the population. The current view is that all humans lie somewhere on this spec-



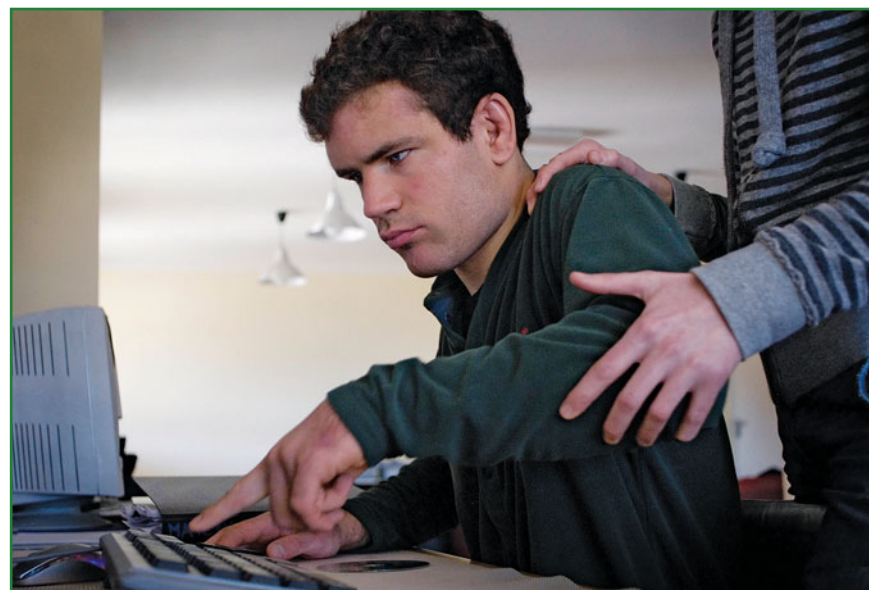
An autistic teenager holds his puppy and a small bucket of his belongings after receiving a Project Lifesaver tracking bracelet at the Staunton (Va.) Police Department.

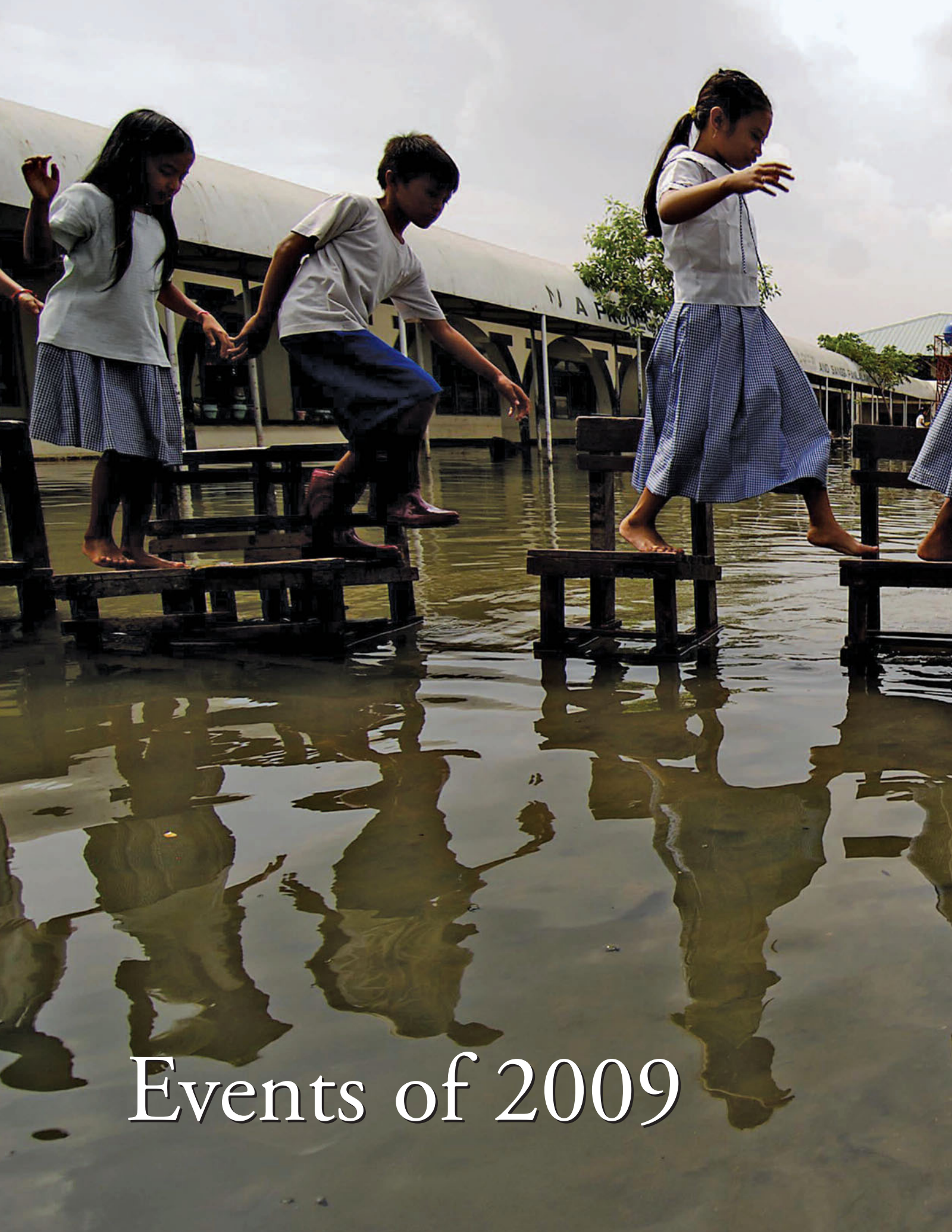
trum and that it is only those who are at the extreme end and those who are experiencing difficulties as a result of their high number of autistic traits who will require a diagnosis. Not all doctors share this view of autism spectrum conditions' simply being a case of neurodiversity. For example, the American Psychiatric Association retains the term *autism spectrum disorder*, since this group of conditions includes the pervasive developmental disorders, which involve varying degrees of impairment of language acquisition, communication, social behaviour, and motor function.

Those individuals on the autistic spectrum who also have below-average IQs (and therefore are at risk of broader developmental delays) are likely to need special support throughout their lives. They will remain vulnerable even as adults. The issues and challenges that low IQ raises are in some respects no different from those issues raised by low IQs in other individuals (who are not on the autistic spectrum) and are probably best served by the same learning disability agencies.

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Communities for autistic adults, such as Cascina Rossago in Italy, create a living environment that caters to the unique needs of these individuals.





Events of 2009



Students in the Philippines use chairs to cross a flooded yard inside the grounds of their elementary school after Typhoons Ketsama and Parma caused heavy flooding and landslides in late September and October.

Noel Celis—AFP/Getty Images

Anthropology and Archaeology

Investigators identified the remains of **COPERNICUS**, debated the taxonomy of **IDA**, and published new information on **ARDI**. Archaeological discoveries included the extensive **STAFFORDSHIRE HOARD**, the oldest **VENUS FIGURINE**, and a long-lost 15th-century **TIBETAN LIBRARY**. Two large **PANELS UNEARTHED** in Guatemala **AUTHENTICATED** the first written version of the **POPOL VUH**.

ANTHROPOLOGY

Key developments in the field of physical anthropology during 2009 included news about the reconstruction and analysis of an extraordinarily complete skeleton of a controversial Eocene primate. The 47-million-year-old adapiform primate, *Darwinius masillae*, was announced to the world on May 19 via the most extensive public relations multimedia campaign in the history of primate paleontology. The specimen was originally unearthed in 1983 near Messel, Ger. (then in West Germany), and was cleaved into two parts that were subsequently sold separately. Jørn H. Hurum from the University of Oslo in 2006 reunited the two fossil-bearing slabs and assembled an international team of researchers who described the nearly complete (albeit crushed) specimen, which lacked only part of the lower left leg. The remains, nicknamed Ida, were those of a juvenile female who would have attained a body weight of 650–900 g (23–32 oz) had she lived to adulthood. She was probably nocturnal, and her incredibly well-preserved digestive tract contents indicated a diet of leaves and fruit. An agile arboreal quadruped, she inhabited a rainforest and died near a volcanic lake. She also possessed a mixture of primitive and advanced morphological traits that led to controversial claims about her taxonomic relationships and phylogenetic position within the order Primates. The authors proposed an unorthodox taxonomy: that the adapiform *D. masillae* represented an early haplorhine, a group that includes the tarsiers as well as the anthropoids (monkeys, apes, and hu-

mans). The consensus favoured by most experts not connected to the research team placed *Darwinius* and other adapiforms within the lemurlike strepsirhines and not among the haplorhines. Thus, the well-publicized conjecture that *Darwinius* was a linking form between lemurlike primates and anthropoids—hence an ancestor of humans—was considered to be false by many of the world's leading paleoanthropologists.

A group of Polish scientists with the assistance of a geneticist from Uppsala (Swed.) University identified the skeletal remains of Nicolaus Copernicus, the

The 47-million-year-old Eocene primate fossil Darwinius masillae.



University of Oslo—PA Photos/Landov

world's most famous astronomer. Copernicus, who died in 1543, was buried in the Frombork (formerly Frauenburg) Cathedral (now in Poland). Although the cathedral contained more than 100 mostly unnamed tombs, experts suspected that Copernicus's grave would be located near the St. Cross Altar because he had been in charge of this altar when serving as an unordained canon at the cathedral. Several skeletons were excavated near the St. Cross Altar in 2005, and subsequently, on the basis of a cranio-facial reconstruction, one incomplete skeleton of a 60–70-year-old male was proposed to be that of Copernicus.

DNA analyses presented in July confirmed this putative identification. DNA was extracted from three upper molars and both femora of this skeleton, and the mitochondrial DNA (mtDNA) profiles of these different samples were identical, which implied that the cranium and postcranial samples represented a single individual. Although no relatives who could provide a DNA reference sample had been identified, investigators found a clever substitute source. By carefully examining Copernicus's heavily annotated copy of Johann Stoeffler's calendrical treatise *Calendarium Romanum magnum* (published 1518)—which had resided at Uppsala since the mid-17th century—they found nine hairs, two of which possessed the identical mtDNA profile of the molar and femur samples. As a result, those strands of hair could be used as a reference sample for his skeletal DNA and thereby confirmed the identification of the skeletal remains as his. Interestingly, although portraits of Copernicus usually showed him with dark eyes, genetic analysis revealed that he had the genotype predominant among blue- or gray-eyed humans and thus actually may have had a light iris colour.

Sarah Tishkoff of the University of Pennsylvania led an international team of scientific collaborators who spent more than a decade collecting and analyzing the largest African genetic database yet assembled. The team genotyped a panel of 1,327 polymorphic markers in 2,432 Africans from 121 geographically diverse populations. They also genotyped 98 African Americans and 21 Yemenites and incorporated data from 952 previously studied indi-

viduals from around the world. Statistical analysis indicated 14 ancestral clusters present in the African data set. Strong associations between geography, language, and genes reflected the concomitant spread of people, languages, and sometimes culture or ethnicity. Genetic diversity was generally highest in African populations and declined with increasing distance from Africa consistent with serial founder effects that resulted from global migrations that initially departed from northeastern Africa near the midpoint of the Red Sea. The analyses also indicated that modern human migration within Africa may have originated near the coastal border of Namibia and Angola, an area that constitutes the current San homeland. The San speak Khoisan (Khoisan) languages characterized by click sounds. The genetic analyses further suggested that the southern African Khoisan speakers, the eastern African Khoisan-speaking Hadza and Sandawe, and the central African Pygmies are all remnants of a widespread proto-Khoisan-Pygmy population of hunter-gatherers that existed more than 35,000 years ago. According to this intriguing scenario, the Pygmies were originally Khoisan speakers who, in a rare example of complete language replacement, subsequently adopted the nonclick Niger-Congo languages spoken by their neighbours. Among the other populations studied, African Americans had primarily West African roots, deriving 71% of their ancestry from both Bantoid and non-Bantoid Niger-Congo-speaking populations, only 8% from the rest of Africa, 13% from European admixture, and the remaining 8% from a number of different source populations.

The October 2 issue of the journal *Science* devoted much space to the skeletal biology, paleoecology, and evolutionary position of the 4.4-million-year-old hominin (hominid) *Ardipithecus ramidus* found at Aramis, Eth. (*Ardipithecus* represented a less-specialized grade of hominin than the later australopithecines.) (See Special Report on page 190.) (STEPHEN L. ZEGURA)

ARCHAEOLOGY

Eastern Hemisphere. In 2009 the largest-known trove of Anglo-Saxon treasure was unearthed in a farmer's field in Staffordshire, Eng. Discovered by local resident Terry Herbert with his metal detector, the find was later excavated by archaeologists from the University of Birmingham and the Staffordshire

Eddie Keogh—Reuters/Landov



Part of the Anglo-Saxon treasure known as the Staffordshire Hoard is displayed at the Birmingham (Eng.) Museum and Art Gallery in September.

County Council. The so-called Staffordshire Hoard was dated to the 7th century CE and was composed of more than 1,500 pieces of gold and silver, weighing 5 kg (11 lb) and 2.5 kg (5.5 lb), respectively. Among the rarest items in the hoard were fragments of a gold helmet—only four helmets from the period had been previously found—and a gold strip bearing the Latin inscription “Surge Domine et dissipentur inimici tui et fugiant qui oderunt te a facie tua” (“Rise up, o Lord, and may thy enemies be dispersed and those who hate thee be driven from thy face”). The Staffordshire Hoard dwarfed the cache of objects recovered in 1939 at the Anglo-Saxon burial site of Sutton Hoo in Suffolk, whose precious gold weighed 1.66 kg (3.7 lb).

Hohle Fels Cave in the Ach Valley, southwestern Germany, continued to yield extraordinary Ice Age finds, among them the world's oldest Venus figurine. Dated to more than 35,000 years ago and carved out of mammoth ivory, the 6-cm (2.4-in)-tall statuette was thought to be the earliest-known example of figurative art, predating previous finds by some 5,000 years. The figurine was found in six fragments amid domestic debris. Its patina and a loop on its back suggest it may have been worn as a pendant. In addition to the Venus figurine, Nicholas J. Conard and his University of Tübingen, Ger., team recently recovered the remains of three flutes from the Swabian Hills site, one of which was 21.8 cm (8.5 in) long with five holes and was fashioned from the radius of a griffon vulture (*Gyps fulvus*); the other two instruments were made of mammoth ivory. These artifacts brought to eight the total number

of known instruments from the Swabian Aurignacian, which suggested that music was an important element of human cultural expression at this early date.

In Rome archaeologist Françoise Villedieu of the École Française de Rome and her colleagues found the remains of a circular banquet hall with a complex rotation system—thought to have been hydro-powered—within the Domus Aurea, the sprawling Palatine Hill palace built by the Roman emperor Nero (ruled 54–68 CE). The hall, which measures some 16 m (52 ft) in diameter and was likely built of wood, rested upon a 4-m (13-ft)-wide pillar that had four spherical rotating mechanisms, affording Nero's guests a panoramic view of the city as they dined. This device, like the rest of the palace, was said to have been built atop the smoldering ruins of Rome after the great fire of 64 CE.

The wrecks of five Roman trading ships that had foundered in more than 100 m (330 ft) of water between the 1st century BCE and the 5th century CE were discovered during a survey of the seabed near the remote Italian island of Ventotene, one of the Ponza Islands in the Tyrrhenian Sea. The ships had been transporting wine from Italy, *garum* (fermented fish sauce—a key condiment in ancient Roman cuisine) from provinces in Spain and North Africa, and metal for making weapons and utensils. According to archaeologist Timmy Gambin of the Aurora Trust, which found the cargo ships, the vessels were likely seeking safe harbour near the island during storms when they sank.

Also in Italy, recent scrutiny of aerial photographs of farmland around the Venetian lagoon—taken in July 2007

during a severe drought—revealed details of the ancient Roman metropolis of Altinum, complete with gated city walls; a complex network of canals, streets, and bridges; harbour facilities; and numerous structures, including houses, shops, and an amphitheatre. According to project leader Andrea Ninfo of the University of Padua, Altinum was the only large Roman city in northern Italy and one of the few in Europe that was not buried by later construction. He also stated that the images made it clear that the citizens of the city, which reached its apogee in the mid-2nd century BCE, had mastered their marshy environment.

Remains of the oldest-known settlement in the Aegean came to light during excavations in June at Ouriakos on the Greek island of Limnos. There, according to site director Nikos Efstratiou of Aristotle University of Thessaloniki, 14,000-year-old stone tools were found along with the remains of animal bones and seashells belonging to the Epipaleolithic Period. Before these materials were unearthed, the earliest evidence for organized human activity in the Aegean had come from the so-called Cyclops Cave in the islet of Gioura (Yioura), from the site of Maroula on the island of Kythnos, and from Kerame on the island of Ikaria, all of which postdate the 9th millennium BCE.

Also in Greece, ongoing research at the submerged city of Pavlopetri off the Laconian coast pushed back the date of the town's habitation to c. 2800 BCE, more than a millennium earlier than previously thought. The site, thought to be the oldest-known sunken city in the world, covers more than 35,000 sq m (some 42,000 sq yd) and includes streets, houses, temples, and tombs. Current exploration of the site—first identified by Nicholas Flemming of the University of Southampton, Eng., in 1967—was being carried out by Jon Henderson of the University of Nottingham, Eng., and Elias Spondylis of the Ephorate of Underwater Antiquities, a department of the Hellenic Ministry of Culture, and was expected to yield abundant new information on trade in the Bronze Age, Minoan, and Mycenaean periods (approximately 3000–1100 BCE) as well as on the tectonic events that led to its destruction.

Biomolecular analysis of residue within an amphora recovered from the multichambered tomb of the early Egyptian pharaoh Scorpion I (c. 3150 BCE) at Abydos revealed that the ancient Egyptians added a host of herbs

and resins to their wines to endow them with medicinal properties. According to Patrick T. McGovern of the University of Pennsylvania Museum of Archaeology and Anthropology, who led the study, wines were steeped with herbs, including balm, sage (*Salvia*), and savory (*Satureja*), as well as the resins of pine and terebinth (*Pistacia terebinthus*); analysis of wine residue in a vessel from the 4th- to early 6th-century-CE site of Gebel Adda in southern Egypt, decanted during the last period of winemaking in Egypt prior to the Islamic conquest, yielded traces of rosemary (*Rosemarinus officinalis*) as well as pine resin, which attested to a long tradition of using herbal wine additives, largely to aid in digestion.

University of Exeter, Eng., archaeologist Alan Outram and his colleagues found the earliest evidence for horse domestication—dated to between 5,700 and 5,100 years ago—at a suite of Botai culture sites in northern Kazakhstan. Equine bones recovered at the four study sites revealed that the horses had had slenderer builds than their wild counterparts—a principal trait of domesticated horses from later Bronze Age sites—and their teeth exhibited wear patterns consistent with bridling. Containers found within pit houses and in nearby middens at the semisedentary village sites also bore traces of fat solids from the horse milk once stored in them. Before this discovery, the earliest-known evidence for horse domestication had come from a series of late 3rd-millennium-BCE chariot burials belonging to the Sintashta culture of Central Asia.

Shards of pottery recovered from a cave in southern China's Hunan province were dated to 18,000 years ago, making them the oldest-known examples of clay craft in the world. Analyzed by Elisabetta Boaretto of Israel's Bar-Ilan University and Xiaohong Wu of Peking University in Beijing, the shards came from at least two ceramic vessels. They were found in Yuchanyan Cave among sediments rich in animal bone and charcoal fragments, bone and shell tools, and cobble and flaked artifacts. The site was thought to have been used as a seasonal foragers' camp during the Late Paleolithic (beginning about 40,000 years ago). Prior to this discovery, the earliest-known evidence for pottery had come from a suite of Chinese sites in Hunan, Jiangxi, and Guangxi provinces, dating to 10,000–16,000 years ago.

And in the isolated Himalayan kingdom of Mustang, once a centre of Tibetan culture and now part of north-

central Nepal, Himalaya expert Broughton Coburn and Everest mountaineer Pete Athans in 2007 and 2008 discovered a long-lost library of 15th-century manuscripts, many adorned with illuminated miniatures. Found within Mardzong Cave, part of a rock-hewn monastery complex carved into a cliff face overlooking the upper Kali Gandaki River, the more than 8,000 folios belong to some 30 religious tracts—most associated with Bon, an animist faith that flourished in the region before the arrival of Buddhism in the mid-7th century CE; adherents of the religion still resided in the area. Among the newly discovered volumes was a heretofore-unknown version of the *Lubum*, a sacred Bon text devoted to the propitiation of *naga* (Tibetan *Lu*) serpent deities. The manuscripts, which were discovered during a cave-documentation project, were transported to a local monastery for conservation and study. (ANGELA M.H. SCHUSTER)

Western Hemisphere. In 2009 archaeological research at the Fisher Mounds Site Complex in southern Wisconsin continued to expand knowledge about Cahokia Mounds, the largest and most complex Native American civilization in North America. Led by Timothy Pauketat at the University of Illinois at Urbana-Champaign, these excavations uncovered evidence of a small colony of Mississippian peoples originating from the Cahokia area some 800 km (500 mi) to the south near modern-day St. Louis, Mo. These Cahokians apparently brought pots and chert (fine-grained quartz) tools with them, as there was little evidence from excavated features for the use of local lithic materials and clay sources. The Mississippian houses, potsherds, and stone tools recovered from these excavations dated to about 1050 CE, coinciding with Cahokia's punctuated regional political consolidation. Why Cahokians traveled so far northward was unclear. The absence of a palisade wall at the site, however, indicated that the colony enjoyed a relatively peaceful existence.

Excavations in East St. Louis, Ill., uncovered large portions of one of the largest Mississippian mound centres in the eastern United States. These excavations fundamentally revised archaeological understandings of the Cahokia civilization. Archaeologists had previously believed that the East St. Louis mound centre witnessed its peak residential occupation while the nearby site of Cahokia was being depopulated. On the basis of ongoing excavations by the

Eduardo Gonzales—AFP/Getty Images



American archaeologist Richard Hansen points out details of one of the two recently discovered 8-m (26-ft)-long panels carved in stucco from the pre-Classic Mayan site of El Mirador, Guat.

Illinois Transportation Archaeological Research Program, however, researchers determined that both the Cahokia and East St. Louis sites experienced their highest population densities contemporaneously, indicating a larger regional population than previously posited. To date more than 100 Mississippian buildings and other features had been uncovered, including a burned structure among whose intact artifacts were an elaborately carved stone figurine of a kneeling female holding a marine shell.

Excavations continued at the Topper site near the Savannah River in South Carolina. Topper was once a Paleo-Indian quarry and habitation site where Clovis points were manufactured. Work at the site in 2009 recovered more detailed information about the Clovis occupation of the site.

The presence of blades, cores, and flake tools indicated that manufacturing activities beyond the production of bifacial stone tools occurred at Topper. The site was also famous for a controversial pre-Clovis occupation argued by Albert Goodyear to date from c. 15,000 to as early as 50,000 BP. Evidence for this claim consisted of various objects argued to be bend-break unifacial tools. If this claim was proved accurate, it would overturn most current theories for the peopling of the New World.

Excavations at the Chimney Rock site near Pagosa Springs, Colo., provided important insight into Southwestern prehistory. Steve Lekson and a team of excavators from the University of Colorado at Boulder investigated two rooms in the site's great house to better understand how it was linked politically to the great houses of Chaco Canyon culture some 144 km (90 mi) away in northern New Mexico. Lekson believed the site to be directly affiliated with Chacoan society and used as a lunar observatory by Chacoan elites. Among the information gleaned from these excavations was the possibility that the elites who lived at Chimney Rock enjoyed a diet of deer and elk, while lower-status residents of the site dined on smaller game.

(GREG WILSON)

Among the significant Mesoamerican archaeological discoveries in 2009 was that of two large stone sculptures in Mexico City by archaeologist Leonardo López Luján. These works provided additional depth to current understand-

ings of Aztec sacrifice and funeral rituals. The first sculpture, a 13-ton monolith, was discovered in October 2006 and was believed to represent Tlaltecuhltli, a female Aztec deity of the earth, known both for her nurturing symbolism and her voracious thirst for blood. Stone representations of this goddess often served as platforms for the cremation rituals of deceased kings. Pigment residues identified on the surface of the sculpture indicated that it would have been decorated in black, red, and blue. The second sculpture discovered more recently by López Luján depicted a large cactus, believed to have been used as a platform for rituals involving Aztec sacrifice; this interpretation of the sculpture's function was based on an Aztec legend that indicates that sacrificial rituals performed atop cacti confer the gods' favour upon the performers.

Archaeologist Richard Hansen recently discovered two 8-m (26-ft)-long panels carved in stucco from the pre-Classic Mayan site of El Mirador, Guat., that depict aspects of the Popol Vuh, the Mayan origin story. The panels—which date to about 300 BCE, some 500 years before the Classic-period florescence of Mayan culture—attested to the antiquity of the Popol Vuh. In explaining how the Mayan gods created the world, the Popol Vuh features the Hero Twins, Hunahpu and Xbalanque, who were transformed into, respectively, the Sun and the Moon. One of the panels depicts the Hero Twins beneath a bird deity; the other panel features a Mayan

maize (corn) god surrounded by a serpent. The panels thus authenticated the earliest written version of the Mayan origin story, transcribed in the 1700s by Spanish colonial priest Francisco Ximénez.

Additional findings at the Classic Maya farming village of Cerén, El Sal., continued to provide major insight into ancient subsistence and food production. Discovered by archaeologist Payson Sheets in 1978, Cerén—which, like the ancient city of Pompeii, was buried in volcanic ash—was pivotal in providing amazing detail about ancient Mesoamerican lifeways. An eruption 1,400 years ago covered the site in 5 m (16.5 ft) of ash, preserving houses and adjacent agricultural plots. The use of ground-penetrating radar and limited test excavations during

the 2007 field season revealed the presence of this agricultural field. Excavations at the site in the spring of 2009, however, revealed the extent of intensive cassava (manioc, or yuca) cultivation in the New World, as evidenced in 18 3 × 3-m (10 × 10-ft) excavation blocks. Although the actual cassava plants had long ago decomposed, their presence was revealed in the ash as hollow spaces that, as in Pompeii, were filled with dental plaster to determine shape and size of the missing object. Cassava, a starchy root crop, is rarely preserved archaeologically, unlike the more common Mesoamerican triad of maize, beans, and squash, the seeds of which have durable structures that can survive charring. In tropical and temperate regions, macroscopic plants can remain in preserved form only if they have been carbonized in fires; cassava is composed mostly of sugars, which melt away when burned. As a result, manioc often was overlooked in the reconstruction of ancient Mesoamerican foodways. The recent findings at Cerén thus filled a significant gap.

Analysis of chili pepper DNA by botanists Seung-Chul Kim, Araceli Aguilar-Meléndez, and Mikeal Roose revised previous interpretations of chili domestication in the New World. Kim and his colleagues suggested that chilies, formerly believed to have been domesticated first in central Mexico, were domesticated independently and from several different wild ancestors in different areas of Mesoamerica.

(AMBER VANDERWARKER)

Architecture and Civil Engineering

Although the **ECONOMIC DOWNTURN** may have ushered in the **END OF AN ERA** in architecture, significant **MUSEUM** projects were completed in Athens and Chicago, New York City transformed an old **ELEVATED RAIL LINE** into a **PARK**, and additions to the remarkable **DALLAS ARTS NEIGHBOURHOOD** were well under way.

ARCHITECTURE

The top story in 2009 in architecture, as in many other fields, was the disastrous impact of the global economic recession. Building projects around the world were suddenly stopped for lack of funding. Some of them left holes in the ground where foundations had been planned. The impact was especially strong in some places that had been growing and building rapidly—for example, such tourist destinations as Dubai, U.A.E. Some of the world's most-successful architects felt the brunt. Staff cuts of 50% or more were common. As just one example, the American Frank Gehry, perhaps the world's best-known architect, reduced the size of his office from 250 employees to 112. In Germany and other countries, firms were cutting back to a four-day week for lack of work. There was concern that many talented younger architects, after being laid off, might not ever return to architecture. Most economic predictions foresaw only a slow recovery for the building market in 2010 and 2011. Some journalists predicted that the era of so-called iconic architecture—the age of heavily publicized prominent buildings by famous-name architects that was said to have begun in the 1990s with the construction of Gehry's Guggenheim Museum in Bilbao, Spain—had come to an end. Also having an impact on architecture was the threat of global warming, which encouraged architects to design “green” buildings—buildings that would generate less atmospheric pollution.

Notable Buildings. Despite the shrinking economy, many notable buildings

did reach completion in 2009. Among the most interesting structures was the new Acropolis Museum in Athens designed by Swiss-born Franco-American architect Bernard Tschumi. Working only 300 m (1,000 ft) from the ancient Parthenon temple, which was possibly the world's most famous building, Tschumi created a modern museum of concrete and stainless steel for 4,500 sculptures and other historical objects. American architect Thom Mayne's 41 Cooper Square in New York City included a student centre, faculty offices, and classrooms for Cooper Union, a school of engineering, art, and architecture. The building's exterior was sheathed in a gleaming mesh of stainless steel, and the interior featured a vast freely shaped stairway that quickly also became a student social centre. Italian architect Renzo Piano, the world's leading designer of art museums, added a large new Modern Wing to the 1893 building of the Art Institute of Chicago. The glass-faced exterior was topped by what Piano called a “flying carpet,” a translucent roof of glass that projected from the building's walls like the visor of a hat.

Several major buildings completed in 2008 continued to garner much critical attention during 2009. The Shanghai World Financial Centre, at 101 stories and 492 m (1,614 ft) high, was one of the world's tallest towers. It was designed by the American firm Kohn Pedersen Fox. The first 77 stories were office space, and a hotel and observatory occupied the upper floors. Gehry transformed the Art Gallery of Ontario in Toronto by wrapping a new glass and steel addition around an older art museum dating from 1918. In Spain in the

Museum of the Roman Theatre of Cartagena, Spanish architect Rafael Moneo wove his own work into the old city. He created a path along which his new buildings merged harmoniously with historical ones, a public path that climbed upward through the hilltop city. In Philadelphia, American architect Robert A.M. Stern, known usually for architecture in traditional styles, designed a 58-story Modernist office tower, the Comcast Center. It contained a dramatic glass-covered lobby called the winter garden. One entire side of the lobby was a media wall, with very realistic ever-changing video imagery. Some thought that the media wall might be an omen of the architecture of the future, in which whole facades might someday consist of digital signage, rather than solid stone, brick, concrete, or glass.

The glass-covered public lobby of Philadelphia's Comcast Center features life-size sculptures of people strolling on steel tubes.



Inquirer/MCT/Landov

Richard Drew/AP



New York City's High Line (green area at centre), a project that converted an abandoned elevated rail line into a long, narrow park, opened in June.

Parks and Civic Projects. The most remarkable and popular “city-making” design of the year, at least in the U.S., was the transformation of the so-called High Line in New York City. This abandoned overhead freight-rail line sliced through the air across 22 blocks in Manhattan and had been scheduled for demolition. Instead, after pressure from a volunteer citizens’ group, the city converted much of it into a linear park. The park was immensely popular and also spurred development; a number of new buildings quickly appeared near it. The park’s designers, who were careful to preserve some of its gritty industrial aesthetic, were landscape architect James Corner and architects Diller Scofidio + Renfro. The Promenade Plantée in Paris, another park along a former elevated rail line, was one of the inspirations for the High Line.

Also in New York City, the site of the World Trade Center still remained without a single completed structure eight years after the attacks of Sept. 11, 2001. Blamed were endless bickering and disagreement among the owners and others. By way of contrast, the city of Dallas was well on the way to completion of the AT&T Performing Arts Center, which was dedicated in October and began performances in the same month. It featured venues for opera, theatre, and ballet and was the work of several architects: Foster + Partners (led by Lord Foster) in London; Office

for Metropolitan Architecture (OMA; led by Rem Koolhaas) in Rotterdam, Neth.; REX (led by Joshua Prince-Ramus) in New York City, and Skidmore, Owings & Merrill in Chicago.

Awards. The coveted Pritzker Prize was awarded in 2009 to Swiss architect Peter Zumthor. Much admired by architects around the world but little known to the general public, Zumthor

was a reclusive man with a small office of 15 employees. Among his best-known buildings was an art museum in Bregenz, Austria, which was a shimmering four-story glass box set beside a lake, with magical daylight interiors. Also well known was his complex of indoor and outdoor thermal baths in the mountains of Switzerland. Here the visitor moved from dark, cave-like interiors out to sun-drenched terraces. Zumthor also designed the Swiss Pavilion for Expo 2000 and the Kolumba art museum, both in Germany.

The annual Gold Medal of the Royal Institute of British Architects went to famed Chinese-born American architect I.M. Pei. Pei, who turned 92 in 2009, was best known for his renovations to the Louvre Museum in Paris. His Museum of Islamic Art, in Qatar, opened in 2008. Among other notable Pei buildings were the East Building of the National Gallery of Art in Washington, D.C.; the Everson Museum of Art in Syracuse, N.Y.; the Fragrant Hill Hotel in Beijing; the John F. Kennedy Presidential Library and Museum in Boston; and the Bank of China Tower in Hong Kong.

The Gold Medal of the American Institute of Architects (AIA) was presented to Peter Bohlin. Founder of the American firm Bohlin Cywinski Jackson, Bohlin was especially known for his beautiful rural houses. Usually made of natural materials such as wood and stone, they

(continued on page 210)

The AT&T Performing Arts Center in Dallas, which was dedicated in October, includes the Margot and Bill Winspear Opera House (right) by Foster + Partners. It adjoins the Morton H. Meyerson Symphony Center (left) by I.M. Pei.



Donna McWilliam/AP

Notable Civil Engineering Projects (in work or completed, 2009)					
Name	Location		Year of completion	Notes	
Airports		Terminal area (sq m)			
Barcelona (El Prat) (Terminal T1)	southwest of Barcelona	544,066	2009	Opened June 17; new second terminal building is located midfield Largest U.S. airport expansion under way in 2009; original terminal is being remodeled and expanded to become the North Terminal	
Miami International (North Terminal)	northwest of central Miami	316,000	2011		
Muscat International (new terminal building)	west of Muscat, Oman, near Al-Sib	240,000	2011		
Berlin Brandenburg International	Schönefeld airport, southeast of Berlin	220,000	2011	Schönefeld to be expanded; other Berlin airports closed in 2008 (Tempelhof) or will close in 2011 (Tegel)	
Cairo International (new Terminal 3)	northeast of Cairo	211,000	2009	Opened April 27; Africa's 2nd busiest airport	
Sabiha Gokcen International (new international terminal)	eastern (Anatolian) shore of Istanbul near Pendik, Tur.	200,000	2009	Opened Oct. 29; designed to withstand a 7.5–8.0-magnitude-level earthquake	
Sheremetyevo International (Terminal 3)	northwest of Moscow	170,000	2010	Swan-shaped terminal will be home to Aeroflot	
Tripoli International (East and West terminals)	south of Tripoli (Tarabulus), Libya	162,000	2011	East Terminal completed 2009	
New Doha International (phases 1 and 2)	near Doha, Qatar	130,000	2011	Being built on 28 sq km of Persian Gulf landfill	
Larnaca International (new terminal)	Larnaca, Cyprus	100,000	2009	Opened Nov. 11; principal airport of vacationers on Cyprus	
Cape Town International (new central terminal)	east of Cape Town	50,000	2009	Opened Nov. 8; combined international/domestic terminal; completed before the start of 2010 FIFA World Cup South Africa	
Al Maktoum International	at Jebel Ali, southwest of Dubai, U.A.E.	41,000*	2020?	To become largest commercial airport in the world (3 passenger terminals, 16 cargo terminals); *size of cargo terminal; will be the world's largest maintenance and repair centre; first phase of operation in 2010?	
Branson Regional	south of Branson, Mo., near Arkansas state line	5,400	2009	Opened May 8; first privately funded commercial airport in U.S.	
Bridges		Length (main span; m)			
Hong Kong–Zhuhai Crossing	Hong Kong to China link (via Macau) (in Pearl River estuary)	c. 50 km	2016	To include world's largest sea bridge (c. 35 km) and world's longest immersed tube tunnel (c. 5.5 km); construction began in mid-Dec. 2009	
Hangzhou Bay #2 (Jiashao)	between Jiaxing and Shaoxing, China	2,689*	2012	*Will be world's longest all-span cable-stayed bridge Opened Aug. 1; *total length of two sections; Africa's second longest bridge; first bridge over Mozambican part of the Zambezi River	
Zambezi bridge at Caia	Caia–Chimuara, Mozam.	2,276*	2009		
Walkway over the Hudson (rehab of Poughkeepsie–Highland Railroad Bridge)	Poughkeepsie–Lloyd, N.Y.	2,063	2009 (1888)	Reopened for new use Oct. 3 (closed as railroad bridge in 1974); world's longest pedestrian bridge—it is 65 m above the Hudson	
Fourth Yangtze Bridge	Nanjing, China	1,418	2013	To be world's 6th longest suspension bridge	
Bridge Crossing to the Russky Island	Vladivostok–Russky Island, Russia (across the Eastern Bosphorus Strait)	1,104	2012	To be world's longest cable-stayed bridge	
Stonecutters (Angchuanzhou)	Tsing Yi–Sha Tin, Hong Kong	1,018	2009	Opened Dec. 20; world's 2nd longest cable-stayed bridge; links container terminals	
Second Inch'on (Incheon)	Inch'on–Yongjong (Yeongjong) Island, South Korea	800	2009	Opened Oct. 16; world's 7th longest cable-stayed bridge	
Chaotianmen ("Face the Sky")	Chongqing, China (across the Yangtze)	552	2009	Opened April 29; world's longest steel arch bridge; designed to resemble the Sydney Harbour Bridge (completed 1932)	
John James Audubon	New Roads–St. Francisville, La. (across the Mississippi)	483	2010	To be longest cable-stayed bridge in North America	
Chenab River	between Katra and Laole, Jammu and Kashmir, India	480	2010	To be world's 6th longest steel arch bridge; bridge will be 359 m above the river, making it the highest railroad bridge in the world	
Hoover Dam Bypass Project	Arizona–Nevada border (just south of Hoover Dam)	323	2010	274 m above the Colorado River; to be world's 4th longest concrete arch bridge	
Samuel Beckett Bridge	River Liffey, Dublin	120	2009	Officially opened Dec. 11; designed by Santiago Calatrava—Calatrava's first Dublin bridge, the James Joyce Bridge, opened in 2003	
Takutu River Bridge	Lethem, Guyana–Bom Fin, Braz.	?	2009	Officially opened Sept. 14; first road link between Brazil and Guyana; expect increased Brazilian–Caribbean trade once road to northern Guyana is paved	
Buildings, Observation/Television Towers		Height (rooftop; m)			
Burj Khalifah	Dubai, U.A.E.	828	2010	Opened Jan. 4, 2010; became world's tallest man-made structure in April 2008; known as Burj Dubai ("Dubai Tower") prior to Jan. 4, 2010	
Shanghai Tower	Shanghai	632	2014	To be world's 2nd tallest building and the tallest in China	
Guangzhou TV & Sightseeing Tower	Guangzhou, China	610	2010	To be world's tallest observation/television tower; height to rooftop 454 m, with spire 610 m	
Abraj Al Bait ("Royal Clock") Towers	Mecca, Saudi Arabia	577	2011	To be world's 3rd tallest building; 6 residential/hotel towers to house 65,000 people	
Freedom Tower or 1 World Trade Center	New York City	"1,776 ft" (541.3 m)	2013	Complex to include 6 new buildings, a memorial, and a museum	
Pentominium	Dubai, U.A.E.	516	2013	Will be world's tallest residential tower	
Burj Al Alam ("World Tower")	Dubai, U.A.E.	510	2013	One of the world's tallest buildings when completed	
International Commerce Centre	Hong Kong	484	2010	To be Hong Kong's tallest (in 2010) and have world's highest hotel	
Trump International Hotel and Tower	Chicago	423	2008/2009	On the basis of new criteria from the Council on Tall Buildings and Urban Habitat released in November 2009, becomes world's 6th tallest building and 2nd tallest in North America	
Torre Central of Faros del Panamá	Panama City, Pan.	346	2011	Torre Central will be the tallest building in Latin America; part of a 3-building complex; 346 m includes spire	
Ryugyong Hotel	Pyongyang, N.Kor.	330	2011?	Work began in 1987 and halted in 1993; construction on what will be North Korea's tallest building resumed in mid-2008	
Dams		Crest length (m)			
Santo Antonio (SA)/Jirau (J) (2 dams on the Madeira River)	(SA): near Porto Velho, Rondônia, Braz. (J): between Porto Velho and Bolivian border	(SA) 1,173 (J) 550	2012 2014	Together will provide 8% of the electricity for Brazil by 2014	
Merowe (earth core rockfill) Dam	on Nile, 350 km north of Khartoum, Sudan	841	2009	Inaugurated March 3; to contain 20% of Nile annual flow; to double The Sudan's power capacity	
Bakun Hydroelectric Project	Balui River, Sarawak, Malay.	750	2010	To be largest concrete-faced rockfill dam in the world; will provide electricity to Singapore and peninsular Malaysia	
Xiluodu (part of upper Yangtze hydropower development scheme)	184 km upriver of Yibin, China	698	2013	First of 4-dam scheme that will generate more electricity than Three Gorges	
Gilgel Gibe III	Omo River, southwestern Ethiopia	610	2012	Production will surpass domestic needs; additional electricity will be exported to The Sudan and Kenya	
Sangtuda 1 & 2	on Vakhsh River, south of Dushanbe, Tajik.	(1) ? (2) 385	2009 2011	Russian-built Santuda 1 became operational July 31; with the completion of the Iranian built Sangtuda 2, Tajikistan will be energy self-sufficient	
Manuel Piar (Tocoma) (4th of 4-dam lower Caroní development scheme)	Caroní River; northern Bolívar, Venez.	?	2012	Final unit of world's 3rd largest hydroelectric complex	
Xiaowan	on Mekong (Lancang) River, southwestern Yunnan, China	?	2013	World's tallest (292 m) arch dam; potential hydroelectric capacity equal to the combined capacities of all other Southeast Asian reservoirs	
1 m=3.28 ft; 1 km=0.62 mi					

Notable Civil Engineering Projects (in work or completed, 2009) continued

Name	Location	Year of completion	Notes
Highways		Length (km)	
South Interoceanic Highway	Iñapari (at Brazilian border)–Ilo/Matarani/ San Juan de Marcona, Peru	c. 2,000 2011	To be paved road for Brazilian imports/exports from/to Asia via 3 Peruvian ports; to link the Atlantic and Pacific oceans
Shanghai–Chongqing National Highway	Shanghai–Chongqing, China	1,900 2009	Final, 320-km Hurongxi section completed Dec. 19; links China's largest city with centrally located Chongqing via a modern expressway
Mombasa–Nairobi–Addis Ababa Road Corridor	Addis Ababa, Eth.–Mombasa, Kenya	1,284 2011?	To facilitate trade between landlocked Ethiopia and the world through the Kenyan port of Mombasa
East-West Highway (across northern Algeria)	Tunisian border (near Annaba)–Algerian border (near Tlemcen)	1,216 2010	To facilitate economic development and trade across North Africa
Egnatia Motorway	Igoumenitsa–Kipoi, Greece	670 2009	Opened May 30; first Greek highway at int'l standards; 76 tunnels, 1,650 bridges
A2 Motorway ("east to west expressway across Poland")	Polish border near Frankfurt an der Oder; Ger.–Brest, Belarus (via Warsaw)	610 2012	Will link to German autobahn; 106-km Nowy Tomysl–Swiecie section under construction in 2009
Transylvanian Motorway	Brasov–Bors, Rom.	415 2013	To link Romania and Hungary and open Transylvania to tourism; 42-km Turda–Gilau section opened Dec. 1, 2009
Trans-Labrador Highway (phase III)	Happy Valley–Goose Bay to Cartwright Junction, Newfoundland and Labrador	280 2009	Final phase of all-weather gravel road near timberline wilderness completed Dec. 9
Canals and Floodgates		Length (m)	
St. Petersburg Flood Protection Barrier	Gulf of Finland embankment, Russia (Gorskaya–Bronka via Kotlin Island)	25,400 2010	To protect city from tidal surges; navigation channel opened October 2008; begun 1980, halted 1987, resumed 2003
New Orleans Surge Barrier	near confluence of Gulf Intercoastal Waterway and Mississippi River Gulf Outlet, east of New Orleans	2,300 2011	Central component of 3.2-km-long project to prevent storm-surge flooding, using 7.9-m barrier walls and floodgates
Project Moses (flood-protection plan)	lagoon openings near Venice	— 2014	Rows of 78 20-m-wide submerged gates in 3 lagoon openings will rise in flood conditions
Panama Canal Expansion	between Panama City and Colón, Pan.	— 2014	Will include new wider and longer 3-chamber locks, doubling the canal's capacity and allowing the passage of world's biggest container ships
Eastmain-1-A Powerhouse and Rupert Diversion	Rupert River watershed to Eastmain River watershed, northern Quebec	— 2012	Most recent Hydro-Québec development; water diversion scheme to create an additional capacity of 918 MW
Railways (Heavy)		Length (km)	
Benguela Railway (rehabilitation; closed by civil war 1975–2002)	Benguela–Luau, Angola (at DR Congo border)	1,314 2011	Will enable resumption of copper exports from DR Congo and Zambia
North South Rail Project (Phase A)	Al-Zubairah–Ras Al-Zour, Saudi Arabia	818 2010	To facilitate the export of phosphate and bauxite from mines in the interior via the Persian Gulf
Sena Railway (destroyed during 1976–92 civil war)	Moatize–Beira, Mozambique	673 2010	Declared free of land mines in 2006; 320-km stretch from Beira to Sena opened in May 2009; important for coal export
Xinqiu–Bayan Ul Railway	Xinqiu, Liaoning–Bayan Ul, Inner Mongolia, China	487 2010	To be important for coal transport; future link to Mongolia expected
Kashmir Railway	Udhampur–Baramula, Jammu and Kashmir, India	290 2012	80% bridges or tunnels in mountainous terrain; 18-km Qazigund–Anantnag section opened on Oct. 28
KATB rail project	Baku, Azer.–Kars, Tur. (via Georgia)	258 2011	Caspian Sea to Turkey link, bypassing Armenia; 98 km of new rail, remainder modernized; new transport outlet for Georgia
Lhasa–Xigaze railway	Lhasa–Xigaze, Tibet, China	254 2010	Extension of the world's highest railroad will link Tibet's two largest cities; future extension to Nepal is a possibility
North Luzon Railway System project	Caloocan (north Metro Manila)–Clark international airport, Philippines	84 2011	To accelerate development of central Luzon
Railways (High Speed)		Length (km)	
Jinghu High-Speed	Beijing–Shanghai	1,318 2012	To halve travel time between capital and financial centre
Wuhan–Guangzhou High-Speed	Wuhan–Guangzhou, China	968 2009	Opened Dec. 26; average speed of 350 km/hr
Turkish High-Speed	Ankara–Istanbul	533 2013	To connect capital with largest city; 245-km section from Ankara to Eskisehir opened March 13, 2009
Zhengxi High-Speed	Zengzhou–Sian (Xian), China	457 2010	Includes 3 tunnels between 7,600 m and 8,500 m in length
Bothnia Line (Botniabanan)	Nyland–Umeå, Swed.	190 2010	Along north Swedish coast; difficult terrain with 25 km of tunnels
HSL–Zuid	Amsterdam–Belgian border	125 2009	Opened Sept. 7; enables high-speed links with Brussels, London, and Paris
Gautrain	Johannesburg–Pretoria, S.Af.	80 2011	First phase to be completed in October 2010 after the FIFA World Cup competition in June 2010
Subways/Metros/Light Rails/Commuter Rails		Length (km)	
Dubai Metro (Red Line)	Dubai, U.A.E.	52.1 2009	Opened Sept. 9; 22.5-km Green Line to open in 2010; 2 lines together will be world's longest fully automated driverless transport system
Shanghai Metro (Line 7)	Shanghai	34.5 2009	Opened Dec. 5; length of lines opened since 1995 equals 284.6 km
Circle MRT	Singapore	33.3 2010/2011	To connect 3 existing MRT lines
Namma Metro	Bengaluru (Bangalore), India	33.0 2011	2 lines to be built; construction began in 2007
Guangzhou Metro (Line 5)	Guangzhou, China	31.9 2009	Opened Dec. 28; total length of metro network at end of 2009 equaled 178.5 km
Delhi Metro	Delhi	27.5 2009	5 lines or extensions of lines opened in 2009; 8 lines or extensions of lines (totaling 93.6 km) are scheduled to open in 2010
Seattle Light Rail	Seattle	25.1 2009	2 sections opened on July 18 and Dec. 19; links downtown Seattle with Seattle-Tacoma International Airport
Vancouver (Canada Line)	Vancouver	19.5 2009	Opened Aug. 17; 3rd metro line; link between Vancouver International Airport and city centre
Mecca (Makkah) monorail	Mecca, Saudi Arabia	18.1 2010	to link various holy sites in Mecca; 500,000 pilgrims can be transported every 6 to 8 hours
Métro d'Alger (Line 1, phase 1)	Algiers	9.0 2010	Mainly underground near the city centre and eastward; delayed by archaeological finds
Tunnels		Length (m)	
Apennine Range tunnels (9)	Bologna, Italy–Florence (high-speed railway)	73,400 2009	Rail line opened to traffic Dec. 13; longest tunnel (Vaglia, 18.6 km); tunnels cover 93% of railway
Brenner Base Tunnel	Innsbruck, Austria–Fortezza, Italy	55,392 2015	To ease congestion of freight travel from across Europe passing through the Alps
Marmaray railroad project tunnels	connecting European and Asian portions of Istanbul	13,600 2011	Includes 1.4-km-long bored tunnel, world's deepest sunken-tube tunnel (56 m under the Bosphorus strait); completed (though not opened) Oct. 13, 2008
East and West tunnels of A86 ring road	western outskirts of Paris	10,000/7,500 2010	Two tunnels under Versailles and nearby protected woodlands
Busan–Geoje Fixed-Link project	Busan–Geoje island, South Korea	3,200 2010	To be world's deepest immersed roadway tunnel
1 m=3.28 ft; 1 km=0.62 mi			

(continued from page 207)

seemed to grow out of the landscape. Among Bohlin's larger urban buildings, the most admired was the Fifth Avenue Apple Store in New York City, a gemlike all-glass cube. The AIA's annual 25-Year Award, given to a work of architecture that had proved its merit over at least a quarter of a century, went to the Faneuil Hall Marketplace in Boston, a renovation of a group of wholesale market buildings dating from 1826. American architect Benjamin Thompson restored the markets in 1976, converting them into what he called a "festival marketplace" of indoor and outdoor streets of shops and restaurants. The AIA presented its annual Honor Awards for new architecture to nine buildings, including the New York Times Building by Piano, a striking pale-gray 52-story tower in midtown Manhattan, and the Cathedral of Christ the Light in Oakland, Calif., by American architect Craig Hartman of Skidmore, Owings & Merrill. The latter was a tall boat-shaped worship space filled with warm-toned light from above.

Preservation. The hottest preservation issue of the year arose over a proposal by British Pritzker Prize winner Lord Rogers for a site in London. Called the Chelsea Barracks, the project would have been built next to a historical 1692 landmark, the Chelsea Royal Hospital by legendary British architect Sir Christopher Wren. Rogers proposed 552 apartments in a row of Modernist steel and glass buildings. He was opposed by Britain's Prince Charles, a frequent critic of modern architecture, who demanded a more traditional design. The prince won the battle in June when the project's developers, investors from Qatar, dropped the Rogers scheme. A happier preservation story was the restoration of the Darwin D. Martin House in Buffalo, N.Y., a 1904 masterpiece by American architect Frank Lloyd Wright. The restoration of the exterior was completed in 2008, and in 2009 the house acquired a new visitors' centre next door. It was designed by architect Toshiko Mori in a crisp glass style that acted as a foil to the heavier brick of the house. In Scotland, American architect Steven Holl won the coveted job of designing an addition to another beloved and legendary building, the Glasgow School of Art, a 1909 work by Scottish architect Charles Rennie Mackintosh.

Exhibitions. A show called "Frank Lloyd Wright: From Within Outward" filled the great domed spiral space of the Guggenheim Museum in New York City. The Guggenheim itself was a



Swiss architect Peter Zumthor, winner of the 2009 Pritzker Architecture Prize, poses in front of his home in Haldenstein, Switz.

Wright building, and the exhibit was timed to mark its 50th anniversary. Also in New York City, at the Architectural League, was "Toward the Sentient City," an exhibit exploring the ways in which computer technology was transforming architecture and cities. New York City's Museum of Modern Art (MoMA) presented "Bauhaus 1919–1933: Workshops for Modernity," an exhibit of the history of the German Bauhaus school, which was one of the major sources of the modern movement in art and architecture. MoMA also presented a retrospective entitled "What Was Good Design? MoMA's Message 1944–56." At the Heinz Architectural Center in Pittsburgh, "Palm Springs Modern: Photographs by Julius Shulman" displayed the work of a 20th-century architectural photographer best known for his images of modern houses in California. An exhibit at Los Angeles's Central Library featured artwork by 20th-century architect Richard Neutra. At the Barbican Art Gallery in London was a massive exhibit of the work of the Swiss Modernist Le Corbusier, one of the three or four leading architects of the 20th century. In 2008 Le Corbusier had been the subject of a tell-all biography, *Le Corbusier: A Life*, by Nicholas Fox Weber, and of an enormous compilation of his work and life entitled *Le Corbusier Le Grand*. Taken as a group, these notable books and exhibitions seemed to mark a resurgence of a taste for Modernism in contemporary culture.

Deaths and Other News. Sverre Fehn, 84, regarded as the leading Norwegian

architect and a winner of the 1997 Pritzker Prize, died in February. Also in February came the death of J. Max Bond, Jr., 73, a noted American architect, educator, and advocate for African Americans in the architectural profession. Arthur Erickson, the most influential Canadian architect, died at age 84 in May. Erickson's buildings included the Canadian embassy in Washington, D.C., and Simon Fraser University, Burnaby, B.C. August brought the death of Charles Gwathmey, 71, who was especially noted for a series of influential modern vacation houses on Long Island, N.Y. (See OBITUARIES.) In September Joan Goody, 73, a pioneer and leader among American women architects, died in Boston.

In other news, the China Central Television (CCTV) headquarters, a major building by OMA, burned while under construction in Beijing. The fire, which completely gutted the 33-story tower, was believed to have been started by fireworks in celebration of the Lunar New Year. Washington, D.C., was the site of competitions for two major civic landmarks. Gehry won the competition for the design of a memorial to U.S. Pres. Dwight D. Eisenhower, to be located on a site just off the Mall. David Adjaye, a British architect born in Tanzania, led a team whose design won the competition for the National Museum of African American History and Culture. It was to be built on an edge of the Mall not far from the Washington Monument. (ROBERT CAMPBELL)

Art and Art Exhibitions

"POP-UP" GALLERIES featuring works by young artists **SPROUTED** up in **VACANT PROPERTIES** in London and in cities across the U.S. Meanwhile, the global economic **RECESSION** resulted in **CHOPPED** museum budgets and a general **LAG** in art sales, with the exception of **CHINESE** contemporary art and works by established **MODERNISTS**. Photographer William Wegman, who had established a worldwide following with books that starred his own **WEIMARANER** dogs, published his latest volume, **DOGS ON ROCKS**.

ART

The economic downturn of autumn 2008 cast a pall on every sector of the 2009 art market. The auction houses faced straitened circumstances with new strategies as well as shaken confidence and diminished expectations. Lowered estimates and restricted reserves—as well as tighter credit limits—were seen in all the major sales rooms, but bidders were equally cautious.

At Phillips de Pury & Co., London, 12 out of the 43 contemporary lots remained unsold. At Christie's in mid-May in New York City, sales were within the estimate range, and of the 54 lots offered, only 5 were not sold. Price records for individual artists were set by Claes Oldenburg's pop sculpture *Typewriter Eraser* (1976) at more than \$2.2 million and David Hockney's iconic painting *Beverly Hills Housewife* (1966–67) at nearly \$8 million, but it was a pale showing compared with those shattered in the previous year's sales. In December, Christie's sold Rembrandt's *Portrait of a Man, Half-Length, with His Arms Akimbo* for a record price of \$33.2 million.

Chinese contemporary art brought strong returns at Sotheby's spring sale in Hong Kong, and a new record was set there in October for the work of Zhang Xiaogang, whose austere

black-and-white oil paintings of ordinary citizens were inspired by Cultural Revolution-era found photographs. The double portrait *Comrade* (2005) surpassed its estimate by nearly a third, but its closing price of about \$1 million, including commission, illustrated the ongoing disparity between the market value of Eastern and Western con-

The shadows of visitors to the Tate Britain, London, are cast on a wall near the surrealist work Absuction Cardigan by Enrico David; the Italian-born artist was short-listed for the Turner Prize.



Toby Melville—Reuters/Landov

temporary art. The highest bidders were based in China.

The singular exception was the sale of Yves St. Laurent and Pierre Bergé's collection of art and antiques at Christie's in Paris at the end of February. It was promoted as the "sale of the century," and the previews brought in thousands of viewers; the return on the 700 lots at nearly \$500,000,000 outstripped all predictions. The best returns were seen for Modern paintings; records were set for works by Constantin Brancusi, Piet Mondrian, and Marcel Duchamp. Henri Matisse's *Les Coucous, tapis bleu et rose* (1911) doubled its estimate at more than \$40 million. A scandal followed the sale when an anonymous bidder, who secured two 18th-century bronze animal heads from China, refused to pay. Cai Mingchao, a consultant for China's National Treasures Fund, revealed that he bid only to bring attention to the works' suspect provenance. Originally part of a fountain with a zodiac motif at the Old Summer Palace in Beijing, the bronzes had been looted by British and French troops during the Second Opium War. In the end, Bergé retained the bronze heads.

Galleries countered the stagnant market by limiting expansion, closing branches, and canceling extravagant exhibitions, such as Chris Burden's *One Ton One Kilo*, slated for a March debut at the Beverly Hills, Calif., branch of the Gagosian Gallery and involving 100 kg (220 lb) of gold bars valued at \$3.3 million. Some clients turned to galleries for private sales, accepting lower returns to avoid the public embarrassment of selling off their collections. Few buyers were willing to make daring purchases, preferring the established work of Modernists, such as Alexander Calder, over that of reigning art superstars, such as Damien Hirst and Takashi Murakami. "Pop-up" galleries—temporary installations in vacant properties in London, New York City, Philadelphia, and Chicago—struck an optimistic trend as a showcase for young artists, bringing notice if not sales.

The decreased value of endowment investments, as well as a

6.4% decline in charitable giving to the arts and humanities, forced museums to make drastic cuts in their operating budgets. Major museums in the United States cut staff numbers and salaries, instituted hiring freezes, and imposed staff furloughs without pay. The Metropolitan Museum of Art, New York City, closed 15 satellite gift shops throughout the country. There were program cuts as well, and museum directors encouraged their curators to create in-house exhibitions based on permanent collections to avoid the insurance and transportation expenses incurred by traveling exhibitions.

The success of the new Modern Wing at the Art Institute of Chicago offered a bright spot in a dire year. After a decade in planning and construction, the addition opened in May to record crowds that boosted attendance rates by 80% during a weeklong celebration (during which admission was waived) and averaged out to a 20% rise over the previous year. Designed by Renzo Piano, the spacious and elegant Modern Wing featured permanent collection galleries for Modern and contemporary art, as well as designated space for architecture, design, and photography exhibitions, a large education facility, and outdoor spaces for changing displays of contemporary sculpture. With an addition of 24,526 sq m (264,000 sq ft)—a 35% increase of total display space—the Art Institute became the second largest art museum in the country.

Antony Gormley's *One and Other*, staged on the empty Fourth Plinth in London's Trafalgar Square from July 6 to October 14, attracted worldwide attention through streaming coverage on the Internet by Sky Arts, receiving more than seven million hits. Out of a pool of 35,000 applicants from every region in the United Kingdom, 2,400 "plinthers" (24 per day) were chosen by a random computer selection to occupy the plinth for the space of an hour to do whatever they liked. The first, Rachel Wardell of the East Midlands, who used her time to promote children's charities, described herself as a normal "stay at home mum," embodying the "sample of now" that Gormley sought to present in his project. One plinther launched a paper airplane; another sat naked on a beach towel and read *Treasure Island*; and another displayed a paper cutout of a British woman on death row in a Texas prison to protest capital punishment.

Bruce Nauman finally launched the skywriting project that he conceived in

1969 called *Untitled (LEAVE THE LAND ALONE)* over Pasadena, Calif., on September 12, in conjunction with the 20th anniversary celebration of the city's Armory Center for the Arts. The letters spelling out his ecological dictum dispersed within the hour's performance; the show also lived on as a YouTube video. On October 29 artist Robert Pruitt staged the First Annual Art Awards at the Solomon R. Guggenheim Museum in New York City. Combining a mischievous performance with a critique of the celebrity art world, Pruitt presided over an invitation-only dinner at which he presented awards to art world luminaries in the form of light bulbs—honouring Jasper Johns—inserted into champagne bottles.

The short list for the 25th Turner Prize was released in April. Included were two painters: Enrico David, a self-described surrealist who used a hard-edged style and disturbing commedia dell'arte characters, and Richard Wright, whose intricate patterns on existing architecture were often painted over at the close of an exhibition. Also listed were installation artist Roger Hiorns, who transformed derelict rooms in South London into glittering blue crystal caves with liquid copper sulfate, and Lucy Skaer, whose drawings and sculptural installations hovered between abstraction and figuration. The prize was awarded to Wright in December. Visual artists named as John D. and Catherine T. MacArthur Foundation fellows included mixed-media installation artist Mark Bradford, landscape painter Rackstraw Downes, and digital artist Camille Utterback. Chris Burden was cited for lifetime achievement by the College Art Association, and *New York Times* arts writer Holland Cotter was awarded the Pulitzer Prize for criticism.

Notable deaths in the art world included painters Andrew Wyeth and Nancy Spero; graffiti artist Iz the Wiz; sculptor Ruth Duckworth; installation artist Jeanne-Claude; and curator and writer Coosje van Bruggen. (See OBITUARIES.) Other losses included those of painters Tyeb Mehta, Ray Yoshida, and Robert Colescott; mixed-media artist Dash Snow; sculptors Tony Rosenthal and Ingeborg Hunzinger; and art dealer Christopher Wood. In late April a brush fire consumed the Hernando county, Fla., home and studios of James Rosenquist, who lamented that everything he owned, including all of his current work, was "wiped out."

(DEBRA N. MANCOFF)

ART EXHIBITIONS

The spring art auction season opened in March 2009 on a positive note that countered dire predictions, and most observers attributed the optimism to the recent spectacular sale of the Yves Saint Laurent private art collection in Paris. Sales were steady at the fairs, but, in fact, the market had not taken an upswing, and many dealers were selling works from established collections to raise cash for their clients. At the European Fine Art Fair in Maastricht, Neth., 239 dealers represented 15 countries; a number of big-name galleries canceled at the last minute, providing an opportunity for smaller dealers to step in, and European clients noticeably outnumbered Americans. In the United States the 11th edition of the Armory Show in New York City hosted 243 dealers with strong international representation. Sales were slow but better than expected, and a new feature called "Special Projects" presented large-scale site-specific works in public venues.

The 10th Havana Biennial, which was held at the Museo Nacional de Bellas Artes, welcomed the first comprehensive representation of American contemporary art in Cuba in more than

A rubber figure, representing the corpse of an art collector, floats face down in a swimming pool in an installation by Danish duo Michael Elmgreen and Ingar Dragset that was displayed in front of the Nordic and Danish pavilions at the 53rd Venice Biennale.



Alberto Pellaschi/AP

Alessandra Benedetti/Corbis



American artist Bruce Nauman's *Topological Gardens* included this installation under the theme "Heads and Hands"; the exhibition earned the United States Pavilion the Golden Lion for best national participation at the 53rd Venice Biennale.

half a century. The installation *Chelsea Visits Havana*, two years in planning, was curated by Cuban-born, New York-based Alberto Magnan and featured the work of major figures, including Marina Abramovic, Matthew Barney, and Guy Ben-Ner. With 68 dealers, the third Art Dubai fair, held at the Madinat Jumeirah resort, enjoyed good attendance, but business was slower than at the previous year's edition. Art Vilnius '09 opened in early July in the Lithuanian capital as the first international art fair to be held in the Baltic states. Good sales were reported at the 40th edition of Art Basel in Switzerland, but "blue-chip" works in conventional media, such as sculpture by Donald Judd and Alexander Calder, were favoured over innovative new media work by younger artists, and this prompted dealer Arne Glimcher to observe that "the bling is really off." Critics noted that energy was high and that European attendees outnumbered Americans.

"Making Worlds" ("Fare Mondi") was the theme for the 53rd Venice Biennale. Artist duo Michael Elmgreen and Ingar Dragset curated two pavilions in a single installation called *The Collectors*, a deadpan critique of owning art in the current market. The sleek California-

style Nordic Pavilion hosted the home of a fictional playboy collector, with works of Wolfgang Tillmans and Tom of Finland on the walls and scantily clad house boys wandering through the rooms. The adjacent Danish Pavilion was "for sale" with a real-estate agent on hand to point out the amenities. In a pool in front of the pavilions, a figure—one of the "collectors"—floated face-down, dead in the water. Elmgreen and Dragset won the Curating Worlds Special Mention for their installation. British artist Liam Gillick filled the German Pavilion with simple pine kitchen furnishings in the installation *Kitchen*, inspired by the 1926 modernist designs of Viennese architect Margarete Schütte-Lihotzky. The spare cabinetry lacked fixtures and appliances, subverting the intended efficiency of the original design. The presence of a talking animatronic cat heightened the absurdity.

The Golden Lion for best national participation went to the United States Pavilion for Bruce Nauman's *Topological Gardens*; it was the first such award granted to an American exhibition since 1991. The exhibition, organized by the Philadelphia Museum of Art, filled three venues—two local universities supplied the additional space to the U.S. Pavilion in the Biennale's Giardini—with a four-decade retrospective of the artist's work. Nauman defined his concepts as "Heads and Hands," "Sound and Space," and "Fountains and Neon," with all three themes blended in each venue. German artist

Tobias Rehberger won the Golden Lion for best artist for his eye-popping retro-chic black-and-white installation *Cafeteria*, which took shape in the old cafeteria of the Palazzo delle Esposizioni (the former Italian Pavilion). The Silver Lion, citing the promise of a young artist, honoured Swedish artist Nathalie Djurgberg, whose *Experiment* was a multimedia installation of nature gone awry. John Baldessari and Yoko Ono received Golden Lions for lifetime achievement.

The New Museum in New York's Bowery district presented *Younger than Jesus*, the first edition of their Generational, a triennial event planned to showcase rising talent. The exhibition was sponsored by the Andy Warhol Foundation and presented 50 artists—all born after 1976—chosen from 500 international applicants. Intended to track shifting trends as the largest generation since the baby boomers came of age, the exhibition revealed the full assimilation of digital media and the displacement of irony with sentiment. Divisions between media were permeable, as seen in Turkish artist Emre Huner's combined painting and animation and in Texan Ryan Trecartin's use of paint as cosmetics in performance. Many works defied categories, such as French artist Cyprien Gaillard's three-part filmed performance, shot in Ukraine, Russia, and France, featuring a disjunctive narrative of staged and real violence and destruction, with a sound track of anthems composed for the production.

At the 53rd Venice Biennale, German artist Tobias Rehberger was awarded the Golden Lion for best artist for his eye-popping installation *Cafeteria*.



Andrea Merola—epa/Corbis

Mid-career surveys dominated retrospective exhibitions, including a 30-year overview of works by Roni Horn at the Tate Modern, London, and a 40-year survey of works by Dan Graham (see BIOGRAPHIES) at the Museum of Contemporary Art, Los Angeles. A retrospective dedicated to Jenny Holzer (see BIOGRAPHIES) at the Whitney Museum of American Art, New York City—*Jenny Holzer: Protect Protect*—spanned 15 years and included her new redaction paintings based on content from declassified U.S. government documents associated with the Afghanistan and Iraq wars. Two exhibitions featured the work of Cy Twombly: a 100-work retrospective at the Guggenheim Museum Bilbao in Spain and *The Natural World, Selected Works 2000–2007*, presented as the inaugural exhibition in the Modern Wing at the Art Institute of Chicago.

Combining fashion, performance, and sculpture, Chicagoan Nick Cave's Soundsuits provided a pansensory experience in the new exhibition *Meet Me at the Center of the Earth* at the Yerba Buena Center for the Arts, San Francisco. (See BIOGRAPHIES.) In contrast, Polish artist Miroslaw Balka's *How It Is*, a massive steel chamber lined with felt and installed in the Tate Modern's Turbine Hall, plunged visitors into silence and darkness. London-based Yinka Shonibare used colourful Dutch-wax fabrics to craft the elaborate costumes worn by the headless mannequins that populate tableaux interrogating African identity and colonial power in the exhibition *Yinka Shonibare MBE* at the Brooklyn (N.Y.) Museum of Art.

New exhibitions challenged accepted art historical perspectives. *Titian, Tintoretto, Veronese: Rivals in Renaissance Venice*, co-organized by the Boston Museum of Fine Arts and the Louvre Museum, Paris, exposed how the three artists pushed one another toward innovation. *Jan Lievens: A Dutch Master Rediscovered*, curated by Arthur K. Wheelock, Jr., at the National Gallery of Art, Washington, D.C., shed new light on the painter whose own fame had been obscured by his friend Rembrandt's gigantic shadow. *Becoming Edvard Munch: Influence, Anxiety, and Myth*, curated by Jay A. Clarke and

based on documents that reveal Munch's ambitious career strategies and his keen awareness of prevalent trends in the art world across Europe, was seen only at the Art Institute of Chicago. It provided new insights and a much broader international context for the Norwegian painter's emotionally charged work.

Budget cutbacks discouraged plans for large loan exhibitions, prompting curators to rethink their permanent collections. At the Museum of Modern Art in New York City, Chief Curator of

PHOTOGRAPHY

In 2009 the attention of the world on the inauguration of Barack Obama as the 44th president of the United States (and the first African American to hold this office) rekindled interest in contemporary American photography and its revelation of the country's values and culture. One could argue, however, that the most considered exhibitions were to be found in Europe rather than in the U.S.

The Musée de l'Élysée, Lausanne, Switz., hosted (January 31–April 19) "This Side of Paradise: Los Angeles (1865–2008)," a vast exhibition documenting the history and popular culture of the City of Angels. The show was divided into the themes Garden, Move, Work, Dwell, Play, Clash, and Dream, and it featured the work of more than 100 photographers past and present, including Ansel Adams, Herb Ritts, Edward Weston, Mary Ellen Mark, and Philippe Halsman.

In Berlin, "President Barack Obama: On the Tracks of the Kennedys?" held at the aptly named the Kennedys Museum (May 1–August 2) examined the parallels between the 35th and 44th presidents after Obama's first 100 days in office. More than 50 photographs were displayed, many by White House photographer Pete Souza, including his intimate study of Obama embraced by an elderly Ethel Kennedy, widow of Sen. Robert F. Kennedy.

Elsewhere in Germany a more irreverent subject was the focus at Galerie Bugdahn und Kaimer, Düsseldorf, which staged American photographer William Wegman's "Dogs on Rocks—in the Woods—at the Seaside" (January 10–February 21). Over the years

Wegman had gained a worldwide following for using his Weimaraner dogs as models. His latest offering featured new colour prints taken on the Maine coast in the previous 10 years. A new book, *William Wegman: Dogs on Rocks*, was released to accompany the show.

Other Americans given solo exhibitions in Europe included Bill Owens, Helen Levitt, William Eggleston, and Ralph Gibson. The growth of American suburbia formed the subject of "Bill Owens: America Fast Forward" at Galerie Alex Daniels, Amsterdam (February 28–April 4), while, elsewhere in

Peter Macdiarmid/Getty Images



Polish artist Miroslaw Balka's installation *How It Is*, a massive steel structure encasing a cavernous area in which visitors were invited to walk, was displayed in Turbine Hall at the Tate Modern, London.

Painting and Sculpture Ann Temkin initiated an ambitious rehanging that included the removal of the wooden frames from iconic modern works by Abstract Expressionist painters Jackson Pollock and Willem de Kooning. Temkin explained that the wooden frames, added to the works for exhibition purposes, diminish viewers' perception of the original radical impact of the works. By revealing the paint-splattered edges of the canvas, the paintings now fully assert their "profound break with the past."

(DEBRA N. MANCOFF)

Amsterdam, Kahmann Gallery hosted "Helen Levitt: New York Photographs" (March 6–May 19), a retrospective exhibition of the 95-year-old artist, who lived in and documented the city for more than 70 years. Sadly, the exhibition coincided with her death on March 29. (See OBITUARIES.)

"William Eggleston: Democratic Camera," at Haus der Kunst, Munich (February 20–May 17), displayed more than 160 works by the artist, including video and infrared films, mostly made in Memphis, Tenn., New Orleans, and other locations in the U.S. South from 1961 to 2008. The Paris gallery Photo4 was the venue for "Ralph Gibson: Nudes and Recent Work" (April 3–May 16) and marked the occasion with the publication of a limited-edition book, *Nude*, with 200 of the 1,000 copies, including a numbered silver-gelatin print signed by the photographer.

The young denizens of Austin, Texas, were the subject of "Lise Sarfati: Austin, Texas," exhibited in Rome at Brancolini Grimaldi Arte Contemporanea (May 6–June 14). Sarfati's 26 colour prints in the exhibition were originally published in Magnum Photo's *Fashion Magazine* in 2008.

On the East Coast, the New York Photo Festival (May 13–17)—curated by William A. Ewing, Chris Boot, Jody Quon, and Jon Levy—provided a showcase of historical and contemporary international photography from artists such as Ernst Haas, Edith Maybin, Chris Killip, Stefen Ruiz, Tim Hetherington, and Edward Steichen. The more renowned Les Rencontres Photographie festival at Arles, France, celebrated its 40th anniversary (July 7–September 13) by hosting dozens of exhibitions, workshops, tours, and seminars within a historic backdrop of ancient Roman architecture. The international lineup included exhibitions featuring Nan Goldin, Duane Michals, Martin Parr, and Brian Griffin, and there was a special retrospective by Willy Ronis, who died at age 99, one day before the end of the festival. (See OBITUARIES.)

The great American fashion and still life photographer Irving Penn turned 92 on June 16. Instead of a retrospective exhibition, Galerie Hiltawsky, Berlin, held a group show, "Homage to Irving Penn" (June 16–July 11). A total of 41 young, mostly European, photographers were invited to submit photographs inspired by the work of the master. Penn died later in the year. (See OBITUARIES.)

Bettmann/Corbis



Boy Drawing on a Sidewalk, a photograph made by Helen Levitt c. 1937, reflects her well-known appreciation of children and of urban life.

The annual Paris Photo (November 19–22) at the Carrousel du Louvre brought together 103 exhibitors from 23 countries, displaying images spanning more than 150 years. The 2009 event had a special focus on Arab and Iranian photography, with work from the Arab Image Foundation and emerging work from the region. Iran was also featured at Aeroplastics Contemporary, Brussels, in the exhibition "Shadi Ghadirian: A Photographer from Iran" (February 13–April 4). The artist's work, already known in Europe, confronted from a female perspective the conflict between tradition and modernity. One of her series of works, *Like Every Day*, featured portraits of veiled women, their faces hidden by domestic items, and another, *White Square*, consisted of pictures of individual objects for military use—such as a helmet and a grenade—decorated with red ribbon and placed on a white surface.

The exploration of national identity was the theme of the show "Anastasia Khoroshilova: Russkie" at the Moscow Museum of Modern Art (Dec. 10, 2008–Jan. 4, 2009). Her exhibition comprised more than 100 colour portraits of individuals and family groups chosen to emphasize the ethnic diversity within contemporary Russia.

Following the acclaim of his first exhibition, "On This Earth" in 2005,

British photographer Nick Brandt published the second volume of his planned trilogy of books and exhibitions depicting the wildlife of East Africa in sumptuous black and white. "A Shadow Falls: Photographs from East Africa," at Atlas Gallery, London (September 8–October 3), featured 58 recent images from famous game reserves, including Amboseli, Nakuru, Maasai Mara, and the Serengeti.

Of course, the year would not be complete without a dose of celebrity photography, and in 2009 one of the most sought-after artists of this genre was Zürich-born Michel Comte. His images of celebrities, including Charlotte Rampling, Naomi Campbell, Jeremy Irons, Helena Christensen, Yves Saint Laurent, Catherine Deneuve, and Gisele Bündchen, were part of his "Retrospective" show at NRW-Forum Kultur und Wirtschaft, Düsseldorf, Ger. (February 1–May 10). It traveled to Young Gallery, Brussels (May 29–August 1). Comte's work was also exhibited at Guy Hepner Contemporary, Los Angeles, in the show "Women" (February 17–March 3), where vivid colour portraits of Carla Bruni (wife of French Pres. Nicolas Sarkozy) and actress Pamela Anderson hung alongside artful black-and-white studies of a nude Christensen.

(KEITH WILSON)

Business Overview

The **WORST** economy in a generation **BLIGHTED** many domestic and international businesses in 2009. The American auto industry experienced the **BANKRUPTCIES** of GM and Chrysler, as well as an increased interest in **ELECTRIC CARS** and gas-electric hybrids. In other sectors companies **SLASHED** inventories, costs, and personnel in the hopes of **KEEPING AFLOAT** until the economy revived.

Automobiles. Some observers felt that 2009 would mark the end of the American era of automobile manufacturing, as the year saw the bankruptcies of General Motors Corp. and Chrysler LLC, both of which essentially became wards of the federal government (by the end of the year, the U.S. government was expected to have poured \$50 billion into GM and more than \$12 billion into Chrysler, along with billions more to support suppliers and lenders connected to the auto industry). The CEOs of the Big Three automakers—GM, Ford, and Chrysler—had appeared before Congress in November 2008 to ask for \$25 billion, hoping that the cash infusion would help them weather the developing economic downturn, but in the first few months of 2009, car sales collapsed. In January automakers sold 656,976 cars and light trucks in the U.S., the lowest total since December 1981, and for the first time in history, auto sales in the U.S. were lower than in China, where 790,000 cars were sold in the same period. In August U.S. Pres. Barack Obama announced that \$2.4 billion of his economic stimulus package had been awarded to some 48 automakers or parts manufacturers in an effort to increase production of electric vehicles. (See Special Report on page 188.)

GM's performance in 2007 and 2008 marked the worst-ever years in the company's 100-year history, and the fate of what had been until recently the world's largest automaker seemed unavoidable once GM posted an astonishing \$30.9 billion loss for 2008. In late March 2009 the Obama administration's auto task force imposed strict measures on GM in

exchange for continued federal aid, including the resignation of GM CEO Rick Wagoner and a comprehensive restructuring plan. GM entered Chapter 11 protection on June 1; it emerged about a month later with a new board and the U.S. government holding a roughly 60% stake in the company. Substantial stakes were also held by the Canadian government (12%) and the United Auto Workers (UAW) Voluntary Employee Benefits Association (VEBA) retiree trust fund (17.5%).

The reorganized GM announced plans to shed more than \$79 billion in debt, reduce its dealer network by 40%, shutter 14 factories, and cut at least 21,000 jobs. Under its new CEO, Frederick ("Fritz") Henderson, GM centred its operations on four brands—Chevrolet, Buick, Cadillac, and GMC. GM dropped Pontiac (to be phased out by 2010),

Hummer (sold to China's Sichuan Tengzhong Heavy Industrial Machinery Co.), Saturn (which was to have been sold to Penske Automotive Group until the deal collapsed in September), and Saab (a last-minute offer from Dutch automaker Spyker Cars NV was pending at year's end). In November GM pulled out of a deal to sell a majority stake in its European operations Opel and Vauxhall. GM faced more tumult when Henderson abruptly resigned on December 1 and GM Chairman Ed Whitacre stepped in as interim CEO.

The auto task force nearly voted to let Chrysler collapse by not providing additional financing. President Obama reportedly decided that the loss of as many as 300,000 jobs would be too much for the already-ailing U.S. economy, however, so Chrysler entered Chapter 11 bankruptcy protection on April 30. It emerged after 42 days, infused with \$6.6 billion in exit financing, to enter into an alliance with Italy's Fiat SpA. (A challenge to this plan by some of Chrysler's creditors was defeated in federal court.) Under the agreement, Fiat would hold a 20% stake in the new Chrysler Group LLC, with an option to increase its stake to 35% and eventually to a majority of 51% after taxpayers were fully repaid. (The UAW's VEBA health care trust owned a 55% stake in the new company, while the U.S. government owned 8%.)

Fiat CEO Sergio Marchionne (see BIOGRAPHIES) took over as the new head

A Ford dealership in Culpeper, Va., creatively advertises the cash-for-clunkers program, in which the U.S. government offered money to consumers who traded in their older cars for new, fuel-efficient models.



Jonathan Ernst—Reuters/Landov

of Chrysler on June 10. The revamped Chrysler continued to be hit by grim sales declines, however—its September U.S. sales were down 42% year-on-year, and its former 11.1% market share had been reduced to 8.4% by year's end. Meanwhile, Fiat posted a 62% drop in quarterly trading profit in the third quarter of 2009, and contrary to earlier statements, officials spoke of possible write-downs due to its partnership with Chrysler.

Ford Motor Co., which only a few years earlier had been considered to be in weaker shape than GM, managed to avoid bankruptcy and government bailouts. Ford increased its overall market share, mainly at its Big Three rivals' expense, and by September Ford's market share in Europe exceeded 10.1%—the company's best performance since September 2001. Boosted by the federal government's cash-for-clunkers plan (in which the government gave consumers up to \$4,500 toward trade-ins of older cars for new, fuel-efficient models), Ford added 10,000 vehicles to its third-quarter production schedule. By year's end new vehicle sales had improved slightly, and Ford had boosted its U.S. market share to 16.1% for the year. Ford, which had been targeting a return to profitability by 2011, surprised analysts with a profit of \$834 million in the first half of the year and a \$1.8 billion profit for the first nine months.

The chaos in American auto manufacturing enabled Japanese carmaker Toyota Motor Corp. to claim the title from GM of the world's largest automaker in late 2008, but the global recession wreaked havoc on Toyota's sales as well. The company in May 2009 posted its first annual loss in 59 years and said that it was also likely to post a loss in its fiscal year ending March 31, 2010. Toyota's vehicle sales declined for much of the year (in September alone, sales fell 13%). Sales of Toyota's popular gas-electric hybrid Prius line remained strong in 2009 compared with Toyota's Lexus (down 30% as of September) and Scion (down 51% in the first eight months of 2009).

Other Asian automakers, while struggling for sales in the collapsed North America market, found some balance in the burgeoning Indian, Chinese, and Pacific Rim markets. Japanese carmaker Honda Motor Co. was expected to post a first-half 2009 operating profit driven mainly by sales in China and Japan, where the governments had introduced tax cuts and subsidies to increase do-

mestic sales. South Korean automakers also prospered; both Hyundai Motor Co. and Kia Motors Corp. reported that profits rose to record highs during the third quarter. They cited the weakness of the South Korean currency as well as government incentives to purchase energy-efficient vehicles.

Many European carmakers faced the same formula—declines in Europe and North America countered by gains in Asia. Sweden's AB Volvo announced a third-quarter net loss of \$423 million, due to a sharp drop in sales in Europe and the U.S. (heavy-duty-truck sales were expected to fall up to 40% in the U.S. from 2008 levels), but the company reported that demand was stabilizing, particularly in Asia. Volkswagen AG's third-quarter earnings were driven by the company's strong sales in China and improved demand in Germany, which was boosted by an equivalent to the U.S. cash-for-clunkers program. In a strange twist of fate, after Porsche had spent a year battling to purchase a majority stake in Volkswagen (it had a 35% share in 2008), it could not raise enough funds, owing to the decline in car sales and a tightening of the credit markets. In turn, Volkswagen in December completed the purchase of a 49.9% stake in Porsche for some €3.9 billion (about \$5.8 billion).

In October China announced that its annual production had exceeded 10 million cars for the first time in history and was expected to top 12 million by year's end. By the summer, when Chinese domestic car sales were up 48% year-on-year, many industry analysts said that China was on pace to become the world's largest car market. Ford especially made a push in late 2009 to boost its presence by introducing the Figo, a low-cost car to be built in India and sold to other Asian-Pacific markets.

Airlines. While much of the automobile sector was in tatters, the American airline industry, which had been battered for much of the previous decade, appeared to stabilize in the second half of 2009. Although the International Air Transport Association predicted that its members would lose \$9 billion in 2009—and the five largest U.S.-based airlines all posted losses in the second quarter—none of the airlines went under or required federal bailouts. One boon for the airline industry was the decline in jet fuel costs for much of the year.

Southwest Airlines Co. and United Airlines' parent UAL Corp. reported narrower losses in the third quarter than in late 2008. Southwest, which

lost \$16 million in third-quarter 2009, compared with \$120 million in third-quarter 2008, increased its ridership by lowering its fares, which reduced passenger revenue yield by 12% in the period. Delta Air Lines Inc. and US Airways Group Inc. also posted losses in the third quarter. AMR Corp., the parent of American Airlines, registered a third-quarter loss of \$359 million, compared with a profit of \$31 million in third-quarter 2008, but the company showed signs of reducing costs and improving productivity; it showed a record-high load factor (the percentage of available seats filled) of 83.9% as of September 30. The low-cost, smaller-volume JetBlue Airways Corp. returned to profitability in late 2009.

International airlines also faced declining ridership and the subsequent need to reduce flights, costs, and staff. Those in the strongest position were low-cost leaders such as Ireland's budget airline Ryanair, which aggressively pursued a strategy of reducing fares while increasing customer charges, such as fees for checked baggage and charges to customers of roughly \$64 to check in at the airport rather than by using Ryanair's Web site. Ryanair was rebuffed in its attempt to purchase Irish rival Aer Lingus, in which it owned a 29% stake.

Meanwhile, Aer Lingus expected to lay off up to 17% of its staff and to impose salary cuts and caps on much of the remainder. British Airways PLC posted its first pretax loss in 22 years, while Air France-KLM's revenue fell by 21%. Germany's Deutsche Lufthansa AG slumped by 19% in the quarter ended June 30, though its purchase of the ailing Austrian Airlines was approved by the EU in August. Japan Airlines Corp., which lost more than \$1 billion in its fiscal quarter ended June 30, said that it would cut 6,800 employees; it also continued in joint-venture talks with both Delta and American. India's low-cost Jet Airways, which in 2003 had controlled nearly half of India's domestic market, saw its market share fall to 25%, and by mid-2009 it was posting losses and cutting staff.

Aircraft. The two largest global aircraft manufacturers had a difficult year, plagued with what seemed to be endless delays in their next-generation aircraft and a great decline in orders. As of Sept. 30, 2009, total orders booked by Airbus and rival Boeing Co. were only 203, compared with the 1,360 orders that the two had booked in the first nine months of 2008.

The 787 Dreamliner, intended to serve as Boeing's next generation of aircraft, was supposed to have entered service in May 2008. Instead it had faced two years of production delays. The aircraft finally made its inaugural test flight on December 15. Company analysts said that Boeing's decision to outsource much of the Dreamliner's manufacturing to save costs had contributed to the bottlenecks in production. Delays in its overhauled 747 program, the 747-8, forced Boeing to record a \$1 billion charge and delay the revamped jet's first flight until early 2010 (a year behind schedule). The 747-8, which was first announced in 2005, was scheduled to start deliveries in the fourth quarter of 2010. Boeing posted a \$1.6 billion loss in third-quarter 2009, compared with a \$695 million profit in the same quarter in 2008. Airbus's next-generation A380s were also two years behind schedule, and Airbus sold only 2 of them in 2009 (it had hoped for at least 10 sales). Despite escalating costs and canceled sales, the Airbus A400M military transport made its long-delayed maiden test flight on December 11.

Petroleum and Natural Gas. Energy producers, after years of record profits due to high oil and natural gas prices, endured a year marked by extreme price volatility not seen since the energy crisis of the late 1970s and by, in many cases, reduced earnings. Oil fell from \$145 a barrel in summer 2008 to \$33 a barrel in December 2008 and then soared again to above \$80 a barrel in late October 2009 before slipping below \$80 at year's end. The price spikes occurred even though energy demand was low and inventories high, which suggested that they were driven more by market fears of inflation and the reduced prospect of new oil discoveries. ExxonMobil, the world's largest private-sector oil company, was expected to report a 63% drop in profit to \$4.94 billion in the third quarter, and Britain's BP PLC posted a 53% decline in profit in second-quarter 2009 alone.

Producers faced challenges on a number of fronts. Royal Dutch Shell PLC's angry shareholders shot down the company's executive-compensation plan in May. ExxonMobil offered to buy a \$4 billion stake in a Ghana oil field, its largest such investment in a decade and one of the biggest new discoveries of



At a "gold party" held in a private home in West Orange, N.J., jewelry and other unwanted gold items are exchanged for cash; such parties, in which the host typically received a commission from the gold dealer attending the event, grew in popularity during the year as the price of gold climbed to more than \$1,000 per ounce.

the decade, only to face potential rival bids by China National Offshore Oil Corp., Total, and BP. In August 2009 Brazil's government announced that its national oil company, Petrobras, would control all future development of Brazil's deep-sea oil fields found in 2007 and considered one of the biggest new oil discoveries in recent years. Venezuela bypassed American and Western European firms for its new development, instead signing a \$16 billion investment deal with China for oil exploration in the Orinoco River region and reaching a similar \$20 billion agreement with Russia.

Chinese energy firms went on a buying binge in 2009. Cnooc Ltd., China's biggest oil and gas producer, and China National Petroleum Corp. (CNPC), the largest state-owned oil firm, proposed a \$17 billion acquisition of Repsol YPF's stake in the Argentine YPF unit. This followed the \$7.2 billion acquisition in June of Switzerland's Addax Petroleum by the Chinese chemical and oil company Sinopec and CNPC's joint \$3.3 billion purchase (with KazMunai-Gas) of a Kazakh oil producer in April.

Metals. By mid-October 2009 gold had risen to more than \$1,000 per ounce. In early December it topped \$1,200 per ounce, though it had dropped to about \$1,095 by year's end. Analysts speculated that gold's inflated prices reflected market wariness of increased government spending and its implications for

long-term inflation (for example, 130 metric tons of gold were purchased in the first quarter of 2009, 50% higher than the decade's average quarterly volume). According to the Commodity Futures Trading Commission, speculative investors in mid-October betting on long-term gold price increases outnumbered short-term speculators by 10 to 1, compared with a 4-1 ratio in late 2008. Silver was up 44% to \$17 per troy ounce as of mid-October 2009, and the price of front-month copper had more than doubled, to \$2.5290 a pound, in July from December 2008, reflecting investor belief that two of the major price drivers for copper—U.S. housing and Chinese industry—were on the rebound.

Aluminum prices, by contrast, slumped in 2009, with prices down 45% year-on-year as of July 2009. Alcoa Inc., which posted a \$454 million loss in the

second quarter and had idled 20% of its production by April 2009, reported a third-quarter profit of \$77 million (down 71% year-on-year) and indicated that most of its major markets, including automobile makers, were showing signs of stabilizing. Alcoa finished a \$750 million construction project on a products factory in Russia and also procured Switzerland-based Noble Corp.'s intellectual property rights on welded-aluminum products.

Steelmakers across the globe contended with bloated inventories, slackened demand, and in some cases heavy losses. European steelmaker inventories were much higher in early 2009 than their American or Chinese counterparts as orders collapsed from automakers and the construction industry (which made up 75% of European steel consumption). ArcelorMittal, the world's largest steelmaker, posted a \$792 million loss in the second quarter but anticipated that the worst of the economic turmoil was over. As in other sectors, demand was recovering faster in India, Russia, China, Brazil, and Eastern Europe than in the U.S. and Western Europe. ArcelorMittal's mills in India were operating at full capacity by mid-year 2009, while only three of its nine American blast furnaces were operating as of July 30. Nippon Steel Corp., ArcelorMittal's biggest rival, also posted net losses in first-half 2009, citing increased raw material costs and flattening demand.

Banking Emerges from the Worldwide Financial Crisis

In 2009 events and conditions in the global banking and financial systems were a direct response to the credit crunch that followed the September 2008 bankruptcy of the American investment bank Lehman Brothers. At the start of the year, the world economy faced the worst recession in modern history, with an increasing number of bankruptcies and rising unemployment. Firms and individuals were having difficulty in accessing operating funds and loans, and there was a dramatic slowdown in global production and trade.

In September 2009 the IMF estimated worldwide toxic debt, or subprime assets, at \$3.4 trillion, down from its April estimate of \$4 trillion. Many banks were close to collapse and were rescued by their respective governments. In the U.S., where 99 banks had been closed down by the end of October, the government's \$700 billion Troubled Asset Relief Program (TARP) fund was used to extend loans to many banks, and toward the end of the year, TARP was expected to divert funds to small community banks to help companies with assets of less than \$1 billion. In Ireland the Anglo Irish Bank—Ireland's third largest bank and Europe's most successful during the housing-price "bubble" years—was nationalized in January. In the U.K., Lloyds Banking Group and the Royal Bank of Scotland were partly and almost completely nationalized, respectively. In continental Europe casualties included the Dutch banking group ING, Fortis in Belgium, and the Hypo Bank in Germany. In Eastern Europe more than \$1.7 trillion had been borrowed, and many banks were in trouble; in 2009 some \$400 billion had to be renewed or repaid, mainly to Western banks that were unable to roll over the debt.

Throughout 2008 central banks around the world had cut interest rates to increase liquidity. Some, led by the U.K. and the U.S. early in 2009, adopted quantitative easing, buying British gilt-edged securities (gilts) and U.S. Treasury bills, respectively, in order to increase lending. Most of the leading industrialized countries adopted such nonconventional measures, with the reluctant European Central Bank following suit in May, at the same time cutting interest rates to a record-low 1%.

The problems facing the banks were reflected in their profits, as reported in the July 2009 issue of *The Banker* magazine in its "Top 1000 World Banks 2009." Total profits for the 1,000 banks on the list fell by 85%, from \$780 billion in the 2008 list to \$115 billion, with the return on capital declining from 20% to less than 2.7%. For the first time in 39 years, the 25 leading banks, which accounted for nearly 40% of bank capital and 45% of total assets, suffered losses, and the top 5 alone lost a combined \$95.8 billion. There were, how-

ever, wide regional and country differences. Western banks endured hefty losses, led by the U.S. with \$91 billion, although three American banks—JPMorgan Chase, Bank of America, and Citigroup—raised enough funds to head *The Banker's* list based on Tier 1 capital. The 27-member European Union (designated as the EU27) sustained a total loss of \$16.1 billion, while the U.K.'s banks lost \$51.2 billion. By contrast, Chinese banks, three of which led the "Top 1000" in overall market capitalization, earned pretax profits of \$84.5 billion, followed by Japan (\$16.5 billion) and Brazil (\$11.7 billion). The bank rankings reflected the growing global importance of Asia (excluding Japan), with the number of Asian banks on the list increasing to 193 from 174 two years earlier, compared with decreases in the U.S. to 159 (from 185) and the EU27 to 258 (from 279).

Bank profits after the first quarter were much better than expected, and 10 American banks in June repaid \$68 billion to the TARP fund, which freed them from adhering to the constraints on salaries and other income that had been introduced by the U.S. Congress. There was growing concern and public anger, however, that the deeply embedded bonus culture persisted, especially in the U.S. and the U.K., where late in the year bank employees—especially those in upper management—were poised to receive huge bonuses. This was in spite of the fact that the \$9 trillion cost of the bank rescues had fallen on the taxpayers. A tacit agreement was reached in September at the Group of 20 (G-20) economic summit in Pittsburgh, where the G-20 representatives pledged that such bonuses should be linked to long-term performance and tapped the Financial Stability Board "to coordinate and monitor progress in strengthening financial regulation."

Meanwhile, central banks and regulatory bodies were formulating measures to prevent another banking crisis. Capitalization requirements were increased, and there was to be greater transparency. In October the U.S. Treasury announced a draft bill that would enable a financial institution to be ordered by the Federal Reserve to sell a risky part of the business or have it seized. In Europe the EU was imposing penalties on all European banks that had been bailed out in the financial crisis, and even more stringent measures were likely. There was ongoing debate on the wisdom and feasibility of dividing banks into a two-tier system of commercial and investment banks in an effort to ensure that the more risky investment bank activities, such as hedge funds and derivatives, never again had so serious an impact on the retail banking sector.

(JANET H. CLARK)

BHP Billiton Ltd., the world's largest mining company, settled iron-ore price negotiations with more than half of its steel industry customers; many customers agreed to rates 33% below 2008 prices, and others agreed on quarterly price negotiations. The more flexible contracts would enable BHP and other miners, such as Anglo-Australian mining giant Rio Tinto Ltd., to respond quickly to spikes in demand and would

also allow steelmakers to cut costs during low-demand periods. BHP failed to break through with Chinese steel-maker clients, who were seeking a 50% discount.

China Minmetals Non-Ferrous Metals Co. bought many of Australia's Oz Minerals Ltd.'s assets, while Sinosteel Corp. purchased iron-ore miner Midwest Corp. in a hostile bid. Aluminum Corp. of China's proposed purchase of an 18%

stake in Rio Tinto fell apart in June, however, when the Anglo-Australian company walked away from the \$19.5 billion proposal, in part owing to shareholder and governmental disapproval. Rio Tinto, still burdened by debt from its 2007 purchase of Alcan, suffered a 65% decline in first-half profit.

In April the American steel industry filed an antidumping suit against China, alleging that Chinese steelmak-

ers had unfairly dumped tubular and pipe steel imports into the domestic market in 2008. Steelmakers, including U.S. Steel Corp., Nucor Corp., and AK Steel Holding Corp., and the United Steelworkers union called on the Obama administration to push for tougher enforcement of trade laws and even to impose extra tariffs against primarily Chinese imports. At the same time, the Chinese government attempted to consolidate its steel industry, which accounted for about 38% of global production but was fragmented into hundreds of small companies. When China attempted to privatize Linzhou Iron and Steel Co., 3,000 steelworkers protested; the government eventually scrapped its plan.

Chemicals. The chemicals sector saw some big-ticket mergers in 2009. Dow Chemical Co. was forced to complete its purchase of rival Rohm & Haas Co. for \$16.3 billion, for which it borrowed \$9.2 billion in short-term loans and nearly saw its credit status downgraded to “junk” because of the increased debt. Dow had tried to cancel or at least delay the deal, but Rohm sued Dow to

close the deal. Faced with a short-term debt burden, Dow undertook layoffs, sold off Rohm & Haas’s Morton Salt unit to Germany’s K&S AG for \$1.7 billion, sold its interest in a Malaysian chemical joint venture for \$660 million, and began consolidating some of its latex, rubber, and plastics businesses into one division for a possible sale.

Pharmaceuticals. Drug manufacturers also offered a string of megamergers during the year. Pfizer Inc. in January paid \$68 billion to acquire its rival Wyeth, the largest pharmaceutical merger since Glaxo Wellcome PLC bought SmithKline Beecham PLC in 2000. Six weeks after the Pfizer deal, Merck & Co. announced that it would buy Schering-Plough Corp. for \$41.1 billion. Merck, with Schering’s patents and new-drug pipeline, could soften the blow from the loss of its patent for the bone drug Fosamax, which had recently become available as a generic. Merck’s patent for the asthma drug Singulair (which had \$4.3 billion in worldwide sales in 2008) was set to expire in 2012, and in August Merck won a patent-infringement suit against Teva

Pharmaceutical Industries Ltd. when the U.S. District Court for the District of New Jersey ruled that Teva was prohibited from marketing a generic version of Singulair prior to the expiration of Merck’s patent. Abbott Laboratories in September acquired the pharmaceutical unit of Belgium’s Solvay SA for \$7 billion in one of several deals undertaken by drugmakers to get rights to new flu vaccines, which the industry considered a growth area.

In September Pfizer agreed to pay \$2.3 billion to settle allegations that it had illegally marketed its withdrawn painkiller drug Bextra and three other drugs—the largest health care fraud settlement and the largest criminal fine in corporate history. A federal case against Merck involving Fosamax ended in a mistrial in September because of a deadlocked jury.

Tobacco. In June 2009 President Obama signed the Family Smoking Prevention and Tobacco Control Act, legislation that gave the FDA regulatory authority over the manufacturing and marketing of cigarettes and other tobacco products, including final approval of new tobacco products, cigarette ingredients, and tobacco industry advertising. The FDA’s first major action in September was to ban flavoured cigarettes, including candy and clove varieties. Tobacco companies, including R.J. Reynolds Tobacco Co. and Lorillard Inc., had filed a federal lawsuit in August to protest the FDA’s new power to impose marketing restrictions, claiming that it violated the companies’ First Amendment rights, but in early November a U.S. District Court judge in Richmond, Va., denied a motion for a preliminary injunction sought by the tobacco companies.

Finance. In 2009 the global economy showed signs that it was emerging from the “Great Recession,” which officially began in December 2007. (See Special Report on page 170.) Although unemployment remained high, even the tarnished banking and finance systems showed improvement. (See Sidebar.) After hitting their lows in the first quarter of 2009, world stock markets rose steadily, with many bourses recording their highest levels at year’s end. In the U.S. the Dow Jones Industrial Average closed at 10,428.05, up 18.8% for the year and 59.3% from the March low but still 26.4% below its all-time high (14,164.53), set on Oct. 9, 2007. (For Selected Major World and U.S. Stock Market Indexes, see Table.)

(CHRISTOPHER O’LEARY)

Selected Major World Stock Market Indexes¹

Country and Index	2009 range ²		Year-end close	Percent change from 12/31/2008
	High	Low		
Argentina, Merval	2321	930	2321	115
Australia, Sydney All Ordinaries	4883	3112	4883	33
Brazil, Bovespa	69,349	36,235	68,588	83
Canada, Toronto Composite	11,780	7567	11,746	31
China, Shanghai A	3644	1956	3437	80
France, Paris CAC 40	3960	2519	3936	22
Germany, Frankfurt Xetra DAX	6012	3666	5957	24
Hong Kong, Hang Seng	22,944	11,345	21,873	52
India, Sensex (BSE-30)	17,465	8160	17,465	81
Italy, S&P/MIB	24,426	12,621	23,248	19
Japan, Nikkei 225	10,640	7055	10,546	19
Mexico, IPC/BOLSA	32,626	16,930	32,120	44
Russia, RTS	1487	498	1445	129
Singapore, Straits Times	2898	1457	2898	64
South Africa, Johannesburg All Share	27,889	18,121	27,666	29
South Korea, KOSPI	1719	1019	1683	50
Spain, Madrid Stock Exchange	1257	716	1242	27
Taiwan, Weighted Price	8188	4243	8188	78
United Kingdom, FTSE 100	5438	3512	5413	22
United States, Dow Jones Industrials	10,549	6547	10,428	19
United States, Nasdaq Composite	2291	1269	2269	44
United States, NYSE Composite	7261	4226	7185	25
United States, Russell 2000	634	343	625	25
United States, S&P 500	1128	677	1115	23
United States, Wilshire 5000	11,631	6858	11,497	27
World, MS Capital International	1178	689	1168	27

¹Index numbers are rounded. ²Based on daily closing price.

Sources: FT.com, Bloomberg.com, mscibarra.com, wilshire.com, *Financial Times*, *The Wall Street Journal*.

Computers and Information Systems

Despite the worldwide recession, **E-BOOKS**, smartphones, and netbooks were hot consumer devices, while **TWITTER** was the cool Web application, and **CLOUD COMPUTING** gained support in the corporate world. Apple CEO **STEVE JOBS** returned to the company after surgery, and Microsoft introduced **WINDOWS 7** to replace the much-criticized Vista.

The global economic recession made 2009 a difficult year for technology workers and companies. In the first quarter alone, American high-technology firms laid off more than 84,200 workers, according to job-tracking firm Challenger, Gray & Christmas. That was up from the 66,300 laid off in the fourth quarter of 2008. In Japan financially troubled computer-chip manufacturer Toshiba announced plans to lay off 3,900 contract workers over the next year, in addition to the 4,500 temporary workers it had already cut from its workforce.

As the year ended, computer companies hoped that they were seeing the signs of an economic upturn, spurred in part by Microsoft's new Windows 7 operating system (OS), which, it was envisioned, would generate a new round of computer-upgrade purchases. Optimism was based on better-than-expected quarterly earnings reports from several companies, including Google, IBM, and Intel. It was too early to tell whether an uptick in technology purchasing in the U.S., driven largely by consumer electronics, would spread to the corporate market.

Electronic gadgets of all sorts continued to become part of the everyday lives of ordinary citizens. A study of American and Canadian consumers by Forrester Research showed that half of all adults played computer games, just under two-thirds of households had a broadband, or high-speed, Internet connection, three-fourths of households had a cellular telephone, and 8% of the consumers surveyed had a smartphone (essentially a handheld computer integrated with a cell phone).

In the U.S., 44% of households owned a laptop personal computer (PC), and the average family owned two PCs. High-definition (HD) television and home computer networks were among the gadgets most rapidly gaining favour with consumers.

Wireless phone companies continued to invest heavily in smartphones and netbooks (downsized laptops equipped with cellular-network Internet connections) as new ways to sell more data services—which was necessary if they were to offset declining prices for cellular voice service. One cellular company tried to borrow an audio technique from consumer electronics to make voice calls more appealing. France Telecom offered HD cellular audio, which brought to cell phones the digital sound reproduction used with digital TV, music compact discs, and FM radio stations.

E-books. Electronic books, or e-books, caught the eye of publishers as never before in 2009 because of Amazon's Kindle and Sony's Reader, stand-alone devices designed to read the e-books that were sold online by Amazon and Sony, respectively. Google also said that it would begin offering e-book downloads, although it was unclear which equipment it would use. Other e-book providers included iRex, a division of Royal Philips Electronics, and cell phone company China Mobile. Bookstore operator Barnes & Noble inaugurated an e-bookstore on its Web site and offered e-books that could be read on several devices, including PCs, Apple's iPhone and Research in Motion's BlackBerry smartphones, and Barnes & Noble's own newly introduced e-book reader called nook.

Some printed book publishers were compelled to take e-books seriously because e-book sales were growing, while sales of printed books were not. Adding to the appeal of e-books was that they were about as profitable to sell as printed books, even though e-books typically sold for less (about \$10 versus an average of \$26 for a hardcover book). That was because publishers could do away with physical book expenses such as printing, storage, and transportation. E-books also offered multimedia options that printed editions could not, and text could be combined with occasional video snippets and links to Web sites. Book publisher Simon & Schuster released the first four e-books, which it called vooks, that included video; these could be read and watched online or on Apple's iPhone or iPod Touch devices.

It was unclear how many consumers would shift from printed books to e-books; in 2009 the latter accounted for only a few percent of unit book sales. Still, some in the book industry worried about piracy of electronic books via downloads of illegal book copies—similar to what had already happened to the music industry. Such illegal book sharing already existed on a small scale. In addition, book publishers worried that letting libraries offer e-books would make consumers less inclined to buy print versions, because downloading e-books made library use easier. As a result, some book publishers refused to allow their e-books to be offered through libraries.

The Kindle produced the first consumer privacy issue associated with e-books when in July Amazon, realizing that it lacked the rights to sell George Orwell's novels *1984* and *Animal Farm* online, refunded the 99-cent purchase price to customers and remotely deleted copies of the books already downloaded to nearly 2,000 Kindle customers. Amazon was slammed with a barrage of criticism, made more intense because *1984* details how powerful rulers can dominate peoples' lives. A Michigan high-school student whose copy of *1984* was deleted sued Amazon, and in September the case was settled out of court. Amazon agreed to pay \$150,000 (to be donated to charity) and apologized for

deleting the books. As part of the settlement, the company also pledged not to delete e-books from U.S. customers' Kindle units in the future unless the user agreed, the user wanted a refund or failed to make the electronic payment, a court ordered a book deleted, or removing a book was necessary to eliminate malicious software.

Smartphones. Apple's iPhone continued to dominate the market for smartphones. The company introduced the iPhone 3GS (which added voice controls, a digital compass, and the ability to record video to the third-generation wireless-network platform) for \$199–\$299 and, in an effort to broaden iPhone use even further, dropped the price of the previous model, the iPhone 3G, to \$99. Apple's iPod remained the top-selling digital music player, although Microsoft continued to compete with its Zune music player, to which it added the capabilities of playing HD video and receiving HD radio signals with better-quality sound than traditional FM radio.

Cell phone companies AT&T and T-Mobile sought to differentiate their data-using smartphone services by offering customers free Wi-Fi (wireless fidelity) connections when they could not get a cellular network connection. AT&T had faced the bigger problem because its iPhone customers used more data than owners of other smartphones and thus tended to take up more network capacity per user. AT&T also offered the most free Wi-Fi hot spots, about 20,000.

Apple reported that it had sold its two billionth unit of iPhone and iPod Touch application software, or app, from its iTunes online store. Users could choose

from among 100,000 apps in 20 categories, including games, business, and social networking. Hundreds of independent firms wrote apps for the iPhone and iPod, but Apple had to approve the programs before they could be sold online through the App Store portion of iTunes.

For the first time, Apple allowed two of its music competitors, on-demand streaming music services Rhapsody and Spotify, to provide an app that connected iPhone and iPod Touch customers to their services. Apple attracted an inquiry from the Federal Communications Commission (FCC) when it rejected an app for Google Voice, which provided access to cellular-calling, text-messaging, and voice-mail services that competed with those of AT&T, the iPhone's exclusive service provider in the U.S. Apple told the FCC that it was still considering whether to offer the Google Voice app.

A new type of app called "augmented reality" was available for the iPhone and phones using Google's Android OS. This app used the GPS (global positioning system satellite navigation) location chip in the phone to overlay the phone's camera view of a street scene with local tidbits of information, such as the identity of stores, points of interest, or real-estate listings. The reliability of augmented reality was limited by the accuracy of the GPS units that the phones contained, but research firm iSuppli concluded that the GPS capabilities of smartphones were opening up a new area of growth for the devices, particularly the iPhone. One use of GPS was to enable the iPhone to compete with stand-alone GPS navigation systems, but there were still tech-

nical hurdles in placing complex navigation software on cell phones.

Apple won in another controversy over whether Palm Inc.'s Palm Pre smartphone should be allowed to connect to Apple's iTunes software, in competition with the iPhone and the iPod. When Apple blocked the connection, Palm complained to an industry oversight group for USB-port connection standards that Apple's action was improper restraint of trade. The USB Implementers Forum dismissed Palm's claim, however, and said that Palm was in the wrong for making its device appear to be an Apple device.

Computer Games. Sales of video games and the game consoles that played them suffered from poor economic conditions, even though the sector had been expected to be recession-proof—on the theory that the games represented stay-at-home escapist entertainment. Experts attributed the sales decline to both tight consumer budgets—new console games cost about \$60 each—and a lack of new must-have games. As a result, Nintendo dropped the price of its Wii game console by \$50, to \$199, Sony reduced the price of its most-expensive PlayStation 3 model by \$100, to \$399, and Microsoft also cut the price of its most-expensive Xbox 360 model by \$100, to \$299.

In an effort to boost the industry's sales, game companies emphasized new titles with familiar names, such as the space-war game *Halo 3: ODST* and *The Beatles: Rock Band*, in which the music and images of the legendary 1960s band were paired with a play-along game. The gaming industry also began to embrace a new trend, playing casual games on cell phones. The iPhone's App Store had made hundreds of low-cost or free games available to consumers for downloading, and there were concerns that cell-phone games could take attention away from more-expensive games for other portable gaming devices.

Social Networking. A study by Forrester Research showed that half of American adults who spent time online used social networks such as Facebook or LinkedIn, a 46% rise from the previous year. Most of the increased use was among adults aged 35 and older. Another survey, conducted by Common Sense Media, a group that monitored children's issues, demonstrated that while teenagers were big users of social networks, most parents did not understand the extent to which the teens used the networks. The survey showed

A new interactive computer game, entitled The Beatles: Rock Band, was released during the year; it featured the music and images of the legendary 1960s band.



MTV Games—Harmonix/Reuters/Landov

Twitter Takes on the World: 140 Characters at a Time

The question “Do you Twitter?” was asked throughout 2009 by users of the Web’s most popular microblogging service. Whereas a traditional Web log, or blog, might be updated with long entries once or twice a day, a Twitter user might post dozens of short messages of up to 140 characters—called “tweets”—in the same period. In addition to this aspect of the service, which worked in some ways like an Internet or mobile telephone instant messaging client, Twitter incorporated features of traditional social networking Web sites, such as MySpace and Facebook. Twitter users (alternatively called Twitterers, Tweeters, or simply Twits) could elect to receive the tweets of other posters or track specific topics, creating a dialogue of sorts and potentially pushing the number of “followers” in a given Twitter feed into the millions. In April 2009 actor Ashton Kutcher made the news when he became the first Twitterer to collect more than a million followers.

While the service itself made headlines throughout the year, its users made their own, transforming Twitter from something that was regarded as an idle hobby for an increasingly wired world into an up-to-the-second news outlet that transcended political borders. On January 15, commuter ferry passenger Janis Krums broke the story of the successful water landing of U.S. Airways Flight 1549 on the Hudson River when he sent out a tweet stating that his ferry was going to rescue people from the downed plane. Krums’s hastily snapped camera-phone image of passengers disembarking the half-submerged aircraft was uploaded to Twitpic.com, a photo-hosting service for Twitter users; the site promptly crashed as thousands of Twitterers attempted to view it. Twitterers scored another scoop in June when National Basketball Association star Shaquille O’Neal learned of his trade from the Phoenix Suns to the Cleveland Cavaliers via tweet. Although celebrity accounts tended to attract hackers interested in little more than sophisticated pranks, a massive denial-of-service attack in August targeted an economics professor in the republic of Georgia, knocking out the entire site for hours. Millions of users attempted to log into Twitter only to be greeted by the service’s iconic “fail whale”—the image of a cartoon whale being hoisted into the air by a flock of birds, signaling a site outage. In November a NASA “tweetup” saw tweets from 100 lucky Twitterers who were allowed to observe and tweet about the lift-off of the space shuttle *Atlantis* from the John F. Kennedy Space Center at Cape Canaveral, Florida. On hand was astronaut Michael Massimino, who posted the first tweet from space during a shuttle mission in May.

Nowhere was Twitter’s role as an emerging outlet for the dissemination of information more apparent than during the events surrounding the Iranian election in June 2009. As state media sources

reported that Pres. Mahmoud Ahmadinejad had secured an easy victory, supporters of opposition candidate Mir Hossein Mousavi (see BIOGRAPHIES) took to the streets in a series of increasingly violent demonstrations. The topic known as #IranElection became one of the most followed on Twitter as Mousavi supporters coordinated protests and posted live updates of events throughout Tehran. On June 15, three days after the election, Twitter delayed a 90-minute maintenance period at the request of the U.S. State Department, rescheduling it for 1:30 AM Tehran time in order to avoid interfering with the flow of information within and from Iran. The following day foreign journalists were banned from covering opposition rallies, and Twitter, along with other social networking sites, filled the void left by the traditional media. Government security officers tried to stanch the flow of information by blocking the Web site, while opposition supporters urged #IranElection followers to change their profile settings to the Tehran time zone in an attempt to overwhelm government filters. Events reached a fever pitch following the shooting of Neda Agha-Soltan as she was leaving a protest on June 20. A mobile phone video of the young woman’s graphic death was posted on the YouTube video-sharing Web site, and by the following day “Neda” was both the rallying cry of the opposition and one of the top trending topics on Twitter.

The creators of Twitter—social media entrepreneur Evan Williams, social networking expert Christopher Isaac (“Biz”) Stone, and messaging-software engineer Jack Dorsey—did not envision such a paradigm shift when they first designed and launched the service in 2006. (See BIOGRAPHIES.) From its inception, Twitter was primarily a free short messaging service (SMS) with a social networking element. As such, it lacked the clear revenue stream that one could find on sites that derived income from advertising or membership fees. With the number of unique visitors increasing some 1,300% in 2009, it was clear that Twitter was more than a niche curiosity, though it was as yet unclear if Twitter could achieve financial independence from its venture-capital investors (there was speculation that the company might eventually issue public shares). In July the Twitter site was revamped to put a greater emphasis on its expanding role as a source for “what’s happening right now, anywhere in the world.” As Stone publicly acknowledged later in the year, Twitter had “long outgrown the concept of personal status updates.” Meanwhile, Twitter remained focused on the essentials: improving site stability; introducing new features such as search, list, and an optional geolocator tag; and ensuring that its tens of millions of users could continue to live the tweet life.

(MICHAEL RAY)

that 22% of teens checked their social networks more than 10 times daily, but only 4% of parents believed that their children were so heavily involved.

Much of the attention in 2009 was focused on Twitter, a social-networking service that allowed people to exchange short (140-character) messages, or “tweets,” on any topic via computer or

cell phone. (See Sidebar.) On the basis of its popularity, Twitter was able to raise \$100 million in new funding, even though it was a start-up with little or no revenue. Twitter’s founders—entrepreneur Evan Williams, social-networking expert “Biz” Stone, and software engineer Jack Dorsey (see BIOGRAPHIES)—sought to expand the reach of

the service that they had launched in 2006 without a formal business plan.

Overall, text messaging—sending short written messages via bursts of data from one cell phone to another—grew in popularity, but the activity became controversial when more people began driving and texting at the same time. Polls in the U.S. found that more

Peter DaSilva—The New York Times/Redux



Evan Williams (left) and “Biz” Stone, founders of Twitter, use the social-networking service at the company’s headquarters in San Francisco.

than 90% of adults favoured a ban on text messaging while driving. Research into so-called distracted driving found that drivers using cell phones were four times as likely to have a crash as other drivers. U.S. government employees were banned from text messaging while driving government vehicles.

Another problem of cell-phone texting was the transmission of sexual images or messages, which became known as “sexting,” between teenagers. In the U.S. the problem posed new issues for schools and courts. The Iowa state Supreme Court upheld a misdemeanor conviction of an 18-year-old boy who had sent a nude photo of himself to a 14-year-old classmate via text messaging. In Houston, public schools banned sexting. While the extent of the problem was hard to gauge, a survey by the National Campaign to Prevent Teen and Unplanned Pregnancy showed that 20% of young Americans between the ages of 13 and 19 had either texted or posted online partially or completely nude pictures or video of themselves.

New Developments. Microsoft, admitting that users had been disappointed with the Windows Vista OS (introduced in early 2007), launched the next-generation Windows 7 in October 2009. Windows 7 was said to address complaints about Vista—slowness, software crashes, and software incompatibility issues—while keeping the underlying Vista architecture. Windows 7 improvements included more efficient use of memory, which caused a PC to start up faster and run more smoothly. When Vista was announced, its high computing demands meant that it would not run well on many existing

computers. That was expected to be less of a problem with Windows 7, which was said to work on nearly all new computers as well as those that were up to three years old. Satisfactory performance on older PCs was said to vary, although Microsoft’s official system requirements were set fairly low.

In December Microsoft reached an agreement on Windows long-running antitrust issues with the European Union. The EU reacted favourably to Microsoft’s offer to alter the way that it combined its Internet Explorer Web browser with Windows. Users would be given a choice of browsers when setting up the operating system; Internet Explorer could be turned off and another browser downloaded.

Microsoft also won a patent victory when a federal judge in Providence, R.I., overturned a \$388 million penalty against the company, one of the largest amounts ever awarded in a civil patent-infringement lawsuit. Software firm Uniloc USA, Inc., had won damages from Microsoft in an earlier jury trial on the basis of claims that Microsoft had infringed on Uniloc’s security software patents.

Another patent-infringement suit involved Microsoft. A federal court in Texas in May ruled in favour of the Canadian firm i4i, Inc., which claimed in a lawsuit filed in 2007 that Microsoft’s Word software infringed on an i4i patent. (The technology involved XML, or extensible markup language, which was used in electronically encoding documents.) In August the court ruled that Microsoft should pay more than \$290 million in damages and issued an injunction that would prohibit

the company from selling versions of the Word program that contained the patented technology. Microsoft obtained a temporary stay of the court’s order and in September told a federal appeals court that the lower court had erred in interpreting i4i’s patent claim, but i4i told the appeals court that Microsoft had known about i4i’s patent before using the technology and had simply disregarded it. Microsoft lost its appeal and agreed to replace the infringing code in Word 2003 and Word 2007. The court ruling might force the software company to make technical changes to the next version of Word, planned for release in 2010.

Microsoft’s new search engine, Bing, won favourable reviews, but according to Irish Web-traffic-statistics firm Statcounter, Microsoft’s share of the American Web-search market remained under 10% and dwindled slightly in the months after Bing was launched, which left it in third place behind Google and Yahoo! Google’s U.S. market share grew slightly during the same period, to 80%. Worldwide, Google held about 90% of the search market.

Microsoft and Yahoo! formed a 10-year partnership to combat Google, but it was unclear how successful the companies were likely to be, given the market leader’s dominant position. Under the agreement, Microsoft was to provide Bing’s search technology on Yahoo!’s Web sites. The goal was to increase the number of people using the Yahoo! search service in order to boost revenue from the advertising that accompanied the search results. The agreement came about after Microsoft failed in its hostile bid to acquire Yahoo! in 2008 for \$47.5 billion (about \$33 per share). Microsoft eventually withdrew its offer, and Yahoo! replaced its CEO, cofounder Jerry Yang, who had reportedly opposed the acquisition unless Microsoft increased its bid to \$37 a share.

There were more delays in Google’s settlement with authors and publishers in a 2005 copyright-infringement case over scanned library books that were to appear online. Google’s original settlement called for Google to pay \$125 million to compensate authors and publishers of books that were still protected by copyright and to help locate the copyright holders for out-of-print books covered by the law. The U.S. Department of Justice (DOJ) raised legal and antitrust objections to the agreement on the basis of complaints that it gave Google too much power over copyrighted works. Amazon complained

that the settlement would give Google a monopoly over “orphan works,” copyrighted books whose owners could not be found, and would allow authors and publishers to set e-book prices—an extension of their influence in what was a key new business area for Amazon. There were also allegations that the agreement violated French law. The two sides in the copyright case—the defendant, Google, and the plaintiffs, the Authors Guild and the Association of American Publishers—negotiated a replacement agreement, which was awaiting court approval at year’s end.

In a related matter, Google acquired reCAPTCHA, a company that created visual puzzles to ensure that people and not automated bots (short for robots) were signing up for Internet services. Google sought to adapt the technology to improve optical character recognition (OCR) for out-of-copyright books that it scanned and offered for downloading. Some of the one million books that were already available contained errors that were traceable to flaws in OCR.

Personal Computers. The PC industry waited for signals that the recession was over, but the outlook was not good in the first part of the year. Research firm IDC said that worldwide PC shipments were down 2.4% in the second quarter from a year earlier, and the value of PC shipments dropped about 19%, in part because of price discounting. It was hoped that the year-end holiday season would signal the return of better economic times—and there were early indications that could be true. In the third calendar quarter of the year, all PC companies (with the exception of Dell) reported rising sales. Late in the year, according to IDC, PC maker Acer replaced Dell as the second-ranked PC market-share holder, with 14% of the worldwide market. Hewlett-Packard remained number one, with just over 20% of the world PC market. Apple boosted its U.S. market share with record nonholiday sales in the third quarter, but the Macintosh remained a minor player internationally.

Netbooks were the fastest-growing PC category and were seen as bridging the gap between smartphones and laptop computers. Netbooks were small notebook computers with slower processors, smaller screens, shrunken keyboards, and lower-capacity disk drives that nonetheless could handle Internet browsing and routine computing tasks. They were aimed in part at users who were comfortable with using online applications for common productivity

tasks, such as document or spreadsheet creation. There was concern in the computer industry, however, that netbooks simply represented a new, less-expensive product category and that their sales would cut into sales of traditional laptop PCs.

Computer manufacturers experimented with a PC even smaller than a netbook but larger than a smartphone—called a “mobile Internet device” or “smartbook.” Designed to fit in a pocket or purse, it was intended for e-mail or Web browsing via cellular network or Wi-Fi Internet connection.

Google, which already made the Android OS used on some cell phones, declared that it would compete with Microsoft and Apple in the market for PC operating systems. Google planned to challenge the Windows and Mac OS X operating systems, using an extension of its Chrome Web browser technology in a product that it expected to introduce in late 2010. As a result, Google CEO Eric Schmidt resigned in August from Apple’s board of directors.

Companies. Steve Jobs, the charismatic Apple CEO and cofounder who had been given credit for Apple’s dominant position with the iPhone and iPod, returned to his job after having taken a medical leave of absence for much of the year. During that time he had a liver transplant that was needed because he had suffered complications from pancreatic cancer. His return was considered likely to reassure Apple shareholders who were concerned that Jobs was an irreplaceable part of Apple’s financial success. Apple in August introduced an undramatic upgrade to its Macintosh operating system, called Mac OS X Snow Leopard; it incorporated many small improvements rather than high-profile changes.

Oracle continued its ambitious growth plans in the software industry, which had resulted in the purchase of more than 40 companies in four years. Oracle’s plan to acquire Sun Microsystems, a computer hardware and software firm, for \$7.4 billion was announced early in the year. Analysts said that the deal would make Oracle more competitive against IBM in the corporate computing market. Oracle’s plan was delayed when the European Commission decided to extend its investigation of the acquisition’s ramifications. EU officials expressed concern that the acquisition of Sun by Oracle, one of the world’s largest software firms, could reduce competition in the market for database software. The delay was unexpected because the

U.S. DOJ had already approved the transaction. Oracle CEO Larry Ellison said that he was eager to complete the acquisition because, he said, Sun was losing \$100 million a month.

Intel appealed a \$1.45 billion antitrust fine levied against it by European Union regulators, asking that the fine be overturned or reduced. Intel was accused of having provided rebates to some PC makers who were heavy users of Intel chips and of having rewarded them for delaying the production and release of PCs using chips from Intel competitor Advanced Micro Devices (AMD), which filed a related lawsuit in 2005. Intel maintained that AMD was not hurt by Intel’s practices.

Late in the year, Intel agreed to pay \$1.25 billion to settle all antitrust and patent claims made by AMD. AMD in turn agreed to withdraw its worldwide regulatory complaints about Intel’s alleged pressuring of computer makers to use Intel chips instead of those from AMD. The two companies also agreed to a five-year cross-licensing of each other’s patents, a potentially large benefit to AMD. It was unclear how the settlement would affect the ongoing government antitrust actions against Intel in Europe, Asia, and the U.S., although it would end private antitrust cases pending in the U.S. and Japan.

Computer storage firm EMC Corp. paid \$2.4 billion to acquire Data Domain, which had “data deduplication” software that helped corporations to sharply reduce the amount of computer storage they required. The technology altered the practice of storing multiple versions of a file that had only minor variations; instead, a single copy of the file was stored once and the minor changes were stored daily.

Adobe Systems, known for its Photoshop and document-reading software, bought Omniture, a Web-traffic-analysis firm, for about \$1.8 billion. Omniture’s software was designed to facilitate online marketing, while Adobe’s focus was on software to create online and offline content.

Cisco Systems was in the process of acquiring Tandberg, a Norwegian videoconferencing company, for \$3.4 billion after initially having bid \$3 billion. Tandberg sold videoconferencing equipment and software that could make connections between different types of video equipment. Hewlett-Packard said that it would acquire network equipment company 3Com for \$2.7 billion in order to compete more effectively with Cisco, the networking market leader.

Dell acquired Perot Systems for \$3.9 billion in an effort to extend its reach into corporate computer services, an area where it competed with IBM and Hewlett-Packard. Texas-based Perot Systems, which was founded in 1988 by businessman H. Ross Perot, a former U.S. presidential candidate, provided services ranging from data centre management to consulting.

Legal opposition was resolved to allow eBay's \$2 billion sale of the majority interest in Internet phone service Skype to a consortium of investors. Copyright lawsuits had been filed in British and American courts by the Skype founders, who sold Skype to eBay in 2005. The founders accused eBay of having violated copyright by changing and sharing key software code associated with the Skype service, which consisted of free Internet-based voice and video messages between users of Skype software on computers and smartphones and of for-pay calls from Skype software to conventional landline and cell phones. eBay settled the lawsuits filed by the Skype founders by giving the founders a 14% ownership position in Skype and two seats on Skype's board of directors. In return, the founders were to transfer to Skype the intellectual property that was the basis for the lawsuits. Skype was acquired to help eBay connect buyers and sellers via Internet phone service, but analysts said that Skype never fit in with eBay's business.

There was an unexpected new development in a legal issue that had swept through the computer industry over the previous several years: the illegal backdating of stock options that led to regulatory investigations of more than 100 companies and the conviction of some executives on criminal charges. A federal appeals court overturned the 2007 conviction of Gregory Reyes, the former CEO of computer data centre supplier Brocade Communications Systems, citing improper actions by prosecutors. He had been sentenced to 21 months in prison and a \$15 million fine for illegal backdating of stock options to increase employee pay, but in 2009 he faced a new trial. Reyes had resigned from Brocade in 2005 after accounting problems were connected to the stock-option grants. Prior to the investigations, it had been common practice in some corporations to backdate the grant date of stock options to a day when the stock price was low, which presumably would increase the value of the options when they were eventually exercised at a higher price. While not

illegal in itself, the practice required a special accounting treatment to avoid artificially increasing company profits, a rule not always followed.

Some sizable layoffs were announced late in the year. AOL said that it would eliminate 2,500 jobs, or one-third of its workforce, as part of its spin-off from media company Time Warner Inc. The spin-off reversed the highly publicized but largely unsuccessful merger of "old" and "new" media firms nine years earlier. Applied Materials, which made equipment used in the manufacture of semiconductors, disclosed plans to cut 1,300–1,500 jobs, or 10–12% of its total employment. Video-game maker Electronic Arts announced that it would eliminate 1,500 jobs, or about 17% of its workforce.

Security. Computer security experts said that the risks from hackers were changing. There was a decline in attacks on security flaws in the ubiquitous Microsoft Windows OS, which had been made more impervious to attacks. Instead, hackers were shifting to attacks on security holes in other programs found on many PCs, including the Microsoft Office software package, Adobe's Flash Player (used to display video animations), and Apple's QuickTime video player software.

In addition, hackers increased the number of attacks on corporate Web sites, either to steal information or to convert legitimate Web sites into distribution points for malicious software that could take over PCs. The theft of data and intellectual property via Web site break-ins reached a value of more than \$1 trillion in 2008, the security firm McAfee said. Harder to calculate was the damage done by armies of PCs that were secretly taken over and turned into botnets (groups of computers used for other hacker attacks).

A hacker in one of the largest identity-theft cases in U.S. history pleaded guilty in late August and faced up to 25 years in prison. It was a turnabout for Albert Gonzalez of Miami, who had been arrested in 2003 but was not charged because he had become a government informant in the case. Among other charges, Gonzalez and two cohorts in 2009 stood accused of having used a laptop computer to pick up wireless data signals in order to access credit card and debit card numbers for more than 40 million accounts from major retailers, including T.J. Maxx, Barnes & Noble, Sports Authority, and OfficeMax. Just days before his guilty plea, Gonzalez was indicted in another hacking case, the

theft in 2007–08 of more than 130 million credit card and debit card numbers from New Jersey payment processor Heartland Payment Systems and others.

One of the most infamous Internet sources of pirated movies, music, and video games, the file-sharing service the Pirate Bay, was to be converted to a legitimate business after being acquired by the Swedish firm Global Gaming Factory for \$7.75 million. The Pirate Bay had an estimated 20 million users worldwide, but it ran aground in early 2009 when a Swedish court convicted its three founders and one of their investors of copyright law violations. Each was sentenced to a year in prison, and they were collectively fined \$3.6 million in damages. Later the three founders were threatened by a Dutch court with \$9 million in additional fines unless they removed links on the Pirate Bay service to copyrighted material owned by a group of Dutch musicians and filmmakers. The founders claimed that they had no power to do so because they were no longer affiliated with the company, which was now owned by Riversella Ltd. of the Seychelles. Questions remained about how the Pirate Bay could be turned into a legal business without either losing its file-sharing audience or violating copyrights.

Data security was a big issue in negotiations between the U.S. and the EU over sharing banking data across country lines to help fight terrorism. The issue arose when it was announced that the database that enabled the financial tracking was being moved from the U.S. to The Netherlands, which brought into play European data-privacy rules that more tightly controlled the sharing of information about trans-Atlantic financial transactions. An interim one-year data-sharing agreement was in the works, but critics questioned its legality. Meanwhile, U.S. Pres. Barack Obama's administration announced that it would devote more attention to cybersecurity to protect an American computer infrastructure that was vulnerable to foreign attack. Theft, alteration, or destruction of data could reduce public trust in information systems.

Microsoft joined a small number of companies that provided antivirus software free instead of selling it. Observers stated that Microsoft's Security Essentials product was not so much an effort to steal business from for-pay antivirus-software companies as it was an attempt to prevent virus attacks among Windows users who did not take proper

Imaginechina/AP



Chinese Internet users play video games or watch movies online at an Internet café in the city of Wuhu, Anhui province.

security precautions. Adobe and security firm McAfee said that they would adapt digital-rights-management software—long used to protect digital music from unauthorized use—to protect corporate documents from unauthorized viewing. Access to documents would be controlled by the level of security classification they carried.

Broadband. Broadband speeds improved worldwide. A university study sponsored by Cisco Systems found that the best-performing broadband connections (based on download and upload speeds and the time it took to get an online connection) were in South Korea, Japan, and Sweden. In rankings of both broadband performance and market penetration, the leaders were South Korea, Japan, and Hong Kong. As part of the U.S. government's economic stimulus plan, the Departments of Commerce and Agriculture were to award \$7.2 billion in broadband stimulus grants beginning in 2009.

Broadband adoption also sparked discussion of fair-use policies. The Obama administration's new FCC chairman, Julius Genachowski, claimed that "net neutrality" would be the federal government's policy toward the Internet. Net neutrality, as advocated by Web companies and consumer groups, would require that all data flowing over the Internet be treated equally. That ran counter to the wishes of some cable-television and telephone companies that wanted to provide different priorities for broadband Internet traffic depending on how much was paid to transport the data. Net neutrality also affected the free flow of information, because it was designed to prevent unpopular views from being blocked by data-transmission companies. Genachowski affirmed that wireless data carriers should be held to the same network-neutrality standards as wired carriers, a situation that did not exist currently.

Another federal agency, the Federal Trade Commission, imposed new regulations on bloggers, those who voiced their opinions online on Web logs. Under updated federal rules covering endorsements and testimonials in advertising, bloggers and others who posted product reviews online would be required to disclose whether they were paid for the reviews in money or free merchandise. The rules were updated because advertisers were believed to be using paid endorsements on blogs and social networks to promote their products under the guise of noncompensated personal recommendations.

Technology. The blurring of the distinction between television and Internet services continued. American viewing of TV shows and movies over the Internet—using a process called streaming video that allowed content to be watched but not downloaded intact—more than doubled from 2008, according to a study by market research firm Ipsos. Germany and Britain planned hybrid TV and Internet services. German public broadcasters planned to let viewers catch up on previous episodes of TV shows via computer Internet connections. The British system would go farther by combining digital TV broadcasts with a companion Internet service that included special TV content.

Renting movies online became an alternative to renting movies on DVD. Netflix, Amazon, and Apple all offered online movie rentals, and Google's YouTube offered some older movies free. Google had experimented with video rentals but stopped offering the service after it bought YouTube.

Cloud computing—providing computing power to customers over the Internet—continued to gain traction in the corporate world, despite some embarrassing setbacks. Cloud computing could be used to develop products on someone else's computers (platform as a service), to access software such as e-mail or databases run on others' computers (software as a service), or to use network equipment or data centres operated by others (infrastructure as a service). Some corporations considered cloud computing to be less expensive and easier to scale up than self-run computing operations.

Cloud computing had its problems, however. When a Microsoft-run remote

server for T-Mobile failed, users of T-Mobile Sidekick phones were cut off from Internet services such as e-mail and Web browsing. When Microsoft restored the server, part of the data—phone numbers, photos, calendars, and other information—was inadvertently corrupted. It was unclear how many of the one million users of Sidekick phones were affected.

Google also had cloud problems when a computer error redirected some of its Web traffic through Asia, creating data congestion that slowed or stopped Google online services such as e-mail, calendars, and office-productivity software for some 14% of its users. The significance of the interrupted Google service was that Google accounted for 5% of all Internet traffic. In a separate incident, Google's Gmail suffered an outage that affected the majority of the service's approximately 146 million worldwide users.

China demanded that all new PCs sold in the country be outfitted with Internet-filtering software preinstalled by computer manufacturers. In the face of computer industry opposition and Chinese citizen protests, however, Chinese officials softened the requirement to apply only to PCs in schools and public places such as Internet cafés. The software, called Green Dam-Youth Escort, was ostensibly developed to block pornography and violence on the Internet in an effort to protect children, but it had the capability to block any content that Chinese officials designated as undesirable. PCs would receive automatic downloads of updated lists of prohibited content, and Chinese hackers reported that the lists included political topics. (STEVE ALEXANDER)

Earth Sciences

Scientists in 2009 developed a **WIRELESS SENSOR NETWORK** to monitor **VOLCANOES**, measured **THERMAL CONDUCTIVITY** in rocks, and launched the **GOES-14 AND NOAA-19 SATELLITES**. One study linked **METEORITE IMPACTS** to the production of early **BIOMOLECULES**, whereas another connected them to the **EXTINCTION OF LARGE MAMMALS**. The **WHITE HOUSE** released a groundbreaking report on **CLIMATE CHANGE**.

GEOLOGY AND GEOCHEMISTRY

The first Epstein Medal for innovation in geochemistry was awarded to John Eiler at the 2009 Goldschmidt Conference in Davos, Switz. This medal celebrates the pioneering research of the late Samuel Epstein, a geochemist perhaps most famous for his calibration of oxygen isotope distributions between carbonates and water, and thus for initiating the field of deriving paleotemperatures in marine sediments and ice cores. These paleotemperature determinations required the estimation of vanished reservoir information such as the oxygen isotopes of the ocean from which marine organisms grew. Eiler, a geologist from the California Institute of Technology, developed an expanded technique that involved the measurement of “carbonate clumped isotopes,” which considered the distribution of oxygen and carbon isotopes among element sites in carbonate minerals. This distribution is temperature-sensitive and independent of the composition of the host medium, such as seawater. Eiler’s acceptance lecture presented new data extending his previous findings that many carbonates and carbonate-bearing minerals follow a single temperature-dependent calibration of the clumped isotope thermometer. He outlined the technique’s applications to a variety of problems involving crustal rocks down to depths of 10 km (about 6 mi), including geotherms (mapped lines of equal temperature within Earth), fault friction, fossil extremophiles, and the genesis of oil, gas, and coal.

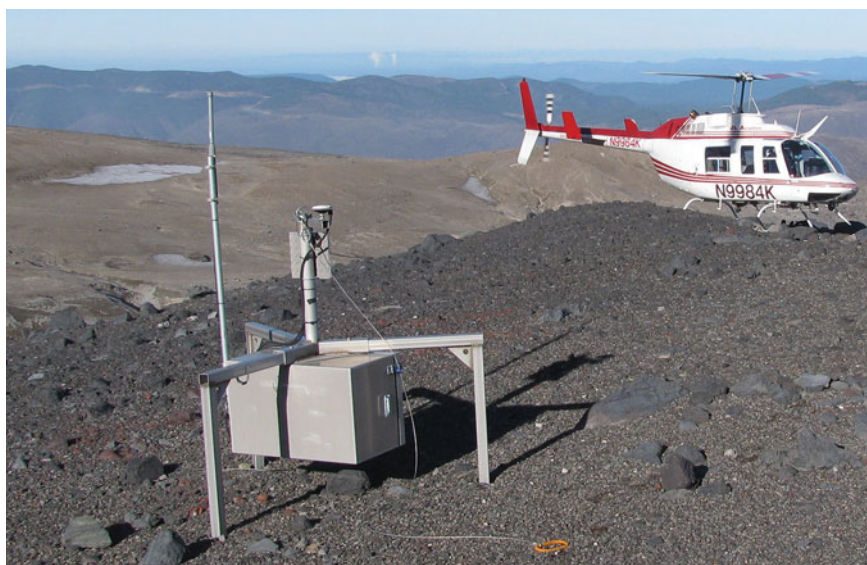
Two papers in 2009 provided geological evidence that could aid in under-

standing the future behaviour of the West Antarctic Ice Sheet (WAIS). For about 30 years, scientists had recognized that this ice sheet was vulnerable to abrupt collapse, which could potentially increase global sea level by up to 7 m (23 ft) and possibly devastate the economies of many megacities. Sediments 600 m (about 2,000 ft) thick in drill cores from the seafloor 850 m (about 2,800 ft) below the floating Ross Ice Shelf revealed the first comprehensive record of the growth and collapse of WAIS during the past five million years. A team of 56 scientists led by sedimentologist Tim Naish of the Antarctic Research Centre in Well-

ton, N.Z., identified 38 sedimentary cycles, each of about 40,000 years’ duration, in good accordance with the same cyclicity recorded in marine-isotope records of global ice volume and mean deep-sea temperatures. A twin paper by earth scientist David Pollard of Pennsylvania State University and Robert M. DeConto of the University of Massachusetts compared the geologic data with a new model designed to simulate the oscillations of the WAIS; the results were in good agreement, which enhanced the prospects for prediction.

Japan’s National Institute for Materials Science (NIMS) continued to explore the geochemical hypothesis put forth by NIMS emeritus fellow Hiro-moto Nakazawa that life on Earth evolved from biomolecules formed by meteorite impacts in early oceans. Recent research about the composition and temperature of Earth’s early atmosphere had refuted the relevance of previous experiments devoted to the generation of organic compounds in gas mixtures that simulate the planet’s early atmosphere. NIMS materials scientist Toshimori Sekine and his colleagues published results of a new approach in 2009. Sekine conducted innovative shock-wave experiments by using a propellant gun that accelerated

A “smart spider” sensor package sits on a deposit of volcanic rock. Delivered by helicopter, this unit was part of a network designed to detect earthquakes, ground deformation, explosions, and large emissions of ash associated with volcanic activity.



US Geological Survey

a stainless-steel disc into a composite sample simulating the components of meteorites, the ocean, and the atmosphere. High-speed impacts generated extremely high pressures and temperatures within the sample for a fraction of a second. Analysis of the shocked samples by chromatography-mass spectrometry established the presence of minute quantities of an amino acid, four types of amines, and six types of carboxylic acid. The experiment confirmed that organic molecules could be generated as proposed by Nakazawa's "big bang" hypothesis for the birth of life.

Meteorites may have been influential in generating life on Earth more than four billion years ago. Since then, however, impacts, such as the one many scientists contend caused the extinction of dinosaurs 65 million years ago, have destroyed life. In 2009 American geoarchaeologist Douglas Kennett of the University of Oregon at Eugene with seven coauthors from several universities published persuasive evidence linking a cosmic impact to megafaunal extinctions and abrupt ecosystem disruptions at the Younger Dryas boundary about 12,900 years ago, a time when Earth was emerging from the last glacial period. The boundary was marked in North America by a widespread layer of black sedimentary rocks covering the bones of many large fauna (including mammoths); such remains were not found above the layer. In addition, the layer contained billions of nanometre-sized diamonds, most of which were encapsulated within carbon spherules. Although some independent experts remained unconvinced that these particles really were diamonds, new evidence indicating that they were shock-induced diamonds appeared definitive. The presence of particulate carbon and grapefruit-sized clusters of soot was consistent with the occurrence of intense wildfires, which were also associated with the asteroid-induced mass extinction of 65 million years ago. These facts supported the conclusion that the Younger Dryas Period began as Earth crossed paths with a swarm of comets.

Ancient sedimentary rocks contain what little evidence there is for the life forms that followed the early synthesis of organic chemicals. In 2009 Nora Noffke of Old Dominion University, Norfolk, Va., supplemented the evidence provided by rare fossil bacteria and stromatolites, which are reeflike

sedimentary structures composed of carbonates precipitated by bacteria. She systematized the criteria for the definition and identification of a distinctive group of textures in sandstones, called "microbially induced sedimentary structures" (MISS), with 17 individual morphologies at scales from 1 mm (0.04 in) to 1 m (about 3 ft). Their formation, established by comparison with the activities of cyanobacteria in modern tidal flats, occurred during periods of calm hydraulic conditions as the bacteria formed an organic meshwork of microbial mat that bound together fine sand grains. MISS were produced by interaction of microbiota with wave and current dynamics, and they suggest the presence of strongly seasonal paleoclimates. Extensive microbial mats grew over large areas of ancient shallow seafloors from at least 3.2 billion years ago until the present, and their fossil remnants promised to supplement the geobiological interpretations from the better-known stromatolites.

The need to monitor active volcanoes in order to provide reliable estimates of renewed activity to ensure safe evacuation procedures was emphasized by the eruption of Mt. St. Helens in 2004, nearly 25 years after the explosive eruptions of 1980. Computer scientist Wen-Zhan Song of Washington State University at Vancouver was the principal investigator for a project funded by NASA that lowered 15 robotic emissaries from a helicopter inside and around the crater of Mt. St. Helens in July 2009. The project (also supported by the Jet Propulsion Laboratory and the U.S. Geological Survey) was expected to provide a blueprint for the installation of sensor networks at other unmonitored active volcanoes. Such a plan could help determine reliable estimates for the evacuations of endangered populations. The battery-operated robots looked like microwave ovens on tripods, and each contained an earthquake-detecting seismometer, a GPS receiver to pinpoint location and ground deformation, an infrared sounder to sense volcanic explosions, and a lightning detector to detect ash-cloud formation. The robots communicated wirelessly with one another and with NASA's Earth Observing Satellites, thus providing a low-cost sensor network that could operate in harsh conditions. Similar sensor webs were also planned for the exploration of other planets with hostile environments.

(PETER J. WYLLIE)

GEOPHYSICS

A damaging earthquake occurred near the Italian village of L'Aquila on April 6, 2009. The earthquake, which had a moment magnitude of 6.3, was felt throughout central Italy, killing nearly 300 persons and leaving more than 40,000 homeless. It was the deadliest Italian earthquake since the 1980 Irpinia event. The main shock was followed by thousands of aftershocks that were detected and located by the Istituto Nazionale di Geofisica e Vulcanologia (INGV), using a portable network of seismometers. The L'Aquila earthquake resulted from normal faulting on the northwest-southeast-trending Paganica Fault. It and several neighbouring faults are related to extensional tectonic forces associated with the opening of the Tyrrhenian Basin to the west.

Earthquakes that occur deeper than about 50 km (30 mi) have long been enigmatic to seismologists. At these depths the lithostatic pressure is large enough to inhibit brittle failure, or rock fracturing. In other words, rock at these and greater depths should undergo ductile, or plastic, flow in response to shear stress, yet earthquakes caused by rock fracturing have been recorded at depths as great as 700 km (435 mi). In January a team of geologists from Norway and Germany led by Torgeir Andersen presented new evidence in favour of a proposed mechanism for generating intermediate-depth earthquakes. They analyzed veins of rock that had been formed by flash heating in a Precambrian terrane in Norway. Known as pseudotachylytes, these rocks often occur near fault zones. In this case, geochemical analysis showed that the pseudotachylytes had initially formed at depths greater than 70 km (44 mi) before being exhumed to the Earth's surface. Using computer modeling, the authors explained their observations by means of a self-localized thermal runaway failure mechanism, a process by which the rocks are softened by released heat. Interestingly, this mechanism does not depend on the existence of free fluid in the pore spaces of rocks and therefore provided a distinct alternative to the dehydration embrittlement hypothesis that was currently favoured as a mechanism for generating intermediate-depth earthquakes.

Scientists from the United States reported the results from a seismic study of a region of the ocean's floor in which "black smokers" vent superheated water

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Anne Hofmeister of Washington University places a sample of granulite into a laser-flash apparatus. Using the laser-flash analysis technique, her research provided insight into how heat behaves as it is conducted through rock.

enriched with dissolved minerals. Discovered in the late 1970s, these features had been extensively studied because they led to distinct biospheres that did not depend on photosynthesis. In 2003 scientists began monitoring the Endeavour segment of the Juan de Fuca Ridge in the Pacific Ocean off the coast of Oregon and Washington with a network of eight seismometers buried just beneath the seafloor. Using the high-fidelity seismic data, the scientists located several thousand small earthquakes that were associated with an axial magma chamber that drives the hydrothermal, or deep-sea, venting in the region. By modeling the seismic waveforms, the researchers were able to deduce the style of faulting responsible for the earthquakes. They concluded that cracking associated with the recharge of the axial magma chamber was the key mechanism for localizing and maintaining black-smoker vent fields over long periods of time.

Anne M. Hofmeister of Washington University in St. Louis, Mo., and her colleagues Alan G. Whittington and Peter I. Nabelek of the University of Missouri in Columbia announced new measurements of the thermal conductivity of rocks, and their findings had profound implications for crustal dynamics. The scientists used a new technique known as laser-flash analysis to determine the time that it took for heat to diffuse from one end of a rock sample to the other. This technique prop-

erly accounts for biases caused by radiative heat loss and allowed for accurate measurement of the drop in conductivity as the sample was heated. The results of these experiments showed that thermal conductivity was reduced by as much as 50% at the base of the crust compared with previous estimates. This in turn implied that the base of the crust was much hotter than previously thought and that the large amounts of granitic magmas observed in hot mountain belts such as the Himalayas could be generated without the radioactive heat production in the lower crust increasing. Instead, heat generated by the localized deformation of the crust may form the magmas. Another implication was that the positive feedback created by temperature-dependent conductivities may have been integral to the differentiation of the Earth into core, mantle, and crust from its original chondritic (meteorite-derived) composition.

Scientists studying Earth's magnetic field reported new constraints on the structure and dynamics of Earth's core. Bruce A. Buffett of the University of California, Berkeley, Jon Mound of the University of Leeds, and Andrew Jackson of the Institute for Geophysics in Zürich analyzed recently discovered magnetic field fluctuations that have periods on the order of decades. Although the magnetic field fluctuations were observed at the Earth's surface, they reflected processes of fluid dy-

namics that took place in Earth's liquid-iron outer core. The fluctuations were created by torsional oscillations that occurred with a cylindrical geometry. In contrast to the elastic restoring force responsible for seismic waves from earthquakes, a magnetic restoring force creates these hydromagnetic waves. Nevertheless, using methods that seismologists developed to study seismic waves, the scientists modeled the hydromagnetic waves to constrain the structure of the magnetic field in the outer core and the rigidity of the solid inner core. The "core-quakes" that generate the hydromagnetic waves appeared to originate near the equator of the inner core, but their precise source mechanism remained a mystery.

(KEITH D. KOPER)

METEOROLOGY AND CLIMATE

The first stage of the largest and most ambitious tornado field experiment in history ran from May 10 to June 13, 2009, across the U.S. Great Plains. VORTEX2 (Verification of the Origins of Rotation in Tornadoes Experiment 2) involved a roving armada of more than 50 scientists and 40 research vehicles, which included 10 mobile radars. The collaborative project was designed to explore the origins, structure, and evolution of tornadoes by collecting data from portable instruments placed near or inside the violent storms. Understanding how tornadoes form is expected to aid the ongoing improvement of severe weather warnings.

The original VORTEX program operated in 1994–95 in the Great Plains and documented the entire life cycle of a tornado for the first time in history. Applications of the findings from this project contributed to improvements in National Weather Service severe weather warning statistics. VORTEX2 was a \$11.9 million program funded by the National Oceanic and Atmospheric Administration (NOAA) and the National Science Foundation (NSF), 10 universities, and three nonprofit organizations. NOAA's National Severe Storms Laboratory (NSSL) provided leadership and equipment for the program, which was scheduled to operate its second and final field phase from May 1 to June 15, 2010.

Scientists hoped to use the VORTEX2 program to study five tornadic storms in 2009, but the year was a historically quiet one, especially during May. Early June, however, saw a marked increase in severe weather, and several VORTEX2

participants collected data on a significant tornado tracking across southeastern Wyoming on June 5. Researchers believed that this tornado became the best-documented tornado in history, with data collection beginning before the tornado developed and continuing through its lifetime. Mobile Doppler radars estimated winds of the EF2 tornado at about 210 km (130 mi) per hour. In addition to collecting data on the Wyoming tornado, the scientists investigated several supercell thunderstorms that did not spawn tornadoes. Collecting such data was important, because it could help researchers understand why tornadoes develop in some cases and not in others.

In other meteorological developments, the National Aeronautics and Space Administration (NASA) launched NOAA's latest geostationary satellite of the Geostationary Operational Environmental Satellites (GOES) project. GOES-O blasted off on June 27. Renamed GOES-14, it reached its final position in orbit on July 8. Hovering about 36,000 km (22,300 mi) above Earth, GOES-14 carried enhanced instrumentation to capture high-definition images of severe weather patterns and atmospheric conditions. Such images could help meteorologists develop more accurate forecasts and warnings for hurricanes, tornadoes, floods, and disruptive solar disturbances. GOES-14 joined GOES-13 to serve as a backup satellite until one of the operational

satellites (GOES-11 and GOES-12) experiences trouble.

Launched in February, NOAA-19, a polar-orbiting satellite, was part of the Polar Operational Environmental Satellites (POES) project. It orbits the planet at a height of about 870 km (540 mi), much lower than the GOES satellites. The POES project was designed to detect more subtle changes in atmospheric and oceanic conditions, and its satellites could be used for longer-range forecasts as well as research on climate change.

Regarding the impacts of climate change, on June 16 the White House released a landmark study on the effects of climate change on the United States. The 190-page report, entitled "Global Climate Change Impacts in the United States," asserted that climatic changes resulting from the increase in heat-trapping greenhouse gases were already occurring. The report was commissioned in 2007 and was written by a team of 31 climate scientists from the U.S. Global Change Research Program; it outlined climate-related trends and projections for the country, as well as for specific regions.

The report stated that climatic changes already under way in the United States were forecast to increase. Some of the predicted effects of global warming included rising temperature and sea level, retreating glaciers, longer growing seasons, and earlier snowmelt. The report also affirmed that the effects

of climate change would differ by region. For example, water stress from reduced mountain snowpack would continue to intensify, especially in the West and Alaska. Although agriculture was one of the sectors most adaptable to climate change, the report maintained that growing crops and raising livestock would become more difficult. Among other predictions, the report also anticipated that land along the Atlantic and Gulf coasts, Pacific Islands, and parts of Alaska would be at greater risk of sea-level rise and storm surge and that climatic changes would exacerbate other environmental problems and social stresses. Echoing other publications, the study noted that the pace of climate change would ultimately depend on levels of current and future greenhouse gases and particulates released into Earth's atmosphere. To solve this problem, many scientists called for a reduction in greenhouse gas emissions.

From August 31 to September 4, the World Climate Conference-3 (WCC-3) brought more than 2,000 climate scientists and decision makers from more than 150 countries to Geneva to establish a Global Framework for Climate Services. The WCC-3 summary reported that the goal of the conference, which was convened by the World Meteorological Organization (WMO) and its partners, was to ensure that every country was equipped to access and apply the array of climate prediction and information services made possible by recent developments in climate science and technology. The conference concluded that such capabilities fell far short of meeting present and future needs, particularly in less-developed countries.

In November released e-mails hacked from the Climate Research Unit at the University of East Anglia raised questions about the possible manipulation of the temperature related to global warming. Researchers countered stating that the e-mails were taken out of context.

On December 19, the Copenhagen United Nations Climate Change Conference ended with a nonbinding agreement to cap an increase in average global temperatures to below 2 °C (3.6 °F) to avoid the worst effects of climate change. To achieve this goal, industrialized countries would commit to implement economy-wide emissions targets. Developed countries agreed to support a goal of mobilizing \$100 billion annually by 2020 to address the needs of less-developed countries.

(DOUGLAS LE COMTE)

A National Severe Storms Laboratory Field Command Vehicle helps track a nearby tornado as part of the Verification of the Origins of Rotation in Tornadoes Experiment 2 (VORTEX2) in Goshen county, Wyo. The project was designed to examine the evolution of tornadoes in an effort to improve the ability of the National Weather Service to predict severity of these phenomena.



Mike Coniglio—National Severe Storms Laboratory/NOAA

Education

SAFETY and **STANDARDIZATION** topped international concerns in education in 2009. In addition, American students **LAGGED** behind their Asian counterparts **ACADEMICALLY**, India began offering **FREE** elementary **EDUCATION**, China focused on rebuilding **EARTHQUAKE-RAVAGED** schools, and **H1N1 FLU** closed numerous schools worldwide.

PRIMARY AND SECONDARY EDUCATION

Repercussions were felt in 2009 when the results of the 2007 Trends in Math and Science Study (TIMSS)—assessments given to fourth- and eighth-grade students in 59 countries and 8 other jurisdictions—confirmed that students in Asia were at the top of the world in math and science achievement. The assessments, reported in late December 2008, showed that students in Hong Kong and Singapore were the top-performing fourth-grade math students in the world. Students in Taiwan, South Korea, and Singapore were the top eighth-grade math students, followed by students in Hong Kong and Japan. In science, students in Singapore were the top fourth-grade scorers, followed by Taiwan and Hong Kong. Students in Singapore and Taiwan had the highest average science achievement among eighth graders.

The 2007 TIMSS was the fourth international assessment of math and science made since 1995, and it was eagerly studied around the world as a way to gauge what could be expected of students and how to define “world-class standards.” This assessment, the largest gauge of student achievement in the world, was a project of the International Association for the Evaluation of Educational Achievement (IEA), headquartered in Amsterdam, and was administered by the TIMSS & the PIRLS (Progress in International Reading Literacy Study) International Study Center at Boston College.

The results were considered somewhat disheartening in the United States, which once again found itself trailing much smaller and poorer countries,

such as Latvia and Kazakhstan, though it was ranked above the average world performance. Interestingly, fourth and eighth graders in Massachusetts, which was one of only two states that participated in TIMSS as a separate jurisdiction, performed at levels comparable to students in Japan, Taiwan, and Hong Kong. The other state, Minnesota, also performed above the U.S. average.

The TIMSS results helped to spur a new round of American policy makers, including the newly elected U.S. president, Barack Obama, to call for American schools to adopt world-class standards. U.S. Secretary of Education Arne Duncan, the former chief executive officer of Chicago Public Schools, made the establishment of world-class standards and assessments a hallmark of the \$4.35 billion “Race to the Top” ini-

tiative that Obama established as a one-time fund to spur reform. States were encouraged to apply for Race to the Top grants if they aggressively pursued reform in accordance with the American Recovery and Reinvestment Act (ARRA) of 2009. The ARRA pumped money into the economy to stimulate recovery after the near collapse in 2008 of the financial system, which caused a deep recession that threatened to cut funds to schools across the country and severely cut education budgets in some states, notably California. Secretary Duncan urged states and schools “to take advantage of these short-term stimulus funds to invest in strategies that will drive improvements for years to come.”

In order to be eligible for Race to the Top money, states had to affirm that they were working to develop world-class standards and assessments, introduce data systems that would be able to track the progress of individual students and link those students to their teachers, allow the establishment of charter schools, and rehabilitate the country's 5,000 lowest-performing schools. Those were the schools that most observers agreed had been virtually untouched by the reforms ushered in by the 2001 revision and reauthorization of the Elementary and Secondary Education Act (ESEA, 1965) as the No Child Left Behind Act (NCLB). NCLB required that

Five students share a single textbook at a primary school in Harare, Zimb., one of many state schools suffering from severe shortages of educational materials.



Jekesai Njikizana—AFP/Getty Images

all states have standards, assessments, and a transparent reporting system with the aim of increasing student performance via increased accountability for schools, school districts, and states. Although the results of the long-term National Assessment of Educational Progress (also known as the Nation's Report Card), released in April 2009, showed that there had been considerable progress in reading and math for younger students as well as some narrowing of achievement gaps between different groups of students, the relative stagnation of state-by-state math scores on what is known as the "main NAEP," released in October, and the persistence of low-performing schools meant that educators and policy makers continued to search for new ways to spur improvement. Although there had been some discussion of reworking the federal ESEA legislation in 2009, the illness and death of Sen. Edward Kennedy (*see* OBITUARIES), one of the coauthors of the 2001 authorization, was one of many factors that pushed back the legislation to the 2010 legislative schedule.

While the United States struggled to provide its students with a world-class education, many countries still struggled to provide students with any education at all. UNICEF estimated in January that 101 million children—53 million girls and 48 million boys—of primary-school age had not attended school in 2007. Sub-Saharan Africa and South Asia were the regions with the most children out of school.

Following the near collapse of Zimbabwe's schools in 2008, UNICEF announced in September one of the biggest donor programs in five years, stating that Australia, New Zealand, and European countries had donated \$70 million to fund a program to get Zimbabwean students back in school and to provide them with textbooks. As schools opened in 2009, it was estimated that there was only about one textbook for every 10 students in Zimbabwe.

By far the country with the most children chronically out of school was India. A UNESCO 2009 report estimated that 9.6 million boys and 11 million girls in India did not attend school in 2007. Recognizing the scope of the problem, India's parliament passed and the president signed into law the previously controversial Right of Children to Free and Compulsory Education Act, 2009, which guaranteed all children between the ages of 6 and 14 the right to an elementary-school education with no fees. This specifically included children with dis-

abilities and older children who should have received such an education at a younger age. Indian policy makers continued to wrestle with the practicalities of how to make free education available to all children, particularly in rural areas, and agreed to a national-curriculum framework and appropriate training and education for teachers. They also established a higher-education commission to tackle issues of access and quality at the higher-education level.

Schools—particularly those serving girls—continued to be under siege from extremists claiming that Islamic law prohibited girls from being educated. In one particularly vicious attack in July in Afghanistan, a truck bomb killed 25 people, including 13 children on their way to school. By July 2009 it was estimated that more than 640 schools in Afghanistan and more than 350 in Pakistan had been bombed, burned, or shut down by extremists associated with the Taliban and al-Qaeda. Dexter Filkins of the *New York Times* chronicled an acid attack on schoolgirls by men on motorcycles that left one girl's face badly scarred. The story prompted readers to send donations, which Filkins used to buy a school bus to help protect the girls from further attacks. Of Shamsia Husseini, the girl scarred with acid, Filkins wrote: "My parents told me to keep coming to school even if I am killed," Shamsia said. She exhibited a perfect grasp of the situation, both hers and her country's: "The people who did this to me don't want women to be educated. They want us to be stupid things."

In Egypt top Muslim clerics and governmental officials worked to ban in schools the *niqab*—a face veil with only a narrow opening for the eyes that was often worn by women—which the sheikh of al-Azhar, Muhammad Sayyid Tantawi, the nation's top cleric, declared had nothing to do with Islam and was only a custom. There were reports that he planned to bar female students who wore face veils from entering the schools of al-Azhar, Sunni Islam's premier institute of learning.

China continued to deal with the aftermath of the devastating 2008 earthquakes that had destroyed or damaged more than 12,000 schools, leaving more than 5,000 students dead or missing and more than 500 students disabled. In the aftermath it became clear that many schools had been shoddily built in the 1990s following the extension of compulsory education. The central government set aside about \$1.2 billion,

Shah Marai—AFP/Getty Images



An Afghan woman visits Shamsia, who was a victim of an acid attack on schoolgirls by Islamist extremists in Kandahar, Afg., as she recovers from facial injuries in the hospital on Nov. 15, 2008.

according to *China Daily*, to shore up poorly constructed schools and, the newspaper reported, "provincial and city leaders have... been warned of the harsh consequences they face if any incident involving unsafe school structures occurs."

Many countries, particularly Mexico and the United States, struggled with the effects of the pandemic H1N1 flu (*see* Special Report on page 194), which caused the closure of many schools toward the end of the 2008–09 school year and threatened many schools in the fall of 2009. Schools in the United States were instructed to prepare materials for students to continue their lessons in the event that the schools had to close owing to illnesses, and trials for an H1N1 vaccine were quickly put into place in order to make vaccines available in October. Although 11 million doses were available in October, most doses were not available until later in the year.

The World Health Organization (WHO) identified schools as a key link in the spread of pandemics and issued guidelines urging schools to stock soap and other hand-washing supplies and encouraging students and staff to stay home if they felt sick. WHO stopped short of urging schools to close, however, noting that economists had estimated that such closures could result

in the need for as much as 16% of the workforce to stay home to take care of schoolchildren. Because this figure included many doctors and nurses with school-age children, WHO found the decision to close schools under these circumstances difficult. At the beginning of the 2009 school year, colleges and universities in the United States reported that hundreds of students had fallen ill with H1N1 flu. By December 26, it was reported that nearly 1,700 deaths had occurred in the United States. Public health officials said that figure was comparable to the usual number of deaths from the common seasonal flu; however, the H1N1 flu victims were more likely to be young and healthy.

HIGHER EDUCATION

The 2009 Condition of Education, produced by the U.S. Department of Education, reported that higher-education enrollment grew sharply from 2000–07, with total undergraduate enrollment in degree-granting postsecondary institutions increasing from 13.2 million in 2000 to 15.6 million in 2007. This compares with 7.4 million in 1970. As schools opened in the fall of 2009, however, there was widespread concern that the cost of college might cause a decline in enrollment, particularly since the near collapse of the financial system the previous year had caused many private college and university endowments to drop. In addition, cuts in state budgets meant that public colleges and universities cut programs and increased tuitions.

At the same time, many public-university systems began addressing the disparity in graduation rates among students. African American students were found to attain a baccalaureate degree at about half the rate of white students, and Latino students only at about one-third the rate. More than 20 university systems, including California State University, the University System of Maryland, and the State University of New York, pledged to halve the gap in graduation rates by 2013.

U.S. higher-education institutions continued to be a draw for international students, according to the Institute of International Education's report "Open Doors on International Educational Exchange," issued late in 2008. Almost 624,000 international students enrolled in the 2007–08 school year, a 7% increase over the previous year and an indicator that the difficulties of ob-



Facilities of Texas A&M University at the Qatar Foundation's Education City in Doha, Qatar, which housed branch campuses for six American universities.

taining student visas after the terrorist attacks of Sept. 11, 2001, had eased. The majority of international students hailed from India, China, South Korea, Japan, and Canada. This increase was matched by a sharp increase in students from the United States attending institutions abroad, with the United Kingdom, Italy, Spain, France, and China being the most popular destinations for American students.

Meanwhile, in the Middle East, a major effort to establish high-quality higher education continued with the September opening in Saudi Arabia of the King Abdullah University of Science and Technology, offering nine master's and doctoral programs in math, engineering, computer science, and bioscience to about 400 students. In establishing the university, a sprawling campus along the Red Sea, King 'Abd Allah said that he hoped it would "be a beacon of hope and reconciliation and will serve the people of the Kingdom and benefit all the peoples of the world." It was charged with developing the research that would solve problems related to energy production and drew considerable criticism from within Saudi Arabia because women on campus were permitted to drive automobiles and mingle freely with men and were not required to wear veils.

Qatar continued with its own ambitions to reestablish the Arab world as a seat of knowledge development. Sheikh 'Abd Allah ibn 'Ali Al Thani, vice president of education at the Qatar Foundation for education, science, and community development, said that "the leadership is using the country's gas

revenues to equip its people for the challenges of the 21st century." To this end the Qatar Foundation established Education City, an initiative that since 1998 had built and housed branch campuses in Doha for six American universities—Carnegie Mellon, Cornell, Northwestern, Texas A&M, Virginia Commonwealth, the first school at Education City, and Georgetown University's School of Foreign Service—as well as many other educational, technological, and technical institutions. By 2009 some 1,200 students were enrolled in these institutions, and the foundation was in discussion with Imperial College London to establish a branch campus at Education City within a few years. In March the Qatar Foundation also launched the Qatar Science & Technology Park (QSTP) for technological research and development.

International efforts toward standardization in postsecondary education continued in 2009 as part of the Bologna Process, which began as an attempt to create a way for European countries to recognize credits and degrees among European universities but had since grown to become an attempt for worldwide cooperation in higher education. In April a Bologna Policy Forum included not only the 46 participating Bologna Process countries but also many others, including China, Egypt, Israel, Japan, Tunisia, and the United States. The forum addressed such issues as the universal recognition of teacher qualifications; teacher, researcher, and student exchanges; and measures to ensure quality assurance.

(KARIN CHENOWETH)

The Environment

Less-developed and industrialized countries sparred over **EMISSIONS TARGETS** and financial assistance tied to **CLIMATE CHANGE**. Surveys of **EUROPEAN WADING BIRDS** showed that 50% are in decline; **AFGHANISTAN** established its first **NATIONAL PARK**; and the first **FIJI PETRELS** were rediscovered after 25 years.

INTERNATIONAL ACTIVITIES

The decision by EU governments to phase out all incandescent lightbulbs and low-efficiency types of halogen bulbs by 2012 was confirmed on March 18, 2009. From September 1 it became illegal in the EU to manufacture or import 100-W incandescent lightbulbs and all frosted incandescent lightbulbs.

On February 2 a directive came into force under which carbon emissions from all flights arriving at and departing from EU airports would be capped in 2012 at 97% of their 2004–06 levels and at 95% of those levels after 2012. The EU's carbon emissions trading scheme was challenged when on September 23 the European Court of First Instance (part of the European Court of Justice) ruled that the power to set car-

bon emissions limits rested with member states rather than the European Commission (EC). The court also ruled that the EC had exceeded its powers by reducing the caps for Estonia and Poland to levels lower than those the two governments had requested in their National Allocation Plans (NAPs), thereby imposing too heavy a burden on their industries. Six other member states had similar cases before the court.

On January 13 the European Parliament approved a new regime for granting market approval to pesticides and consented to a draft directive guiding their sustainable use. Pesticide application near schools, parks, or hospitals would be forbidden or severely restricted; aerial crop-spraying would be banned; and buffer zones would have to be established to protect aquatic en-

vironments and drinking water. About 22 pesticides would be removed altogether from the EU market—approximately 25% of all pesticides in use.

NATIONAL DEVELOPMENTS

Australia. In December 2008 Prime Minister Kevin Rudd announced a plan to combat climate change under which his country would reduce emissions by between 5% and 15% below 2000 levels by 2020 and would introduce a carbon-trading scheme in 2010. The scheme was strongly criticized by the energy-intensive industries, which claimed that it would reduce their competitiveness, but the climate campaigners and the Green Party thought that the targets were inadequate. In early May Rudd announced that the introduction of the trading scheme would be postponed for one year owing to the poor economic climate; however, the delayed scheme would aim to reduce emissions by up to 25% of 2000 levels. On August 13 the Senate defeated the plan by only 12 votes. The government returned the package to the Senate for a second time, but it was rejected again, in a vote of 41–33, on December 2.

China. In June it was reported that the Environment Ministry had halted construction on two dams in Yunnan province on the Jinsha River, a tributary of the Yangtze River. The projects had commenced without environmental assessments or ministry approval.

In early August 33 persons were admitted to hospitals in Hunan province and hundreds of others were found to have high levels of cadmium in their bodies following a series of leaks from the Changsha Xianghe chemical plant, a producer of zinc sulfate, in the city of Liuyang. One person had died in May and another in June. In the nearby town of Zhentou on July 30, approximately 1,000 people staged protests against the polluting chemical plant, and during the following weekend medical tests were carried out on nearly 3,000 Zhentou residents. The plant was closed in August following the demonstrations. The authorities promised to pay compensation for tainted farm produce and livestock that needed to be destroyed.

It was also reported in August that two environment agency officials in Wugang

On the shelf of an electrical supply store in central London, a sign warns of the approaching ban of incandescent lightbulbs. The ban went into effect across the European Union on September 1.



Leon Neal—AFP/Getty Images



Adult patients and children convalesce in a hospital after having become poisoned by emissions released from a lead smelter. The incident took place in August near the city of Xi'an in south central Shaanxi province, China.

City, Hunan province, were being investigated for suspected dereliction of duty over an incident in which 1,354 children suffered lead poisoning, evidently from a metal smelter. Two executives of the Wugang Manganese Smelting Plant had earlier been arrested and the smelter shut down. Earlier in August another smelter in Shaanxi province had been closed after more than 850 children fell sick with lead poisoning. On August 27 the Standing Committee of the National People's Congress announced its approval of a resolution calling for new laws to target energy savings and emissions reductions.

United Kingdom. On July 15 the government published a white paper outlining its plan to reduce U.K. greenhouse gas emissions by generating 40% of electricity from low-carbon sources by 2020. Renewables would account for 30% of total generating capacity, and nuclear and clean coal would make up the remaining 10%.

United States. In March John Holdren was confirmed by the Senate to be Pres. Barack Obama's science adviser and director of the White House Office of Science and Technology Policy. Holdren, originally a Harvard physicist, was the Teresa and John Heinz Professor of Environmental Policy at the John F. Kennedy School of Government at Harvard University and director of the Woods Hole Research Center in Falmouth, Mass.

In April the Environmental Protection Agency (EPA) said that it planned to declare that carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride

emissions contributed to air pollution that endangered public health and welfare. On June 23 the U.S. Chamber of Commerce filed a petition for a formal hearing on the decision. It filed a 21-page petition on August 25 asking for the EPA and environmental and business groups to undertake a credible weighing of the scientific evidence that global warming endangered human health. Not all members of the Chamber of Commerce agreed. Pacific Gas and Electric Co., Exelon, and the Public Service Co. of New Mexico resigned from the chamber in protest.

On June 26 the House of Representatives passed the American Clean Energy and Security Act by a margin of seven votes. The law, sponsored by Henry Waxman, a Democratic representative from California, and Edward Markey, a Democratic representative from Massachusetts, committed the U.S. to adopting clean energy sources and reducing emissions of greenhouse gases to 17% below 2005 levels by 2020 and to 83% below 2005 levels by 2050 through a cap-and-trade mechanism. The law would also require utilities to generate 20% of electricity from renewables by 2020, although they could meet one-quarter of the target through improved energy efficiency. Democratic Senators John Kerry (Massachusetts) and Barbara Boxer (California) drafted a Senate bill that was published at the end of September. It set a target of reducing carbon emissions by 20% below the 2005 level by 2020. The act allowed the U.S. to impose penalties on imports from countries that did not take steps to reduce emissions.

ENVIRONMENTAL ISSUES

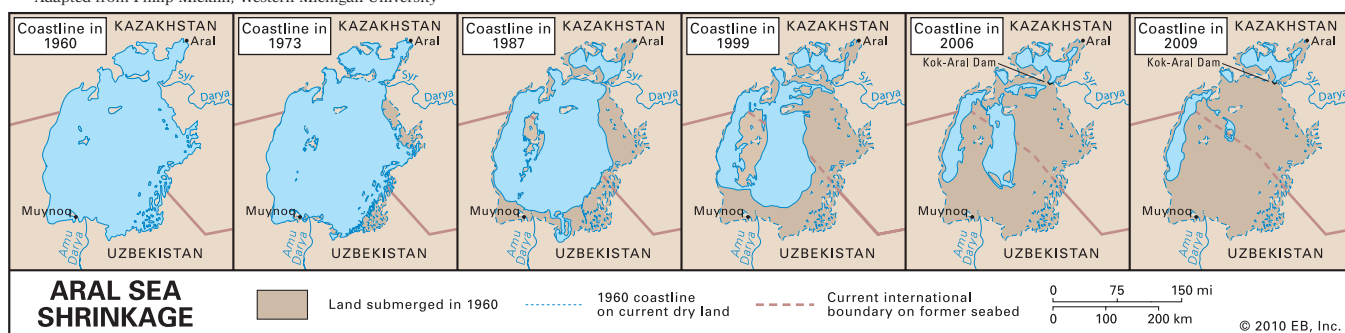
Climate Change. The first formal round of the UN Framework Convention on Climate Change (UNFCCC) discussions to prepare for the 15th Conference of the Parties in Copenhagen took place in Bonn, Ger., from March 29 to April 8, 2009. Delegates from 175 countries attended the discussions. LDCs called on industrialized countries to reduce their greenhouse gas emissions substantially and commit 0.5–2% of their GDP to fund mitigation and adaptation measures in LDCs. On March 31 Su Wei, leader of the Chinese delegation, said that success at the December Copenhagen meeting depended on whether developed countries were prepared to provide substantial funds and transfer climate-friendly technologies to LDCs.

A second round of talks was held in Bonn in June. India, supported by about half of the Group of 77 LDCs, proposed an amendment to the Kyoto Protocol that would require developed countries to reduce their emissions to 40% below 1990 levels by 2020, with indicative targets for each developed country. China and India, supported by the Group of 77, defeated an attempt by industrialized countries to offer curbed reductions while seeking solid commitments from LDCs. Subsequent rounds of talks were held in Bonn in August, in Bangkok in September and October, and in Barcelona in November; little progress was made, however, toward reconciling the differences between industrialized countries and LDCs.

The secretary-general's Summit on Climate Change took place in September at the UN in New York City. More than 100 government leaders attended and recorded their firm political will to reach a comprehensive agreement at Copenhagen, although they set no targets or deadlines. Chinese Pres. Hu Jintao said that his country would try to limit its emissions by a notable margin by 2020 by improving energy efficiency, but he set no target.

The first of three meetings of the Major Economies Forum on Energy and Climate, made up of the 17 countries with the largest greenhouse gas emissions, was held in Washington, D.C., on April 27–28. Delegates agreed that the meeting had been constructive but made no specific recommendations. The second meeting took place in July at L'Aquila, Italy, alongside a Group of Eight (G8) summit. On June 30, ahead of the meeting, India's environment and forests minister, Jairam Ramesh,

Adapted from Philip Micklin, Western Michigan University



Since 1960 the areal extent of the Aral Sea, once the world's fourth largest lake, has shrunk by over 74%. The shrinkage of the lake was caused by irrigation projects along the valleys of two of the lake's tributaries. Over the course of 50 years, these projects caused the loss of more than 90% of the lake's volume.

relied his country's determination not to commit to making any quantifiable reductions in greenhouse gases. Delegates agreed that the global average temperature should not be permitted to rise by more than 2 °C (3.6 °F), and G8 leaders pledged to reduce their greenhouse gas emissions by 80% by 2050. Russia immediately rejected that target. Arkady Dvorkovich, an economic aide accompanying Russian Pres. Dmitry Medvedev to the summit, said that for Russia the figure "is unacceptable and likely unattainable." He also stressed that Russia would not threaten its economic growth by agreeing to emissions cuts. The U.S. and the EU also urged LDCs to commit to a 50% cut in emissions by 2050, but the LDCs rejected this proposal. At the third meeting, held in Washington, D.C., in September, the U.S. and other industrialized countries said that they wished to abandon the Kyoto Protocol in favour of an Australian proposal. This proposal, which was strongly opposed by India, demanded that all countries, regardless of their level of development, commit themselves to timetables for reducing emissions by stated amounts and that reductions begin by 2020.

On June 10 Japanese Prime Minister Taro Aso announced that by 2020 Japan would cut emissions to 15% below 2005 levels, amounting to a reduction to 8% below 1990 levels. Following the August election victory of the Democratic Party of Japan, the new prime minister, Yukio Hatoyama, said that Japan would instead aim for a 25% reduction below 1990 levels by 2020, provided there was an international agreement that included India and China.

During the year several cost estimates for adapting to climate change were published. In 2007 the UNFCCC had calculated an annual cost of \$49 billion to \$171 billion. A study published on

Aug. 27, 2009, by the London-based International Institute for Environment and Development and the Grantham Institute for Climate Change at Imperial College London estimated that when the effects on various key economic sectors were taken into account, the total might be two to three times higher. On September 1 a UN report from the World Economic and Social Survey said LDCs would need \$500 billion–\$600 billion annually from industrialized countries, or about 1% of their GDP. In contrast, the preliminary findings from a World Bank study suggested that the cost to the LDCs might amount to \$75 billion–\$100 billion annually from 2010. On September 2 the Department of Environmental Economics and Management at Renmin (People's) University of China in Beijing reported that the cost of reducing China's emissions would reach about \$438 billion per year within 20 years. The report also said that developed countries would have to bear much of that cost.

A significant number of scientists expressed their disagreement with the appraisal of global climate given by the Intergovernmental Panel on Climate Change (IPCC). On Dec. 11, 2008, during the Poznan meeting, the U.S. Senate Committee on Environment and Public Works published a minority report in which more than 650 scientists disagreed with the IPCC assessment of climate change. On Feb. 12, 2009, the Committee of Geological Sciences of the Polish Academy of Sciences issued a statement saying that recent global climate change was part of an entirely natural climate cycle. They agreed, however, that the increase in the atmospheric carbon dioxide concentrations was partly due to human activity and that these emissions should be reduced while sustainable economic

progress is maintained. The 2009 International Conference on Climate Change, sponsored by the Heartland Institute and occurring March 8–10 in New York City, was attended by about 800 scientists, economists, legislators, policy activists, and journalists. Keynote speakers included Vaclav Klaus, president of the Czech Republic and of the EU, American astronaut Jack Schmitt, and Arthur Robinson, curator of a petition rejecting the assertion that global warming is caused primarily by human activity and constitutes a crisis. The petition was signed by more than 34,000 American scientists, more than 10,000 of whom had doctorate degrees.

In late November and early December, news organizations reported that the Climatic Research Unit (CRU) of the University of East Anglia (Norwich, Eng.) suffered an electronic break-in that resulted in the release of numerous private e-mail messages related to global warming research. Many skeptics of human-induced climate change maintained that some messages provided evidence that climate data were deliberately manipulated and exaggerated and dissenting research suppressed to serve an alarmist agenda. Many climate scientists answered these allegations by stating that the messages were taken out of context.

On December 7 the 15th Conference of the Parties was convened in Copenhagen. The goal of the conference was to develop a binding global agreement on greenhouse gas emissions that would replace the Kyoto Protocol. What was produced after two weeks of frenetic and heated negotiation was the recognition by the 193 attending countries of a nonbinding agreement to keep the rise in global average temperatures under 2 °C (3.6 °F). Attendees also agreed to provide \$30 billion in

short-term aid to less-developed countries until 2012.

Marine Pollution. In October 2008 a meeting of the International Maritime Organization (IMO) in London formally approved amendments to the UN MARPOL convention on ship-source pollution, confirming new global limits on the sulfur content of marine fuels. Sulfur in fuels would be reduced from 4.5% to 3.5% in 2012 and to 0.5% in 2020, subject to a review in 2018. The revised limits would come into force in July 2010. The meeting also produced tougher emission standards for nitrogen oxides for new marine engines and the final draft text of a new IMO convention on ship recycling. Under the convention, ships would have to hold inventories of all hazardous materials on board, and certain substances would be banned outright.

A HELCOM report published on August 24 stated that 210 illegal discharges of oil were detected in 2008, a 10% decrease from 2007. The improvement was attributed to increased surveillance and tighter rules.

Toxic Waste. It was reported in July that Brazilian police were investigating the discovery of 99 containers of hazardous waste in the port of Santos, near São Paulo, and at two other ports in the state of Rio Grande do Sul. The containers held approximately 1,400 tons of dangerous material from the U.K., but they were labeled as recyclable plastic. The Brazilian authorities named two Swindon, Eng.-based companies, Worldwide Biorecyclables and U.K. Multiplas Recycling, as the sources of the waste. U.K. Environment Agency officials arrested three men, who were later released on bail. Brazil formally accused the U.K. of having breached the international law forbidding the export of toxic materials. Liz Parkes, head of waste at the U.K. Environment Agency, said that the U.K. authorities were working with the Brazilians to arrange the return of the material. It was shipped back to the U.K. in August.

In September a report unveiled that Italian authorities were investigating a claim made by a member of the Calabrian mafia that the mafia had deliberately sunk ships carrying toxic wastes to evade laws on waste disposal. One wreck was located 30 km (about 19 mi) southwest of Italy, and images from a robot camera revealed yellow barrels with toxic warning labels.

At the end of the trial over the 2006 dumping of toxic wastes in Abidjan,

Côte d'Ivoire, Nigerian Salomon Ugborugbo, head of Tommy, a local company contracted to handle the waste, was sentenced to 20 years' imprisonment. Esoin Kouao, the shipping agent from Abidjan who recommended Tommy to Trafigura, the Dutch-Swiss commodities company that chartered *Probo Koala*, the ship carrying the waste, was sentenced to five years in prison. Trafigura and the captain of the *Probo Koala* were also facing criminal charges in The Netherlands for having illegally exported the waste. In September Trafigura agreed to pay more than \$46 million in compensation to people made ill by the waste, and each of the 30,000 victims would receive \$1,546. This payment was in addition to the \$200 million Trafigura had paid in 2007 to the Ivorian government.

Awards. The Asahi Glass Foundation awarded its 2009 Blue Planet Prize to Hirofumi Uzawa of Japan and Nicholas Stern of the U.K. Uzawa was honoured for his advocacy of the concept of social common capital as a theoretical framework for confronting environmental issues. Lord Stern was recognized for his report "The Economics of Climate Change," which he prepared for the U.K. government.

The seven 2009 Goldman Environmental Prizes were presented in April at a ceremony in San Francisco. Marc Ona Essangui of Gabon halted large-

scale deforestation and mining in the Congo basin rainforest; Syeda Rizwana Hasan of Bangladesh won legal battles to regulate the ship-breaking industry; Olga Speranskaya of Russia helped identify toxic stockpiles in the former U.S.S.R.; Yuyun Ismawati of Indonesia helped poor urban communities develop sustainable waste-management schemes; Maria Gunnoe of the U.S. halted environmentally damaging mountaintop mining in Appalachia; and Wanze Eduards and Hugo Jabini of Suriname shared the prize for helping tribal peoples secure the right to protect their lands. (MICAEL ALLABY)

WILDLIFE CONSERVATION

The intricate relationships between biodiversity conservation, ecosystem services, human livelihoods, and sustainable—or unsustainable—exploitation of wild resources were highlighted in the news in 2009. Perhaps no event was more visceral than a series of bushfires that began on February 7 in the Australian state of Victoria. The fires, thought to be deliberate acts of arson, were amplified by dry conditions of a seven-year drought to become the worst in Australia's history. They took a devastating toll on local wildlife and killed 173 people. (See Sidebar on page 367.)

A warning was issued in February through an assessment of the vulnera-

A koala receives a drink from Country Fire Authority firefighter David Tree amid the wildfires that ravaged Victoria, Australia, in February. The burning of more than 1,500 sq mi (3,900 sq km) of drought-affected land was thought to be the result of arson.



Mark Pardew/AP

bility of 132 national economies to the effects of climate change on their fisheries. Fourteen of the 20 most-at-risk countries were in Africa, along with Peru, Colombia, Bangladesh, Cambodia, Pakistan, and Yemen. The vulnerability indicator for each country was influenced by the results of predicted warming models, the importance of fisheries to economies and diets, and the country's limited capacity to adapt to potential impacts.

A study published in February concerning the shortfin mako shark (*Isurus oxyrinchus*) in the South Pacific Ocean revealed a "sexual line in the sea." Nearly all shortfin mako sharks caught east of 120° W by commercial fishing boats were female, whereas most caught west of this line were male. The western part was fished more heavily, and thus a disproportionate number of males may have been caught. Despite being classified as Vulnerable by the International Union for Conservation of Nature (IUCN), many individuals fell victim to accidental capture in drifting gill nets.

In April, Afghanistan's first national park was created at Band-e-Amir, a region of blue lakes separated by dams of travertine mineral deposits. Although much of the area's wildlife had been lost, some species remained—including the urial (*Ovis vignei*), the ibex (*Capra sibirica*), the wolf (*Canis lupus*), and the Afghan snow finch (*Montifringilla theresae*), the country's only endemic bird species.

Another April report revealed the reappearance of the blue whale (*Balaenoptera musculus*) in the North Pacific Ocean. It was thought that whaling activities up to 1965 had eliminated this population. An analysis of sightings that had occurred since 1997 near the coast of British Columbia and in the Gulf of Alaska, however, revealed that blue whales in these areas were part of an extant Californian population, which suggested that the migration pattern of an eastern North Pacific population may have resumed. These observations also suggested that the Californian population and the population historically inhabiting the area around the Gulf of Alaska could be one and the same.

In addition, a June report showed that the global whale watching industry had burgeoned over the past 10 years. Thirteen million people took part in whale watching in 119 countries and territories in 2008, generating a total expenditure of \$2.1 billion. The industry had grown at an annual rate of

Larry Wagner/AP



Researchers are dwarfed by the carcass of a blue whale that washed up on the coast of northern California near Ft. Bragg on October 20. The 21-m (70-ft) female was believed to have been struck by an ocean survey vessel a few kilometres from shore the previous night.

3.7%. It was estimated that 3,300 boat operators and other tourism officials offered whale watching and employed an estimated 13,200 people around the globe. The report affirmed that protecting whales had generated significant economic benefits to communities worldwide.

Two communities in Tanzania obtained the first Forest Stewardship Council certification for African forests in April. They developed a plan to harvest and sell African blackwood (*Dalbergia melanoxylon*), or mpingo, which was used to manufacture clarinets, oboes, and bagpipes, to international markets. The wood could fetch £13 (about \$19) per log—a considerable increase over the 5 pence (about 7 cents) previously received. Under a system of Participatory Forest Management, a number of Tanzanian communities took ownership of their forests. Provided that the forests were managed sustainably, these communities should profit from timber sales.

An expedition to Fiji in May rediscovered one of the world's most elusive birds. The Fiji petrel (*Pseudobulweria macgillivrayi*), classified by the IUCN as Critically Endangered, was formerly known from one specimen collected in 1855 on Gau Island. In 1984 a single adult was caught on Gau Island, photographed, and released. The expedition baited the sea 25 nautical miles south of Gau with a special food made from finely cut fish offal and fish oil. When cast into the sea, the mixture created a pungent oil slick that attracted the petrels. The expedition team saw eight individual Fiji petrels in 11 days.

Another study published in May revealed that 50% of the populations of wading birds in Europe, western Asia, and Africa had declined, and the pace

of falloff had accelerated. Their decline was linked to inadequate protection of key sites on their migratory routes. While wading birds used a network of protected areas in Europe, key sites elsewhere were not adequately protected. Wetlands along Africa's west coast, for example, had been affected by the construction of dams that drain wetlands and irrigation schemes that affect water flow.

Research published in September reported that a three-year search for the giant Chinese paddlefish (*Psephurus gladius*) failed to sight a single individual while conducting surveys over 300 mi (about 489 km). The IUCN classified the species, endemic to China's Yangtze River system, as Critically Endangered, and the last confirmed sighting occurred in 2003. Individuals born in the late 1980s and early 1990s may survive in the wild because the Yangtze River system has complicated habitats where paddlefish could hide. The upper Yangtze is probably one of the last places that the fish may survive.

Many Asian vulture species have been decimated by consuming the remains of livestock laden with diclofenac, an anti-inflammatory drug used to treat cattle. In September, however, about 200 bearded vultures (*Gypaetus barbatus*), or Lammergeiers, were seen in India in a remote part of Himachal Pradesh. Lammergeiers had previously been seen on India's border with China but not in such a large group or at so high an altitude. Lammergeiers were known for dropping the bones of the animals they consumed onto rocks in order to smash them open and access the marrow. Although Lammergeiers were not badly affected by diclofenac, their numbers had significantly dwindled in India.

(MARTIN FISHER)

Fashions

Trends such as **FAST FASHION**, high-low dressing, **POP-UP** shops, and the **TOSSED-OUT LOOK** were widely in evidence owing to the **RECESSION-BATTERED** global economy.

All sectors of the fashion industry were affected in the year 2009 by the recession as the prolonged global economic downturn dramatically curbed consumer spending on fashion and luxury products. Rather than shop, consumers worried about their finances. Conspicuous consumption, once perceived as “retail therapy”—or an entertaining distraction from daily life—became viewed as superfluous in the straitened economic times. A lengthy front-page *Women’s Wear Daily* (WWD) story published in January outlined the host of factors that had a negative effect on retail sales, including the dramatic rise in unemployment rates, as well as the “volatile stock market, food inflation, and the yo-yoing price of oil.”

For the fall 2009 collections staged (February 13–20) at Mercedes-Benz Fashion Week in New York City, attending fashion buyers representing upscale department stores reduced their order budgets by 20%, citing the “double-digit sales declines” that they had experienced the previous autumn. As WWD noted, “Depressing economic news . . . raised further concerns over whether consumers would even be shopping for clothes come fall.”

To support London Fashion Week (February 20–25), Boris Johnson, mayor of the city, joined forces with the London Development Agency in the allocation of £40,000 (about \$57,500) to fund the cost of airline tickets and hotel accommodations for 30 Middle Eastern buyers. The gesture was made in recognition of their “significant” and “growing” purchasing power.

By the summer, department stores and specialty stores were offering discounts earlier than expected owing to the “dismal sales.” According to the BBC, by autumn American retail sales had risen “by more than expected,” and Bloomberg reported that the retailer Saks Fifth Avenue—by reducing inven-

tories to “counter a sales decline”—announced an “unexpected” profit of one cent a share in the quarter ended October 31—“its first in more than a year.”

In Great Britain a Local Data survey revealed that during the first nine months of the year, 18% of women’s and children’s shops closed across the country. In the U.S. a number of established upscale boutiques went out of business, including the one on Park Avenue run by New York directional designer Linda Dresner; the store closed in December 2008. Luxury brands also reported steep sales declines. Compag-

Teenager Tavi Gevinson, whose blog Style Rookie became a popular destination for fashion tips, secured a front-row spot at the Mercedes-Benz Fashion Week in September.



Astrid Stawiarz/Getty Images

nie Financière Richemont SA—the Swiss luxury-goods company and owner of Cartier, Alfred Dunhill, and Chloé, among other premium labels—reported that fiscal first-half sales were down by 15% from the same period in 2008, and Burberry revealed that during that same March–September period, it experienced a 19% drop in profit. Ralph Lauren divulged that fiscal second-quarter sales were down 4% year-on-year “amid lower wholesale and retail sales.”

In October, LVMH Moët Hennessey–Louis Vuitton—the parent company of a host of brands that included Christian Dior, Louis Vuitton, and Fendi—released news that revenues over a nine-month period in 2009 had suffered a 6% fall year-on-year. Massimo Ferretti, executive chairman of Aeffe SpA, the esteemed Italian fashion group that operated Alberta Ferretti, Moschino, and Pollini, noted a 23.9% drop in first-half sales due to a “general decline in consumption.” Dolce & Gabbana announced its decision to reduce the price of fashion and accessories by 10–20%. This was achieved by working in a more cost-effective way with suppliers and manufacturers as well as by streamlining the “selection of hundreds of fabrics” to “dozens . . . in a more far-ranging palette.”

A legion of respected designers also declared bankruptcy. Italy’s IT Holding SpA—proprietor of Gianfranco Ferré and Malo knitwear—went into receivership, as did Christian Lacroix’s Paris couture house after 22 years of operation. On May 28 it was announced that cutting-edge 35-year-old Belgian designer Veronique Branquinho would close her company; she had already accepted a new role as creative director of Delvaux, the venerable Brussels leather-goods label. Besides numerous nonpayments for her spring-summer line, she experienced a “sharp drop” in orders for her autumn-winter collection; in 2008 she had staged a celebratory 10-year retrospective at the ModeMuseum (MoMu) for fashion in Antwerp, Belg. Yohji Yamamoto, the “elder statesman” of Japanese fashion, who founded his label in 1972, filed for bankruptcy protection on October 9, although an investor was in place to restructure the brand. On November 9, the same day that Luella Bartley celebrated master-

minding the decoration of London's Liberty department store's Christmas windows, she announced that her eponymous label would cease trading; though it was perceived that Bartley's label was thriving, her financial backer, Club 21, withdrew its investment. In 2008 she had reported a £9 million (about \$16.5 million) turnover and received the British Fashion Council's coveted Designer of the Year award.

Models' fees plummeted as designers cut back their budgets for once-lavish fashion advertising campaigns, and editorial opportunities lessened as the pagination of fashion magazines dramatically diminished because of "staggering" advertising cutbacks. Leading Condé Nast titles laid off staff, and quarterly magazines *InStyle Weddings* and *Time Style and Design*, devoted to chronicling the luxury market, halted publication.

Ultimately, fashion was about change, and financial hardship ushered in a new era of pragmatism. Rather than purchase monthly magazines, hundreds of thousands of readers logged on to style Weblogs, such as *The Sartorialist*, a chic street-fashion blog maintained by photographer Scott Schuman. Visited daily by 225,000 viewers, *The Sartorialist*, Schuman claimed, was popular because it afforded a "very authentic point of view." Its images provided visitors with "inspiration and ways to reinterpret the clothing they already have" or prompted them to "shop in their own closet," a phrase that became popular as the fashionable turned to their own wardrobes for style inspiration instead of buying new items. *The Sartorialist*'s visibility further increased after the publication in August of a 512-page best-selling Penguin paperback book entitled *The Sartorialist*, which showcased the blog's best images. Equally popular was Tavi Gevinson, a quirkily styled 13-year-old girl from Illinois, who daily flaunted and chronicled her favourite clothes on her *Style Rookie* blog. Gevinson was sought after by the paparazzi as she covered the spring-summer 2010 ready-to-wear collections at New York's Mercedes-Benz Fashion Week in September. She had just appeared in "Blog Off"—a four-page profile in issue two of *Love*, a new Condé Nast biannual fashion magazine—and on the autumn-winter cover of *Pop*, another biannual glossy. In February *Pop* publisher Bauer Media appointed Dasha Zhukova as its editor in chief. The attractive 27-year-old girlfriend of Russian oligarch Roman



Designer Beth Ditto favoured bold designs in the quirky collection she created for the full-figured woman.

Dave Benett/Getty Images

Abramovich also owned a Moscow contemporary art gallery and the Kova & T fashion label.

Fast fashion—inexpensive briskly produced merchandise that copies or interprets runway trends—became even more popular because of its accessible price and celebrity endorsements. On April 2 the British fashion chain Topshop opened its first flagship store outside the United Kingdom, in New York City. To celebrate the opening of the four-story, 2,323-sq-m (25,000-sq-ft) retail space, Sir Philip Green, the flamboyant proprietor of Topshop's parent company, the Arcadia Group, flew in Kate Moss to open the store. (The supermodel produced an eponymous Topshop line.) Green also hosted three lavish parties, including two at the restaurant Balthazar, in New York City's SoHo neighbourhood; performing there were singer-actress Jennifer Hudson, disc jockey Mark Ronson, and comedian Jimmy Fallon. The celebrities in attendance included actress Jennifer Lopez, designer Marc Jacobs, and Georgina Chapman, designer of the Marchesa fashion line.

In June, Beth Ditto, the feisty lead singer of the electro-pop group the Gossip, launched an eponymous line of designs for the plus-size British high-street brand Evans. Upon its debut, Ditto proclaimed to be "28 in age and dress size." For the 22-piece collection,

Ditto specifically created items that curvaceous women usually avoided, including dresses with thigh-grazing hemlines as well as those embellished with sequins and featuring polka dots. Doing so, Ditto prompted a debate about why more stylish clothes were not readily available for the generously sized figure.

Leading designers continued to cause retail sensations by producing low-priced limited-edition collections for high-street retailers. Within hours of the November 14 retail debut of Jimmy Choo's collaboration with the retail giant H&M, several styles of high heels—including suede shoe boots and gladiator heels—were sold out and were later bought on eBay for double their original price. The Choo multifaceted line—conceived by Tamara Mellon, the company's glamorous president—marked the shoe and accessories brand's first foray into clothing. The line included 1980s-inspired women's wear and slick menswear staples, including jeans and T-shirts as well as a slim-fit black suit.

U.S. *Vogue*'s June issue debuted Steal of the Month—a new section featuring fashion that retailed for under \$500. This reflected the plethora of quality fast fashion along with the demand for affordable clothes and also *high-low dressing*—mixing upscale clothes with chain-store merchandise to create an ensemble. The high-profile advocate of this method of dress was Michelle Obama. (See BIOGRAPHIES.) Unquestionably, the U.S. first lady proved the year's most influential fashion force, appearing in March on the covers of *New York*, *The New Yorker*, *People*, and *Vogue* magazines, in April on the cover of *O, the Oprah Magazine*, and in December on the cover of *Glamour* (the only first lady to earn that distinction), while her white one-shoulder inauguration ball gown by Jason Wu (see BIOGRAPHIES) influenced the shade and style of a number of gowns flaunted in February at the Academy Awards ceremony. Obama alternated pricey designer fashion—most often produced by designers who, because of their independently financed operations, were unable to generate costly advertising campaigns—with ensembles that mixed designer ready-to-wear with affordable clothes, notably Talbots dresses, Gap T-shirts, and cardigans by Liz Claiborne and J. Crew. Flaunting an array of cardigans with great flair during the Group of 20 London summit, Obama made the knitwear staple a "must-have" for spring. Her influence was demonstrated when the J. Crew cream "crystal constellation"

Saul Loeb—AFP/Getty Images



First lady Michelle Obama is resplendent in her Jason Wu inaugural ball gown during the festivities at the Washington (D.C.) Convention Center.

cardigan she wore in London during a visit on April 1 to Maggie's Cancer Caring Centre sold out on J. Crew's Web site, merely hours after she appeared in it. Several weeks later, however, the first lady's appearance at a Washington, D.C., food bank in a "high-low" combination of a J. Crew cardigan and casual capris paired with sneakers produced by the French fashion house Lanvin prompted objections when it was revealed that the footwear retailed for \$540.

Another fad resulting from the economic downturn was the proliferation of "pop-up shops." These fashion boutiques opened spontaneously in every major fashion capital as designers negotiated short-term leases, temporarily occupying storefronts vacated by bankrupt retailers. Affordable straw panama hats—which first appeared on the Gucci men's and women's ready-to-wear runways—became a ubiquitous street fashion trend.

Feisty prints and bright "feel-good hues" dominated the designer ready-to-wear collections and were introduced, it seemed, in an effort to spur purchases. Striking variations of leopard print conceived in bold shades proved to be the standout items on the runway of Christopher Kane, who produced his pattern upon Scottish cashmere

sweaters in yellow, orange, and baby pink; a "mad blue" one-shoulder dress featuring fuchsia-tipped black spots was noted by Style.com's Sarah Mower as a highlight in the Lanvin collection.

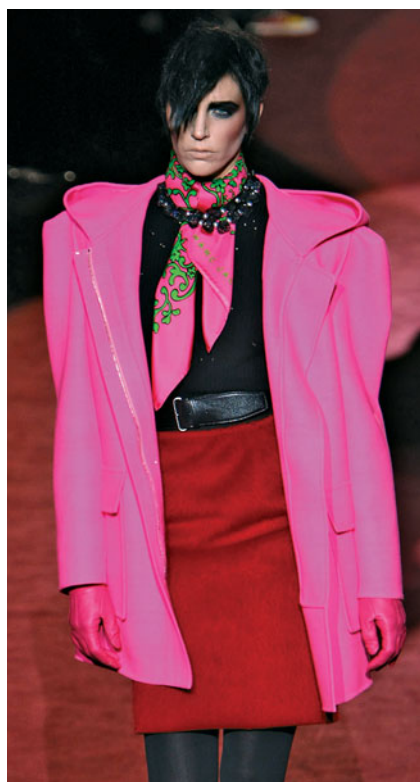
"Bazooka" pink, "Crayola-bright" lemon yellow, and kelly green dominated the 1980s-inspired autumn-winter collection of Jacobs, while "acid green" and "caution orange" defined Michael Kors's shredded fox winter jackets. Balmain's Christophe Decarnin debuted Swarovski-crystal-embellished peak-sleeved minidresses, a zipped miniskirt, and a bow-bedecked blouse in an arresting petrol blue. Conversely, a soft pastel green, one of Chanel's few deviations from black and white in its autumn-winter ready-to-wear line, was described by *Allure* magazine as the "color of the moment." That hue also appeared in Sublime Deco, an Art Deco-inspired Chanel costume-jewelry collection, and when it was reproduced as Jade—a limited-edition Le Vernis nail polish—the shade sold out.

A new grunge-era look also took hold. It was typified by the "tossed-out look" of sloppy-elegant separates conceived by New York-based Alexander Wang—who received the Swiss Textiles Award in November—and the tomboyish casual flair of MTV host Alexa Chung as she sported penny loafers with evening dresses.

A trio of fashion films also proved popular box-office attractions, includ-

Kristian Dowling/Getty Images

Marc Jacobs's fall 2009 collection made liberal use of bright hues, especially bazooka pink, as evidenced in this ensemble.



Stephen Chernin/AP



Alexander Wang reinterpreted the grunge look for the 21st century at the spring 2010 Fashion Week in September.

ing *Coco avant Chanel* (*Coco Before Chanel*), a lushly costumed feature charting the early life and rise to fame of pioneering couturiere Gabrielle ("Coco") Chanel, as well as the documentaries *The September Issue*, which followed American *Vogue's* editor in chief, Anna Wintour, as she produced the September 2007 edition of the magazine, and *Valentino: The Last Emperor*. The latter chronicled the relationship of Valentino Garavani and his business partner, Giancarlo Giammetti. Though *Project Runway* had a yearlong absence from the airwaves—due to legal wrangling as it moved cable channels from Bravo to Lifetime—the show experienced a peak in its popularity, drawing a record-setting 4.2 million viewers. The hit hour-long weekly reality TV show was hosted by Heidi Klum (see BIOGRAPHIES), who set challenges for contestants in the quest to discover the next top designer.

Selma Weiser, the owner of Manhattan's Charivari fashion boutiques (which closed in 1999), passed away in June. She was also known for having taken pioneering steps to sell the designs of important Japanese and Belgian designers; at one time she employed a teenage Marc Jacobs as a stock boy. (BRONWYN COSGRAVE)

Health and Disease

Elucidation of the **HIV GENOME** structure revealed information about the virus's infectious nature. Government officials in The Sudan strengthened efforts to eradicate **POLIO**, while health ministries worldwide pledged their commitment to halting the spread of **TUBERCULOSIS**. Medical advances included the first-ever attempt to repair heart attack damage by using a patient's own heart **STEM CELLS**.

HIV and AIDS. In 2009 American scientists made significant progress in their understanding of how HIV infects humans. In August researchers at the University of North Carolina at Chapel Hill reported having decoded the structure of a complete HIV genome. Their analysis of the architecture of the virus's genome found that its RNA structure plays a key role in its infection cycle. The lead researcher said that the findings could help reveal how RNA genomes influence the behaviour of not only HIV but also other viruses. Prior to this, scientists had charted only small areas of the HIV RNA genome. The breakthrough could lead to the development of new

antiviral drugs, and the researchers were hopeful that their findings would also help to identify other functions of RNA in HIV.

An experimental vaccine thought to stop HIV from causing AIDS was mired in controversy after researchers revealed that their results were not as significant as they first reported. In September AIDS researchers released results from a six-year trial in Thailand of a vaccine that they said showed some promise. But anonymous researchers who were given confidential access to the results criticized those findings. At issue was a group of study participants that had been inappropriately counted in the results. The study's authors cited results for two groups,

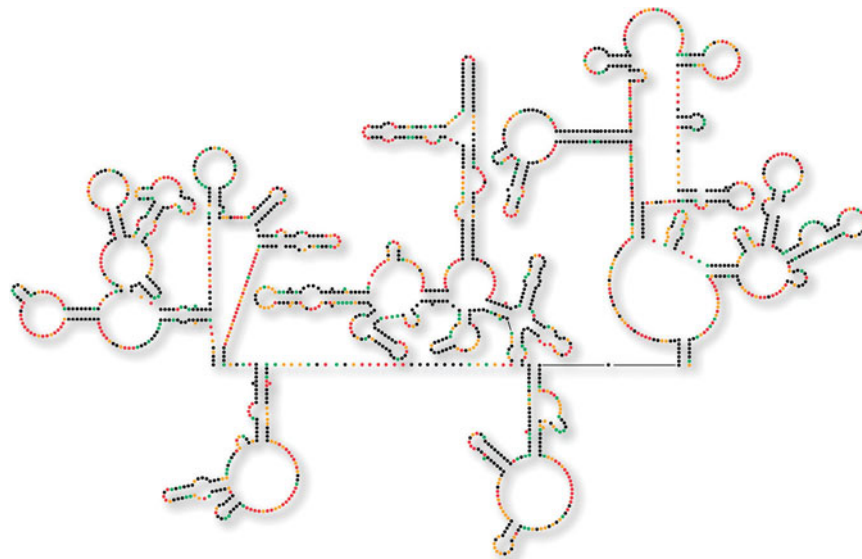
one of which did not remain with the trial until its end. In their initial conclusion, the researchers reported that the vaccine appeared to be 31% more effective than a placebo. Others who saw the research believed that further analysis would show that the results were not statistically significant for the group that had received all six doses of the vaccine and remained in the study until its conclusion.

In a more encouraging development, access to HIV treatment continued to improve around the globe, particularly in parts of Africa. A report released in 2009 by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), and the Joint United Nations Programme on HIV/AIDS (UNAIDS) stated that the number of people receiving antiretroviral treatment in low- and middle-income countries in 2008 was 36% higher compared with the previous year. It also concluded that more than four million people were receiving the therapy, which represented an increase of 10 times the number of people who were using the medications just five years earlier. Much of the progress was reported in sub-Saharan Africa.

The discovery of a species of African chimpanzee susceptible to an AIDS-like illness could help scientists better understand how HIV attacks humans. In July scientists reported that the species developed the illness after being infected with a version of HIV unique to simians. In addition, in August scientists in Europe reported the discovery of a new strain of HIV-1, which was closely related to a strain of virus occurring in gorillas. The transmission of a simian immunodeficiency virus from gorillas to humans had not before been documented. The researchers believed that the jump to humans occurred as a result of people's having been in direct contact with infected ape blood, which was most likely to have happened while butchering apes or eating them. The three known and characterized strains of HIV-1 had previously been linked to chimpanzees, but their association with gorillas represented a groundbreaking discovery in HIV/AIDS research.

Polio. The government of The Sudan called for emergency measures in 2009 to stop a polio outbreak that was spreading across the Horn of Africa.

In August scientists at the University of North Carolina at Chapel Hill reported having decoded the structure of a complete HIV genome.



Joseph Watts and Kevin Weeks, UNC—Reuters/Landov

The outbreak had expanded to northern Sudan, Kenya, and Uganda, having been earlier limited to the western region of Ethiopia and to southern Sudan. The International Federation of Red Cross and Red Crescent Societies also sought emergency funding to battle the outbreak.

Officials said that eradication efforts fell short in stopping the spread of two strains of polio from the northern regions of India and Nigeria. The *New York Times* reported that many Muslims in those countries had refused to be vaccinated because of rumours that the vaccine, having been distributed by Western countries, was deliberately being used to make them sterile. Polio also reached Port Sudan, which was a cause for concern because many people had to pass through the area in their travels to Mecca. Persons going to Mecca were suspected of having caused the spread of the disease from Port Sudan to Saudi Arabia, Somalia, Yemen, and Indonesia between 2004 and 2006. Despite continued efforts, the disease still had not been eradicated in Nigeria, India, Pakistan, and Afghanistan. Officials also reported that polio appeared to be reemerging in Angola, Chad, Niger, The Sudan, and the Democratic Republic of the Congo. Rotary International and the Bill and Melinda Gates Foundation committed \$355 million to strengthening eradication efforts. Other significant funding came from Germany and the United Kingdom. Globally, the number of new polio cases in 2009 that had been reported by late December was 1,517, compared with 1,651 the previous year.

Ebola. In January the government of the Philippines reported what may have been the first known case of the Ebola virus's being transmitted from a pig to a human. A farmer thought to have come in contact with infected pigs tested positive for antibodies to Ebola-Reston virus. Later the government reported that four other people, including farmers and a slaughterhouse worker, had also tested positive for Ebola-Reston antibodies. The Philippine Department of Health said that the people who tested positive appeared healthy. Officials believed that direct contact with infected pigs was the underlying cause for the presence of Reston antibodies in all five individuals. Ebola-Reston was one of five known species of the Ebola virus. Studies of the Reston strain had shown that the virus can be passed to healthy humans with-

out resulting in illness. Its effects in other populations, including the elderly and women who are pregnant, were not known. To prevent the potential spread of the virus, the Philippine government ordered the slaughter of 6,000 pigs at a farm north of Manila.

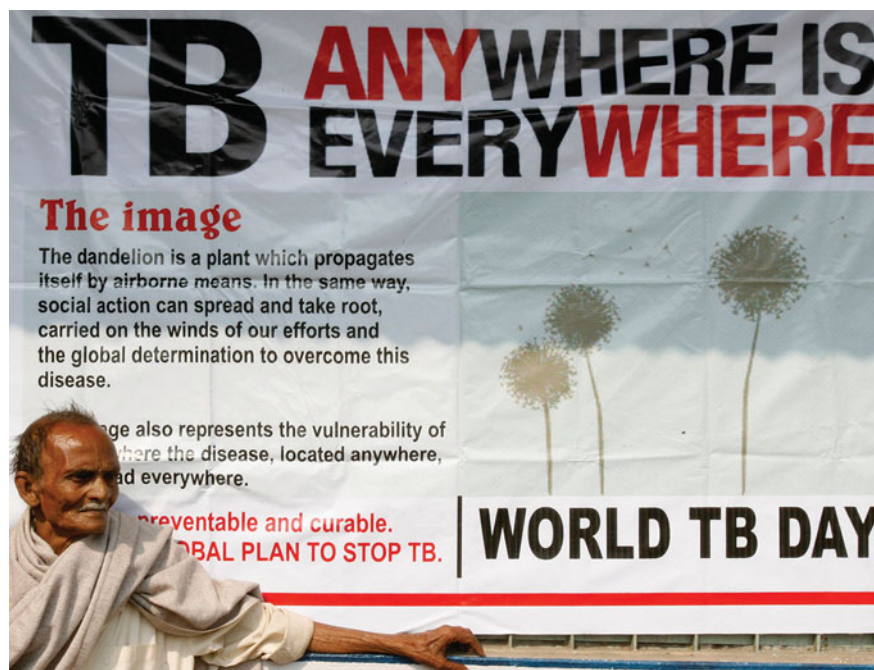
Other Infectious Diseases. Health ministers from countries where drug-resistant tuberculosis (TB) was most prevalent agreed in April to increase efforts to fight the disease. At the centre of these agreements was their promise to invest \$15 billion to support TB-elimination efforts over the course of the following six years. WHO reported that the number of high-burden countries, in which at least 4,000 new cases of drug-resistant disease arose annually or in which one-tenth of the total number of new cases were drug resistant, reached 27 in 2009. These countries were affected in particular by extensively drug-resistant tuberculosis (XDR-TB). WHO's director general, Margaret Chan, said that the problem had become "too great." She explained that a united, global effort in fighting the epidemic was of utmost importance and required consideration on a political level.

The emergence at the border between Thailand and Cambodia of parasites resistant to the antimalarial drug artemisinin caused concern that global malaria-control efforts could face a

major setback. In a report released by WHO in February, agencies monitoring antimalarial drug efficacy said that artemisinin-resistant parasites were found along the Thai-Cambodia border. Combination therapies using artemisinin were considered extremely effective, with more than 90% of infected persons being treated successfully. The malaria drug resistance seen along the border, which was likely to have been fueled largely by the continued use of artemisinin alone rather than in combination therapy, endangered the progress against the disease that had been made in previous years. Better news was reported in Zambia, where officials said that malaria deaths had declined by 66%. Malaria-control efforts implemented in Zambia included the widespread distribution of insecticide-treated nets, as well as the distribution of combination treatments based on artemisinin.

Cancer. Two studies released in September found that using a double dose of a cancer drug increased the chance of disease remission for patients with a common form of leukemia. The studies examined the treatment of patients with acute myeloid leukemia, a cancer of the bone marrow and the blood and one of the most common acute forms of the cancer that occurs in adults. The studies, which appeared in *The New England Journal of Medicine*, examined

A man with tuberculosis awaits free treatment outside a medical facility in Siliguri, a city in northeastern India.



Rupak De Chowdhuri—Reuters/Landov

cancer status and rate of survival in patients given an amount of the chemotherapeutic agent daunorubicin that was twice the dose typically prescribed. In one study, of those who took the higher dose, some 71% experienced remission of their disease, whereas of those patients receiving the normal amount of drug, about 57% entered remission. The results also showed that more chemotherapy was associated with improved survival length, with those receiving the larger dose surviving 24 months and those receiving the smaller dose surviving just 16 months. The second study examined patients aged 60 to 83 and found that more than two-thirds of patients had remission of their cancers when given a dose of chemotherapy that was twice the standard amount. This was in contrast to remission in about 54% of patients treated with the regular dose of daunorubicin. Although survival rates showed no difference between the groups, the researchers did note that those who fared the best appeared to be persons under age 65 who received the increased dose. Researchers said that their work could produce a shift in the treatment of adults under 65. The elderly, however, who were at an increased risk of developing acute myeloid leukemia, were not predicted to see any change in the current approach to the treatment of the disease.

In an effort to better address cancer in Hispanic populations, the United States National Cancer Institute (NCI) created partnerships with the governments of Argentina, Brazil, Mexico, and Uruguay. These partnerships, which also included Chile, formed the basis of the United States–Latin America Cancer Research Network (US-LA CRN). The network's mission was to develop a comprehensive understanding of cancer among Hispanics in Latin America and the United States as well as to improve cancer research and care in those regions.

Cardiovascular Disease. In 2009, for the first time, a person's own heart stem cells were used to help repair tissue damage after a heart attack. In June a team of doctors performed the procedure on a 39-year-old male patient at Cedars-Sinai Heart Institute in Los Angeles. Doctors first removed a small amount of heart tissue from the patient. The tissue was then taken to a lab, where it was cultured, giving rise to heart stem cells. Millions of cells were grown in order to ensure that

there was an adequate supply for the treatment. Using a catheter, doctors were able to deliver the stem cells to the patient's heart via the coronary arteries. The procedure was part of a Phase 1 clinical trial in which 15 other patients were scheduled to undergo the same treatment. The developer of the technique, cardiologist Eduardo Marbán, said that he hoped that the "procedure could be widely available in a few years and could be more broadly applied to cardiac patients."

A study published in March in the *Journal of the American College of Cardiology* concluded that if doctors broadened statin-prescribing criteria to include C-reactive protein (CRP) levels, an indicator of inflammation, that might enable them to prevent thousands of heart attacks, strokes, and deaths each year. The study was conducted by doctors from the Johns Hopkins University School of Medicine, Baltimore, Md. Their report indicated that 6.5 million older adults with low cholesterol but high CRP levels might benefit from statins. Previous studies had shown that statins can prevent additional heart attacks and strokes in patients who had already suffered from one or the other. Statins were also known to help those who were at increased risk for cardiovascular disease but may not have had a heart attack or stroke. About 50% of adverse cardiovascular events, such as heart attack or stroke, occurred in persons who had normal cholesterol levels. Some 20% of these events occurred in persons who had no evidence of cardiovascular disease risk factors.

The incidence of heart attacks had decreased significantly in places in North America and Europe where smoking bans had been passed. These places reported a reduction of 17% in the incidence of heart attacks one year after passing the bans, relative to communities that had not taken steps to reduce smoking in public and work areas. In addition, the number of heart attacks appeared to be continuing to decrease with time, and researchers believed that part of the decline was due to less exposure of nonsmokers to secondhand smoke. The report, which was published in September in *Circulation: Journal of the American Heart Association*, was the result of a comprehensive analysis of more than a dozen studies in which researchers tracked the prevalence of heart attacks in communities where smoking bans had been successfully enforced.

Other Disorders. Researchers were hopeful that a new drug tested in 2009 could stamp out river blindness, or onchocerciasis, a disease that occurred primarily in Central and South America and in sub-Saharan Africa. (The common name of the disease, river blindness, comes from the fact that the black fly, which transmits the disease-causing parasite, breeds in rivers and from the eventual result of parasite infection in humans—the loss of vision.) The drug, known as ivermectin, was investigated as part of a clinical trial involving three African countries. Africa was the region of the world most affected by river blindness; more than 37 million people worldwide were infected with the causative parasite, *Onchocerca volvulus*, and many of these individuals lived in poor rural African communities. The study was focused mainly on determining ivermectin's activity against the adult worms of *O. volvulus*. The drug was developed as part of a collaboration administered by WHO and Wyeth Pharmaceuticals known as the Special Programme for Research and Training in Tropical Diseases. The director of the African Programme for Onchocerciasis Control (APOC), Nigerian biologist and public health scientist Uche Amazigo, said that more than "100 million people are at risk of infection with onchocerciasis in Africa and a few small areas in the Americas and Yemen."

In a related development, a study suggested that eliminating onchocerciasis through ivermectin treatment may be possible. The study, released in July in the journal *PLoS Neglected Tropical Diseases*, stated that ivermectin treatment had stopped infections and further transmissions in three African regions. Because ivermectin kills the larvae but not the adult worms of *O. volvulus*, annual or biannual treatments would be necessary to prevent resurgence.

Vaccines. Promising results were reported in a study examining a new vaccine for advanced melanoma, a deadly form of skin cancer. In a Phase 3 clinical trial, researchers at the University of Texas M.D. Anderson Cancer Center in Houston found better response and survival outcomes among patients who received a peptide vaccine combined with interleukin-2, an agent that stimulates the body's immune cells to attack cancer cells. Typically, patients with localized melanoma had a five-year survival rate of 65%, whereas persons with melanoma that had spread (metastasized, or metastatic melanoma) had a

five-year survival rate of just 16%. Among those given the vaccine, 22.1% of patients responded, and for nearly three months, the treated patients' cancers did not progress. Those who were not treated with the vaccine, however, experienced an average of about 1.6 months of progression-free survival. The average overall survival time for patients treated with the vaccine was 17.6 months. In contrast, patients not treated with the vaccine survived only an average of 12.8 months. The vaccine was also the first to have demonstrated, in a Phase 3 clinical trial, beneficial effects in patients with melanoma.

New hope for cocaine addicts may be on the horizon after an experimental vaccine showed positive results in helping treat their addiction. Vaccination with the anticocaine agent reduced cocaine use in 38% of treated patients. The clinical trial, which included patients who were being treated for methadone addiction, received backing from the U.S. National Institute on Drug Abuse. The results were published in October in the journal *Archives of General Psychiatry*. The vaccine works by triggering antibody production by the immune system, similar to the way in which other vaccines work against infectious diseases. In the presence of the anticocaine vaccine, antibodies are produced that bind specifically to cocaine in the blood. This stops the drug from moving through the blood-brain barrier and thereby prevents the "high" that it normally causes.

The vaccine Gardasil, widely used to help prevent cervical cancer in women, found a use among men. In September U.S. drug advisers recommended that Gardasil be used for the prevention of genital warts in men. Genital warts are caused by the human papillomavirus, the same virus that can cause cervical cancer in women. A committee associated with the U.S. Food and Drug Administration (FDA) voted to support the extension of Gardasil uses to include the vaccination of males aged 9 to 26. The vaccine binds to the papillomavirus, rendering it incapable of infecting the cells of the genital tract. The virus can, in rare instances, cause penile and anal cancer in men. Gardasil was approved in

2006 for use in females aged 9 to 26 to aid in the prevention of cervical cancer.

Pharmaceuticals. In September Pfizer Inc., one of the world's largest pharmaceutical companies, along with one of its partner entities, settled an agreement to pay \$2.3 billion for having illegally encouraged the medical use of several drugs that were known, by company officials, to have potential health

tion painkillers Vicodin and Percocet because of their potential for causing liver damage. Those drugs combine acetaminophen with an opiate narcotic. Acetaminophen is an aspirin alternative used in over-the-counter pain relievers, such as Tylenol and Excedrin. High doses of acetaminophen can cause liver damage. Patients who need to take Percocet or Vicodin for long periods of time often require periodic increases in dosage for the drugs

to remain effective. This means that more acetaminophen enters their bodies, creating a higher risk for liver damage. The panel also recommended lowering the maximum dose of over-the-counter painkillers with acetaminophen. The recommendations followed an FDA report showing that severe liver damage, and even death, can result from a lack of consumer awareness that acetaminophen carries such risks. Many patients take acetaminophen because it is easier on the stomach than aspirin and ibuprofen.

Alzheimer Disease. In September information published in the 2009 World Alzheimer Report indicated that some 35 million people worldwide were living with some form of dementia, such as Alzheimer disease. The figure was much higher than scientists had previously thought. The newly

published data were the result of an extraordinarily comprehensive investigation aimed primarily at assessing the prevalence of the illness. The number surprised scientists because it was about 10% higher than what they had anticipated according to assessments that had been completed several years earlier. The previous studies had not fully estimated the extent of the impact that Alzheimer disease would have in less-developed countries. The report also indicated that the number of persons with dementia would continue to increase substantially every year, so that by 2050 Alzheimer disease could affect more than 115.4 million people. This rise was attributed in part to increased life expectancy in developed countries. Daisy Acosta, the head of Alzheimer's Disease International, which released the report, said that "we are facing an emergency." Whereas the United Kingdom and several other countries had in place long-term pro-

Saul Loeb—AFP/Getty Images



Therapists and Alzheimer patients play percussion instruments at the Copper Ridge Care Center, Sykesville, Md. Music therapy was shown to positively affect behaviour and mood in persons with dementia.

risks. The U.S. Department of Justice described the case as being a landmark health care settlement and one of the largest of its kind in the country's history. The drugs at the centre of the case included the painkiller Bextra, which had been withdrawn from the market several years earlier. Bextra was known as a COX-2 inhibitor, the name given to a class of pain-relieving drugs that inhibit the cyclooxygenase-2 enzyme, which is involved in inflammation. Pfizer pulled Bextra from the market when it was revealed that the drug posed potential risks to heart health in some patients. The government charged that Pfizer officials engaged in schemes to illegally market Bextra and other drugs, including the antibiotic agent Zyvox and an agent known as Lyrica, which was used to treat nerve pain.

Other prescription drugs came under fire as well in 2009. An FDA panel urged a ban on the popular prescrip-

Mark Wilson/Getty Images

grams to deal with the anticipated impact of Alzheimer disease, the U.S. did not. In fact, in the U.S. Alzheimer disease, compared with other diseases, had received much less attention and federal support.

Other Developments. A government advisory group in the United States sparked a heated debate in November after recommending that women begin screening for breast cancer at age 50 rather than 40. The panel also said that women should have mammograms only every other year rather than annually. The recommendations by the U.S. Preventive Services Task Force prompted fiery disagreement among breast cancer researchers, oncologists, and doctors, many of whom had long recommended that all women begin screening in their 40s and have mammograms every year. U.S. Health and Human Services Secretary Kathleen Sebelius said that women should continue to have regular mammograms starting at age 40 and reminded the public that the task force did not set federal policy and was only an advisory group. The guidelines were described as “a step backward” by officials at the American College of Radiology. The same group also said that the new recommendations could potentially harm the health of women. The American Cancer Society also strongly objected to the new recommendations. The task force’s decision to recommend later and less-frequent screening was based on research into the benefits and risks of mammography. It took into account whether screening actually led to reductions in the number of deaths from breast cancer, and it assessed the number of false-positive instances and unnecessary treatments that occurred as a result of the procedure. The report said that mammograms may help reduce the breast cancer death rate by 15%. It also said, however, that the potential harms, such as unnecessary biopsies and treatment of non-life-threatening slow-growing cancers, needed to be taken into consideration. The new screening guidelines did not include women who may be at greater risk for breast cancer and recommended that women 40 and older still consult with their doctors about when to undergo testing. Secretary Sebelius said that mammograms remain “an important life-saving tool in the fight against breast cancer.”

In early 2009, after 8 people had died and more than 500 had fallen ill from



U.S. Rep. Greg Walden hoists a jar of peanut products tied with cautionary tape at a House Energy and Commerce Committee hearing in Washington, D.C., in February. The president of Peanut Corp. of America, Stewart Parnell, refused to answer questions concerning the salmonella outbreak that was linked to the company's Georgia plant.

salmonella poisoning, U.S. health officials announced a countrywide recall for all peanut products made during the previous two years at a Georgia plant that was linked to the outbreak. Peanut Corp. of America, which initiated the recall, produced various peanut products, including peanut butter and peanut paste. The FDA subsequently issued public warnings against eating any products made with peanut butter or paste, such as crackers and cookies. The warnings did not include peanut butter sold in jars at retail stores. U.S. cereal maker Kellogg voluntarily recalled 16 products containing peanut butter, including some 7,000,000 cases of crackers and 33,000 cases of cookies.

In March U.S. Pres. Barack Obama lifted the ban on human embryonic stem cell research in the United States, opening the door to new avenues of scientific study that had previously been closed. The ban had been imposed in 2001 by former president George W. Bush, who, among many others, objected to the research because studying embryonic stem cells required the destruction of a human embryo. Obama's order removed the restrictions on federal funding for such research. He also acknowledged, however, that this issue was deeply divisive. Obama said that it was important that federal dollars be permitted to

support research employing embryonic stem cells because “medical miracles do not happen simply by accident.” A separate legislative ban on federal funds to pay for the development of stem cell lines was not part of the president's order.

Deaths from unsafe abortions, particularly in poor countries of Africa, remained a serious problem worldwide in 2009. Each year an estimated 70,000 women died from unsafe abortions, and many more women were seriously injured or crippled when the procedure was performed improperly, according to a report compiled by the Guttmacher Institute in New York. The data further indicated that of the 41.6 million abortions reported in 2003, nearly 20 million were unsafe and many were carried out by women themselves. The report noted that sub-Saharan Africa was particularly affected, with more than half the deaths from unsafe abortions occurring in this region of the world. The region also was reported to have had an exceptionally high occurrence of unintended pregnancies. This was likely associated with the fact that very few people there used contraceptives. Worldwide, however, more people were taking advantage of contraceptives, which contributed to a decline in the overall number of abortions performed globally in recent years.

(KEVIN DAVIS)

Life Sciences

Researchers identified one of the earliest societies to domesticate **HORSES**, described **CORAL** thousands of years old, characterized **GENES** that enable **RICE** plants to survive floods, discovered the largest-known **SNAKE** (a 60-million-year-old specimen from Colombia), and uncovered information about microbial communities of the **HUMAN MICROBIOME**.

ZOOLOGY

The year 2009 marked the sesquicentennial of the publication of Charles Darwin's *On the Origin of Species* and the bicentennial of his birth. Among Darwin's many other outstanding accomplishments were his book *The Variation of Animals and Plants Under Domestication* (1868) and his less-well-known discourses on coral reefs.

Alan K. Outram, an archaeologist from the University of Exeter, Eng., and colleagues addressed the question of when horses were first domesticated. They concluded that one of the earliest societies to domesticate the ancestors of modern domestic horses (*Equus caballus*) was the Botai Culture of Kazakhstan on the Eurasian Steppe about 3500 BCE (5500 BP). One of three separate lines of evidence was based on a comparative analysis of bones of domesticated horses from the Bronze Age and those of wild specimens from older Paleolithic sites. Skeletal material revealed Botai horses to be slenderer and more similar to Bronze Age domestic horses than to wild horses from the older sites, providing evidence of domestication. In addition, a third of the mandibles of horses that were examined showed signs that they had held bits in their mouths and possibly carried riders. Furthermore, isotopic analyses of fat residues in Botai pottery fragments revealed that the pots had once held horse milk. Mares in the region were still being milked.

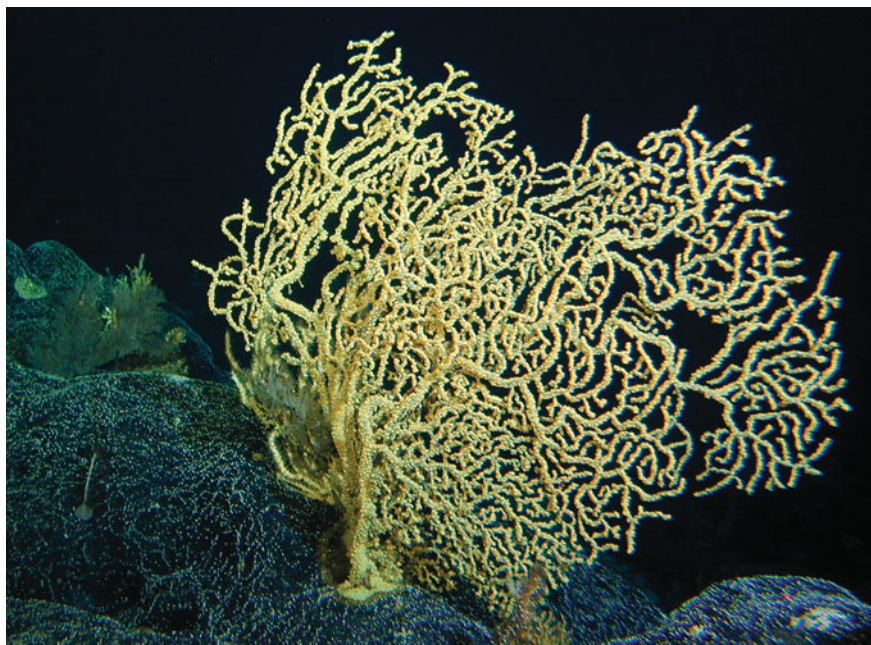
Arne Ludwig of the Leibniz Institute for Zoo and Wildlife Research in Berlin and Michael Hofreiter of the Max Planck Institute for Evolutionary Anthropology in Leipzig, Ger., along with several of their colleagues, examined bones of fossil horses and used DNA se-

quence polymorphisms (genetic variations) to determine coat colour. Horses from the Pleistocene Epoch of Siberia and Europe did not vary in colour and were presumed to have been bay (reddish brown) or bay dun (yellowish tan). Wild horses from the Iberian Peninsula dating to the Early Holocene, however, carried both black and bay genes thousands of years before horses were domesticated anywhere. Black colour expressions in wild horses are presumed to have been a consequence of natural selection associated with dense forests

following glaciation. New coat colours and patterns, including chestnut and spotting, however, became evident in Siberia and Eastern Europe around the time of the Bronze Age, 5000 BP. The investigators concluded that selective breeding of domestic stock is the most parsimonious explanation for the observed changes in horse coat coloration in the Eurasian Steppe.

Since the deep ocean is one of the least-explored parts of the planet, the myriad interactions and associations between species there—as well as the trophic dynamics occurring within biological communities—are not well understood. Among the population traits that can be critical to the persistence of some communities is the longevity of a keystone species upon which other species depend. (Keystone species are those with a disproportionately large influence over a community's structure.) Several species of deep-sea coral occupy continental shelf areas at depths up to three kilometres (two miles) and provide vital habitat for numerous species of marine invertebrates

Long-lived corals, such as this gold coral (Gerardia) found at a depth of 400 m (about 1,300 ft) near Hawaii, provide reliable living space for many generations of marine creatures. Fishing and other harvesting activities that destroy such deep-ocean corals were thought to disrupt the fragile ecological balance of deep-sea communities.



Hawaii Undersea Research Laboratory (HURL), Terry Kerby and Maximilian Cremer

and fish. Texas A&M University oceanographer E. Brendan Roark and colleagues used a submersible to collect samples of two corals, *Gerardia* species and *Leiopathes* species in Hawaiian waters at depths of 400 to 500 m (1,300 to 1,600 ft). Using a combination of stable isotope techniques and radiocarbon analyses, the researchers examined living coral tissues to estimate coral ages. They found that some individual colonies were several thousand years old. The oldest *Gerardia* species specimens were more than 2,700 years old, and those of *Leiopathes* species had longevities of more than 4,200 years. Many scientists maintain that the destruction of deep-sea coral eliminates critical living space and other ecosystem services for many members of the biological community. Bottom trawling, other fishing activities, and harvesting for the coral jewelry trade have been identified as the cause of long-lasting damage to deep-sea coral beds in many regions. Such activities are not compatible with maintaining ecosystem integrity in fragile deep-sea communities dependent on long-lived coral.

Researchers studying animal behaviour continued to discover patterns that shed light on the ecology and evolution of species. Evan A. Eskew, from Davidson (N.C.) College, and J.D. Willson and Christopher T. Winne, from the University of Georgia's Savannah River

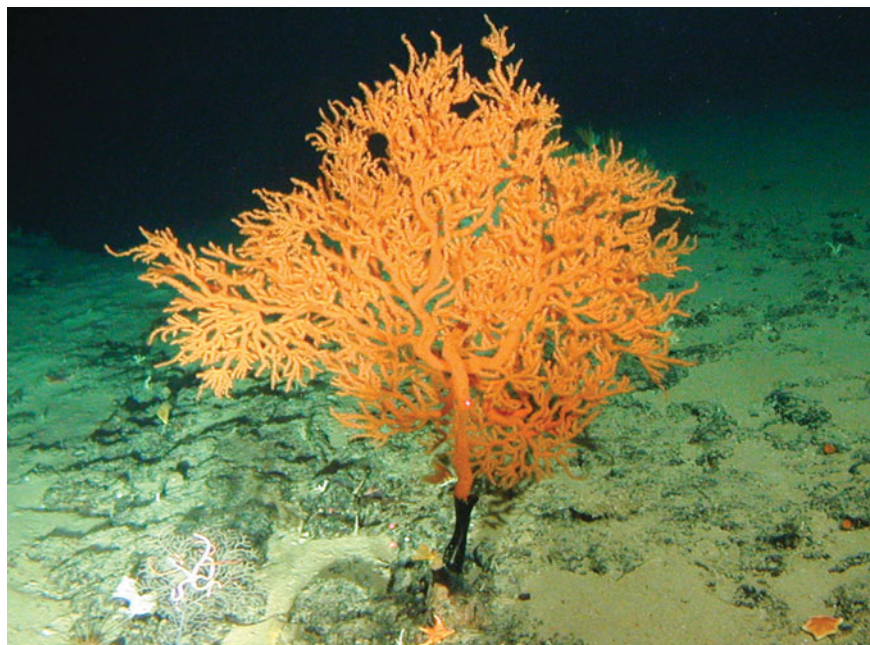
Ecology Laboratory in Aiken, S.C., examined how a semiaquatic pit viper, the eastern cottonmouth (*Agkistrodon piscivorus*), of the southeastern U.S. changed foraging habits from juvenile to adult. The researchers characterized the animal's foraging strategy in a freshwater wetland by measuring various microhabitat characteristics where 51 cottonmouths were located during systematic visual surveys at night. They also measured the microhabitats of 225 randomly selected sites within the wetland study area. Using a statistical technique called principal components analysis, the investigators determined that choice of foraging microhabitats by juvenile cottonmouths was not random. In contrast, adults were randomly scattered throughout a diversity of microhabitats. Young cottonmouths were found on land alongside the wetland, typically in a tight coil, in a sit-and-wait foraging posture for ambushing prey. Juveniles also occurred in locations hidden from predators, whereas adults were generally discovered outstretched and actively foraging throughout the wetland. Juvenile snakes, which have yellow tails, were able to use caudal luring (tail wagging) to attract salamanders and small frogs. The findings underscored how developmental changes in coloration and the behaviours that affect an animal's risk of becoming prey can influence foraging

strategy and the choice of microhabitat within a predatory species.

Many social animals gain ecological benefits from living in groups, and two that are commonly accepted by behavioral ecologists are (1) more effective predator avoidance and (2) an increase in foraging success, or prey capture. A third recently identified advantage to larger groups is the development of more effective problem-solving skills in novel situations. András Liker and Veronika Bókonyi of the University of Pannonia, Hung., tested common house sparrows (*Passer domesticus*) to determine whether groups of two or six birds differed in ability to open a feeding station with which all birds were familiar but to which access had been blocked by a transparent lid. Groups of six were found to be as much as 4 times more successful than groups of two at solving the problem of removing the lid and 11 times faster at gaining access to the food. A clear conclusion was that larger group size resulted in more rapid problem solving. One explanation for the higher success rate of larger groups was that certain individuals may have had experience in solving similar problems or simply have an aptitude for doing so.

Research in 2009 also focused on questions related to how animals may respond to shifts in climate. Two generally accepted responses of animal populations and communities to global warming are latitudinal or elevational shifts in geographic distribution and changes in the seasonal timing of critical biological events, such as reproduction, migration, or emergence from hibernation. Two independent research projects identified components of higher environmental temperatures that affect the body size of animals. Martin Daufresne, Kathrin Lengfellner, and Ulrich Sommer of the Leibniz-Institut für Meereswissenschaften in Kiel, Ger., tested the hypothesis that decreased body size among ectothermic, or cold-blooded, aquatic animals will generally become more prevalent with continued global warming. They provided evidence from fish sampled in the Baltic Sea and rivers in France and from published data about the North Sea. The investigators found that in rivers with more than two decades of gradual increases in water temperature, average fish size decreased and species with smaller body sizes became significantly more prevalent. The latter observation was also true for North Sea fish communities where warming trends had occurred. In some fish the

This specimen of smooth black coral (Leiopathes), which lives in deep water near Hawaii, lived for approximately 4,000 years.



Hawaii Undersea Research Laboratory (HURL), Terry Kerby and Maximilian Cremer

reduction in body size was related to juveniles' making up an increased proportion of the population. Among the overall findings, it was revealed that increased water temperature resulted in changes in species composition, individual growth rates, and reproductive patterns of fish and other aquatic ectotherms. Similar patterns were found in lab experiments in which a warming environment decreased the size of zooplankton, phytoplankton, and bacteria.

Arpat Ozgul and Tim Coulson of the Imperial College London and colleagues examined the causes of decreasing body size among a free-living population of Soay sheep (*Ovis aries*) on Hirta, an island in the Saint Kilda archipelago of Scotland. They concluded that the shift in size was primarily a consequence of ecological responses to climate change that produced milder winters over the previous two decades. The researchers analyzed age-specific growth rates of individual sheep and found that the growth of lambs was strongly influenced by the winter climate. Although seemingly counterintuitive, the explanation was that more sheep survived milder winters, resulting in greater population densities that led to grazing competition and slower growth rates overall. The results from the studies of body size of both fish and sheep, which changed in under three decades, suggested that rapid changes in a trait as biologically important as body size can be induced by climate change.

(J. WHITFIELD GIBBONS)

BOTANY

Important breakthroughs were made in 2009 by using genetic engineering to raise the productivity of crop plants. Most rice plants die if they are completely submerged in floodwaters for more than a few days, and this problem afflicts up to 40% of rice crops in Asia and Africa during their rainy seasons. Some rice varieties, however, can survive flooding by rapidly growing their stems upward, in some cases reaching 4 m (about 13 ft) in height. Such plants are typically far less productive than high-yield varieties. A team of Japanese scientists led by Motoyuki Ashikari at Nagoya University identified two genes, appropriately dubbed *snorkel 1* and *snorkel 2*, that made the flood-tolerant plants elongate their stems. As the stems grow, they form hollow structures inside that allow gas exchange with the atmosphere

and thus prevent the plant from water-logging. When these genes were introduced into common rice plants, their stems rapidly elongated in deep water and withstood flooding. The researchers planned to breed high-yielding rice varieties that can tolerate floods, potentially saving billions of dollars in lost crops and feeding millions of additional people.

In another study a team led by Shuichi Fukuoka at the National Institute of Agrobiological Sciences in Tsukuba, Japan, identified a gene that helps some types of wild rice fend off rice blast disease, a fungal infection caused by *Magnaporthe grisea* that destroys up to 30% of world rice production. Previous attempts to breed cultivated rice with resistance to the fungus produced poor-tasting, low-quality rice. The fungus also quickly evolved to overcome the resistance in as little as two years. The new work successfully used genetic sequencing to isolate the blast-resistant gene, *Pi21*, from a linked stretch of DNA responsible for the bad flavour of the wild varieties of rice. The gene also increased the plant's defenses against infection in general, making it harder for the blast fungus to take hold. The researchers planned to breed *Pi21* into cultivated varieties of rice to give long-lasting resistance to rice blast disease without impairing the quality of the rice grain.

Scientists from Germany, Switzerland, and the U.S. used another form of plant defense to genetically engineer corn (maize) plants to fight off a serious root pest. Larvae from a beetle known as the western corn rootworm (*Diabrotica virgifera*), which had become the most destructive corn pest in the U.S., burrow into the plants' roots. *D. virgifera* and other corn pests are largely controlled with insecticides; some varieties of corn, however, fight off *D. virgifera* by releasing a chemical messenger called (E)-beta-caryophyllene. The chemical attracts protective soil-living nematode worms, which attack and kill the beetle larvae. After decades of breeding, most North American corn varieties no longer emitted (E)-beta-caryophyllene and thus had lost the ability to recruit protective nematodes. When the gene for the chemical was introduced into the genomes of ordinary corn plants, the plants became far less vulnerable to beetle attacks.

Plant scientists took a major step forward in their plans to "barcode" every plant species in the world by using DNA analysis. The selection of the most

appropriate gene for barcoding animals had been achieved several years earlier, but a botanical equivalent proved troublesome. A team of 52 scientists working in 10 countries spent four years discussing which DNA barcode to use. They eventually selected portions of two chloroplast genes—*rbcL* and *matK*—where variations in the DNA give a characteristic signature for plant species. The researchers tested the technique on 907 plant samples. In 72% of the cases, they immediately determined the correct species of plant. For the remaining specimens, they were able to place each plant within a group of related species. Peter Hollingsworth, head of genetics and conservation at the Royal Botanic Garden in Edinburgh, explained the significance of his team's findings: "Identification is important. . . It is not possible to know if a plant is common or rare, poisonous or edible, being traded legally or illegally, etc., unless it can be identified."

Researchers in the U.S. and Belgium identified two species of microbes growing on the inside of roots of poplar trees (genus *Populus*) that boost the trees' productivity on barren or contaminated soils. *Enterobacter* species 638 and *Burkholderia cepacia* BU72 produced the greatest increase in biomass production and growth rates in the trees. Genetic analysis of the two bacterial species revealed that they produce growth-promoting plant hormones, which could stimulate the trees' growth. With fertile farmland in short supply, the notion of adding bacteria to poplar trees to help them grow on marginal land was particularly attractive. Such trees could be used as feedstock for the production of biofuels and to help sequester carbon from the atmosphere.

Another study revealed a fascinating symbiosis between bacteria and the giant cardon cactus, *Pachycereus pringlei*, that allowed the plant to grow on barren rocks in Mexico. When the cactus seeds germinated, bacteria contained within the seeds dissolved the rock and released minerals that the seedling roots could absorb. Once the cactus was established, its roots grew into the rock and, with the help of the bacteria, eventually produced soil. In return for supplying the minerals, the bacteria were fed carbon and nitrogen compounds by the cactus.

Many orchids lure insects to pollinate their flowers by imitating the insects' sex pheromones. A unique type of mimicry was discovered in *Dendrobium sinense*, an orchid that grows in China. Instead

Jennifer Brodmann



*The orchid *Dendrobium sinense*, which inhabits the Chinese island of Hainan, produces a chemical that mimics the alarm signal of honeybees in order to lure hornets of the species *Vespa bicolor* to its flower.*

of landing and pausing on the petals like most insect pollinators, hornets were observed to attack the flower of *D. sinense*. A team of Chinese and German scientists discovered that the orchid produces a chemical that exactly imitates the honeybees' alarm pheromone Z-11-eicosen-1-ol, a chemical previously unknown in plants and rarely identified even in the insect world. Hornets typically home in on this pheromone to catch honeybees for food. The hornets are so fooled by the orchid's scent that they pounce on it and thus pollinate the flower.

(PAUL SIMONS)

MOLECULAR BIOLOGY AND GENETICS

The Role of the Human Microbiome. Every human is host to a microorganism community—a veritable ecosystem of a diverse array of microbes that outnumber the more than 75 trillion cells of the human body by at least 10 to 1. What is perhaps most striking is that the majority of microbial populations that inhabit the skin, nose, mouth, gut, urogenital tract, and other tissues are not simply opportunistic parasites; they are true symbionts vital to human health, and they exert previously unappreciated influence on the ability of humans to resist disease. One reason that many of these microbes have remained unknown until recently is that they do not grow well outside of their normal habitat, meaning they cannot be cultured in the laboratory. In addition, available

samples of human secretions or tissues contain such a complex array of different species as to be refractory to analysis by traditional means. The application of modern molecular techniques, including PCR (polymerase chain reaction) and improved DNA sequencing methods, however, have begun to overcome these roadblocks, revealing the diversity of microbial species that call the human body “home.”

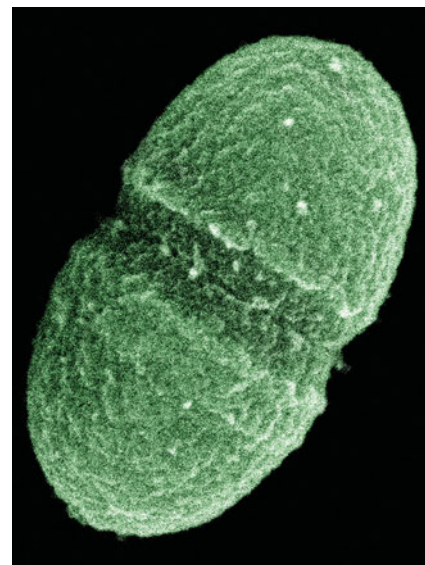
In 2009 scientists made great strides in improving their understanding of the identities and roles of these microbes. These research efforts were spearheaded in part by the Human Microbiome Project (HMP), an undertaking sponsored by the National Institutes of Health in the United States. Launched in December 2007, the HMP pursued stated goals that included identifying and sequencing the genomes of those microbial species that inhabit the healthy human body, exploring similarities and differences in the microbial populations that inhabit different individuals or different groups of people, developing new tools to facilitate the stated goals, and addressing the social and ethical implications of human microbiome research.

One of the first members of the human microbiome to be recognized as beneficial to human health was *E. coli*, which inhabits the large intestine. It became clear, however, that the community of microbes inhabiting the gut is startlingly diverse. DNA sequence analysis of the gene *16S rRNA* (riboso-

mal small subunit RNA), which is unique to each species of microorganism, enabled scientists to identify various microbes in the human gut. From this they estimated the total number of microbial genes; indeed, the bacteria, archaea, and fungi that inhabit the human gut demonstrate a collective gene count estimated at 100 times that of the human genome. Studies of the microbial communities in healthy humans and laboratory animals implicate microbial variation as a factor influencing everything from nutrient extraction during digestion, to defense against invading pathogens, to the ability to inactivate environmental toxins. The composition of commensal microbial communities can vary from person to person, within a single person over time or in response to subtle environmental changes, and even from location to location on the body; for example, the forearm skin microbiome, which is estimated to include more than 180 different species, is different from that found inches away at the crease of the elbow.

One of the most compelling connections reported between gut microbes and health deals with obesity. Researchers exploring the distal gut microbes of obese and lean laboratory mice, and also of obese and lean human volunteers, noted striking differences between these groups in terms of

*The bacteria *Enterococcus faecalis*, found in the human gut, is a member of the diverse community of microbial species that constitute the human microbiome.*



Human Microbiome Project/National Institutes of Health

the relative abundance of two dominant bacterial divisions: the Bacteroidetes and the Firmicutes. What was most striking, however, was that the trait was transferable; germ-free mice intentionally colonized with “lean” gut microbes accumulated significantly less total body fat through the course of the experiment than did their counterparts colonized with “obese” gut microbes. Of note, the “obese” gut microbes also demonstrated an increased ability to extract energy from the diet. While circumstantial, these data clearly implicate the “obese” gut microbes as a contributing factor in human obesity and may also suggest novel routes of intervention in the battle against this health epidemic.

One of the least-well-understood aspects of the human microbiome deals with the question of initial colonization of an infant. A newborn emerges sterile from the womb, and over the course of the next days to months, he or she must acquire a full complement of “good” microbes. How does this process occur? One can only wonder whether the most ingrained and natural of all behaviours—that of human parents to nuzzle and kiss their baby, or of a mother mouse to lick her pups—derives from the need to share not only love but also microbes.

The Genetics of Autism. Classic autism, the most common autism spectrum disorder (ASD), is a neurodevelopmental disorder that is evident by age three and that affects four times as many males as females. Before 1985 the incidence of autism was reported to be between 2 and 5 in every 10,000 children; after 2000, reports cited an incidence of close to 6 in every 1,000. Whether this apparent “epidemic” of autism reflects a true rise in incidence or is due to changes in diagnostic criteria and ascertainment is a point of some contention, though most experts in the field attribute at least a majority of the apparent increase to ascertainment.

ASDs are complex traits. The heritability has been estimated at greater than 90%, but even monozygotic (“identical”) twins do not show 100% concordance; sometimes one twin is affected and the other twin is not. Further, even when both twins are affected, the level of severity can differ. The sibling risk is 5–10%, which is 10 times higher than the population risk. Together these data confirm that ASDs result from a combination of both genetic and environmental factors. Further, neuroanatomical and neuroimaging

studies suggest that affected individuals may experience abnormal neurodevelopment in utero, beginning as early as the first or second trimester of gestation. The key environmental influences, therefore, may be prenatal as well as postnatal.

Autism became perhaps best known in 2009 for the resolution of a series of high-profile, though misguided, legal actions resulting from a 1998 article that claimed the existence of an association between autism and childhood vaccination for measles, mumps, and rubella (MMR). The article, published by British physician Andrew Wakefield and colleagues in the journal *The Lancet*—though later retracted by a majority of the coauthors—caused a wave of fear among parents and health care providers, so much so that immunization rates in the U.K. fell by more than 10%, and in 2006 the country saw its first death from measles in 14 years. Numerous subsequent studies by other researchers found no link between autism and MMR vaccination or the vaccine preservative thiomersal (also called thimerosal in the U.S.). In February 2009 the Omnibus Autism Proceeding in the U.S. Court of Federal Claims ruled against the plaintiffs in three test cases, thereby closing this sad chapter in medical legal history.

ASD research made a series of impressive strides forward in 2009. For example, a mouse was engineered to carry a duplication of genes corresponding to a region of chromosome 15, the location of the most frequently observed chromosomal abnormality in ASD. The mouse demonstrated a variety of social and behavioral characteristics reminiscent of the disorder, providing further evidence of a causal relationship between the chromosomal abnormality in patients and their clinical symptoms. Other data suggested that some of the features of ASD may respond to fever and may result from impaired regulation of neurons in a region of the brain stem called the locus coeruleus. These advances offered hope that the cause of autism would soon be understood, which may enable future generations to prevent or reverse its course. (See also Special Report on page 196.)

(JUDITH FRIDOVICH-KEIL)

PALEONTOLOGY

In October 2009 a number of reports documenting the discovery of a new early hominid were published in the journal *Science*. This species, named

Ardipithecus ramidus, was dated to 4.4 million years ago and appeared to be far more primitive than *Australopithecus*. (See Special Report on page 190.)

In the spring of the year, a study reported on the analysis of preserved soft tissues and collagen sequences extracted from the femur of an 80-million-year-old hadrosaur (duck-billed dinosaur). The hadrosaur sequences were determined to have more in common with those of birds than those of other reptiles, confirming the close relationship between birds and dinosaurs.

The family Heterodontosauridae represents a very basal group of ornithomimid, or “bird-hipped,” dinosaurs. They were small bipedal animals known mainly from the Early Jurassic Period of Africa. A report published in March 2009 described the first known Early Cretaceous heterodontosaur from the Chinese province of Liaoning. In addition to extending the temporal range of the heterodontosaurs, the new species, *Tianyulong confuciusi*, extended their geographic range into Asia.

A new Jurassic ceratosaur from China shed light on the origin of the reduced number of digits in birds. Previous studies suggested that the reduction to three digits in theropod dinosaurs occurred by the loss of digits four and five. Birds, however, appeared to have lost digits five and one—leaving the three expanded central digits to support the wing. In the new Chinese ceratosaur, the metacarpal region (an area made up of the bones of the hand proper) shows similarities to digits two, three, and four, while the phalangeal region (the outer portion of the hand) shows more affinity to digits one, two, and three. The authors indicated that this phalangeal anatomy in other theropods may be the reason for the idea that they retain digits 1–3. The authors suggested, however, that it made more sense to assume that the reduced number of fingers in theropods actually represents digits 2–4, given the avian affinities to the theropods combined with the hand anatomy of the new ceratosaur.

A study published in 2008, comparing the clutch volumes of the dinosaurs *Troodon*, *Oviraptor*, and *Citipati*, supported a bird-paternal-care model for the dinosaurs, indicating that the male parent cared for the young. In contrast, living archosaurs, such as the crocodilians, follow the maternal behaviour model, in which the young are cared for by the female. This finding strengthened the idea that the predominant avian parental-care system

evolved before the first appearance of birds. Another 2008 report on *Epidexipteryx hui*, a new avian from the Jurassic of Inner Mongolia, showed a surprising mixture of characteristics from several different theropod groups, unlike other early bird species that seem more aligned with a particular type of coelurosaurian.

An analysis of pterosaur limb strength indicated that, unlike birds, pterosaurs may have launched into flight by using all four limbs. The research compared bone strength of three pterosaur species with that of 20 bird species. In heavier birds the leg becomes much thicker than the humerus of the wing, which creates more leg strength for takeoff. In pterosaurs, however, the forelimbs are much stronger, which suggests that pterosaurs may have used them to aid in takeoff.

The postcranial skeleton of a 255-million-year-old therapsid (mammal-like reptile), *Suminia getmanovi*, exhibits very long hands, feet that represent 40% of the length of the limb, and digits that were designed for grasping. These features suggest that the animal lived in trees, making it the oldest-known tree-dwelling vertebrate in the fossil record.

The Late Cretaceous North American crocodile, *Deinosuchus*, had a body length of more than 10 m (about 33 ft) and a skull length of 1.5 m (5 ft). A biometric study published in 2008

compared the bending force of the jaw of this animal with that of the American alligator and estimated that *Deinosuchus* had a bite 13 times as powerful as the alligator. It was likely one of the top predators of coastal environments, capable of easily taking down a sizable dinosaur.

An online report of three new Australian dinosaurs was published in August. The three were the first to be named from Queensland in 28 years, and two of the new genera, *Diamantinasauros* and *Wintonotitan*, represented the first new sauropods from Australia in 75 years. The third dinosaur, a large carnivorous theropod, was assigned to the newly created genus *Australovenator*. All three dinosaurs lived during the Cretaceous Period approximately 98 million years ago.

With a body length of 13 m (about 43 ft) and an estimated weight of 1,135 kg (2,500 lb), *Titanoboa cerrejonensis*, a newly described 60-million-year-old boid from northeastern Colombia, represents the largest-known snake of any age. Since the maximum size of poikilothermic, or “cold-blooded,” animals is restricted by metabolic rate, average temperatures must have been relatively high to support the snake’s growth. The authors pointed out that the mean annual temperature during the Paleocene in this part of South America must have been 30–34 °C (86–93 °F) in order

for a snake of such size to survive. This interpretation supports the hypothesis of very hot Paleocene climates in the neotropics based on high concentrations of carbon dioxide predicted by climate models.

Fossil evidence has indicated that it took 14 million years for whales to sequence from a terrestrial animal to a fully aquatic one. A 47-million-year-old specimen of *Maiacetus inuus*, a semi-aquatic ancestor of the whales, was reported with a fossilized fetus in the skeleton. The size and position of the fetus indicates that the young were delivered headfirst, similar to terrestrial mammals. Since marine mammals deliver the fetus tail first, the new specimen suggests that this ancestral whale still gave birth on land.

An unusually well-preserved Silurian fish specimen discovered from the Devonian Period of Yunnan province, China, may represent the oldest near-complete specimen of a gnathostome (jawed vertebrate). While some features of the postcranial skeleton are similar to those found in nonosteichthyan gnathostomes (that is, gnathostomes that are not bony fish), it also shows some features typical of basal sarcopterygians (lobe-finned bony fish). The authors suggested that this new specimen places the minimum date for the divergence of the actinopterygians (ray-finned bony fish) and sarcopterygians at 419 million years ago.

A study of trilete spores from Late Ordovician rocks of Saudi Arabia showed that vascular land plants evolved about 450 million years ago. Trilete spores in the fossil record indicate the presence of vascular plant lineages. During the Ordovician, Saudi Arabia was part of a large southern landmass known as Gondwana. The paper hypothesized that vascular plants originated and diversified in Gondwana and then migrated elsewhere.

The group known as the “great appendage” arthropods, so named because of large clawed limbs at the front of the head, has been known only from Cambrian deposits such as the Burgess Shale and occurs near the base of the arthropod family tree. The discovery of a “great appendage” arthropod from the Hunsrück Slate in Germany confirmed their presence in the fossil record about 100 million years after the Middle Cambrian. The rarity of great appendage arthropods in the fossil record was probably due to a scarcity of the types of sites needed for their preservation. (WILLIAM R. HAMMER)

This image provides a side-by-side comparison of the vertebrae belonging (left) to the present-day anaconda (Eunectes) and (right) to that of Titanoboa cerrejonensis, an extinct boid from the Paleocene Epoch that is considered the world's largest-known snake.



Ray Carson/UF Photography

Literature

The literary scene **ABOUNDED** with books chronicling the **ECONOMIC CRISIS** and the **GREED** associated with it, and a number of titles were devoted to Charles **DARWIN**, whose **BICENTENARY** birth anniversary was celebrated in 2009. Online publishing figured prominently, especially in China, where the growth of **INTERNET LITERATURE** overshadowed the production of print products. While Russia announced a **RECORD** number of literary deaths, major novelists elsewhere—including Americans John **UPDIKE** and Frank **MCCOURT** and Brazilian Augusto **BOAL**—also departed.

ENGLISH

United Kingdom. In the non-fiction realm, 2009 was a vintage year for books that examined the death of unbridled capitalism. In these books one could see the authors analyzing, defining, and coming to terms with the end of an era. The BBC economics editor, Paul Mason, explored the neoliberal orthodoxy's culpability in the ongoing global financial crisis in *Meltdown: The End of the Age of Greed*. Financial journalist Gillian Tett's *Fool's Gold* similarly attributed the recession to unfettered greed. HSBC chairman Stephen Green's book *Good Value* identified the "casino capitalism" behind the "manifest failure of market fundamentalism." Many of these books looked forward optimistically toward a kinder, greener business climate. The well-received book *The Storm* by Vince Cable, treasury spokesman for the Liberal Democrats, argued for a return to safe, regulated banking, and Zac Goldsmith's *The Constant Economy* sketched out a new society, in tune with the limits of the Earth. As one commentator noted, these books marked the end of an era of "mass hallucination."

Links between capitalism, consumption, and the fate of the planet were likewise explored in Tristram Stuart's *Waste: Uncovering the Global Food Scandal* and Neal Lawson's *All Consuming*. The effects of the prioritization of economic growth over equality were analyzed by Richard Wilkinson and

Kate Pickett in *The Spirit Level: Why More Equal Societies Almost Always Do Better*, which identified inequality as the cause of isolation, depression, and the drive to consume. Anna Minton's *Ground Control: Fear and Happiness in the Twenty-first Century City* assessed the privatization of the British city and the cost of championing investors' needs over those of residents in terms of human happiness.

The short list of the Man Booker Prize for fiction was dominated by what one commentator called "costume dramas," with little overt interest in the 21st century. A.S. Byatt's *The Children's Book* described the English fin de siècle, from its William Morris wallpaper to Fabianism to Russian exiles, including all the social, political, and artistic convulsions of the era. In Sarah Waters's *The Little Stranger*, readers entered a post-World War II landscape of decay, austerity, and class envy. Simon Mawer's *The Glass Room* was a historical novel set in 1930s Czechoslovakia. Adam Foulds based his novel *The Quickening Maze* on a moment in the late 1830s when "peasant poet" John Clare and future poet laureate Alfred Lord Tennyson shared a home in High Beach Asylum. Stylistic methods mirrored the eras evoked: *The Children's Book* was likened to the compendious late Victorian novel; *The Little Stranger*, with its "cool pacing" and magnificent set pieces, was reminiscent of the films of the 1940s; the symmetry and detached beauty of *The Glass Room* were compared to the modernist archi-

tectural masterpiece in its title. The winner of the Man Booker, however, was Hilary Mantel's astonishing *Wolf Hall*, which fleshed out the life of Thomas Cromwell, adviser to Henry VIII, in a period when England was divided over the interests of Catherine of Aragon and Anne Boleyn. Full of verbal jousting, rich historical detail from tapestries to heretic burnings, and human insight, Mantel's novel was described as a "Tudor spellbinder"; it was historical revisionism at its best.

Despite the prevalence of historical subjects, as Robert McCrum pointed out in *The Observer* newspaper, the Booker short list was still a nod to the present, reflecting publishers' recession-induced timorousness about backing newer authors or "difficult" writing. Short-listed authors Byatt, Waters, J.M. Coetzee (for *Summertime*), and Mantel all occupied the highest echelons of the literary hierarchy, and the youngest contender, Foulds, was already a seasoned award winner. Furthermore, for an award often maligned for championing "unreadable" novels, the short list was full of commercially viable "cracking good" reads. The fact that the long list was made up of all white nominees and was peopled almost exclu-

British writer Hilary Mantel won the Man Booker Prize for her novel Wolf Hall, a retelling of the life of Henry VIII adviser Thomas Cromwell.



Alastair Grant/AP

sively by British and Irish writers (with the exception of Coetzee) also marked a departure from recent years in which Indian and Asian-British themes and writers had predominated.

In contrast to the Man Booker Prize, which excluded American writers, the Orange Prize for Fiction (open to all women novelists writing in English) short-listed only one British author. This was newcomer Samantha Harvey, who surprised critics when she was nominated over Nobel Prize-winning American writer Toni Morrison. Harvey's first novel, *The Wilderness*, traced the descent of an aging architect into dementia as he loses grasp of his own memories and consequently his identity. A reviewer in *The Observer* called it "an incredibly moving look at the sword of Damocles that hangs over us all." The winner of the Orange Prize was American writer Marilynne Robinson for *Home* (2008), another book in which the characters attempt to come to terms with their personal and family histories. As with many novels honoured in the U.K. in 2009, *Home* was appreciated for both its technique and its humanity.

If the narrator of *The Wilderness* could be described as unreliable, so too could the main characters of a number of other well-received novels. Neo-Gothic novelist Patrick McGrath's *Trauma* (nominated for the 2008 Costa Novel Award) was written in the voice of Charlie, a New York City psychiatrist who treats Vietnam War veterans suffering from post-traumatic stress disorder yet is in need of help himself. Charlie calls into question his own attempts to order the chaos of his life, "This falsification of memory—the adjustment, abbreviation, invention, even omission of experience—is common to us all, it is the business of psychic life," and the reader is left searching for the truth between the lines. As one reviewer remarked, "One of the disheartening contributions psychiatry makes to literary understanding is the insistence that we are all of us unreliable narrators." The limitations of memory were also a theme in Irish writer Sebastian Barry's *The Secret Scripture* (2008), winner of the 2008 Costa Book of the Year award. Barry's protagonist, Roseanne McNulty, an almost 100-year-old resident of a mental hospital, tries to reconstruct her life in a "testimony of herself." Yet she becomes aware of the impossibility of her task. "No one has the monopoly on truth," she points out. "Not even myself, and that is a vexing and worrying thought."

Whether they be historical novels with a political edge, cosmic adventures, or dystopian fantasies, central to all the books nominated for the CILIP Carnegie Medal for children's books was the transition from childhood to adulthood. Set in 1980s Ireland, the winning entry, *Bog Child* (2008), by the late children's author Siobhan Dowd, combined the stories of Fergus, an Ulster teenager with a brother half dead in the Maze prison on a hunger strike, and Mel, the Iron Age girl whose body Fergus finds preserved in a bog. Dealing with teenage sexuality and the difficulties of disentangling politics from immediate human relations, Dowd showed an empathetic understanding of the confusing terrain of adolescence. Another notable nonfantasy book for adolescents was the 703-page *Just Henry* (2008), Michelle Magorian's first novel in a decade and winner of the 2008 Costa Children's Book Award. Set in postwar Britain, it promoted the timeless values of tolerance and friendship by telling the story of Henry, a boy forced to work on a photography project with two classmates stigmatized by the prejudices of the age.

Unusually, poetry captured front-page headlines twice within three weeks in May. Carol Ann Duffy (see BIOGRAPHIES) became the first woman to be appointed poet laureate since the post was created in 1668. Duffy's hard-hitting first poem in her new role was a departure from the topics expected of a poet laureate. As one commentator described it, *Politics* was an "almost speechless with rage" attack against the effect of politics on the politician; the poem was seen to have topical resonance in a year brimming with politicians' expense scandals. Poetry again stole headlines when Derek Walcott, frontrunner for the post of professor of poetry at the University of Oxford, dropped out of the race after becoming the target of a smear campaign. The scandal continued apace when Ruth Padel, who won the election, admitted to her part in disseminating sexual-harassment allegations against Walcott to the press. Padel, who would have been Oxford's first woman professor of poetry, subsequently resigned.

William Sieghart, founder of the Forward Prize for Poetry, said that the sheer volume of the year's entries testified to "the rude health of the U.K.'s contemporary poetry scene." Josephine Hart, the judges' chair, also spoke of a "renaissance in poetry" as the prize boasted its strongest short list in years. The winner in the best collection cate-

gory was Scottish poet Don Paterson for his fourth collection, *Rain*, described as "a kind of Platonic inquiry into the self and its relation to the physical world." Paterson attributed a philosophical shift in his poetry toward "hardcore" materialism, to time "reading popular science, and thinking about the basis of stuff." Other contenders included the 80-year-old establishment poet Peter Porter and Christopher Reid. Reid's collection *A Scattering* was a "moving, unsentimental record of loss," dedicated to his wife, who died in 2005.

Fifty years after physicist and novelist C.P. Snow gave his famous Rede Lecture at the University of Cambridge positing two cultures—humanities and the sciences—in opposition to one another, the Wellcome Trust inaugurated a new international prize to honour books, whether they be fiction or non-fiction, that integrated art and medicine or biomedical science. Short-listed books for the £25,000 (about \$35,000) Wellcome Trust Book Prize included Havi Carel's *Illness: The Cry of the Flesh* (2008), which blended philosophy with phenomenology to reflect on the social effects of illness on the sufferer, and was based on the author's own experience of living with a rare and fatal lung disease. The effects of disease were likewise explored from a personal perspective in Andrea Gillies's *Keeper: Living with Nancy*. Gillies, who looked after her mother-in-law with Alzheimer disease, provided "a painfully honest account of . . . a monstrous disease that strips people of their dignity and life savings." Brian Dillon's *Tormented Hope: Nine Hypochondriac Lives*, also short-listed, drew links between hypochondria and creativity, examining such historical figures as Charlotte Brontë, Marcel Proust, Charles Darwin, and Glenn Gould.

Given the Wellcome Trust's urge to bridge the disciplines of science and art, it was perhaps timely that the winner of the Royal Society Prize for Science Books was the result of a 10-year quest to prove the connection between science and poetry in the Romantic period. *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science*, by literary biographer Richard Holmes, looked at radical science before Darwin and its impact on great writers such as Shelley, Coleridge, Byron, and Keats. Sir Tim Hunt, chair of the judges, said that it "[wore] its science lightly while placing it within a much wider cultural context." Holmes said, "I believe that we
(continued on page 258)

WORLD LITERARY PRIZES 2009

All prizes are annual and were awarded in 2009 unless otherwise stated. Currency equivalents as of July 1, 2009, were as follows: €1 = \$1.409; £1 = \$1.657; Can\$1 = \$0.864; ¥1 = \$0.146; SKr 1 = \$0.130; DKr 1 = \$0.189; and 1 Russian ruble = \$0.032.

Nobel Prize for Literature

Awarded since 1901; included in the behest of Alfred Nobel, who specified a prize for those who "shall have produced in the field of literature the most outstanding work in an ideal direction." The prizewinners are selected in October by the Swedish Academy and receive the award on December 10 in Stockholm. Prize: a gold medal and an award that varies from year to year; in 2009 the award was SKr 10 million.

Herta Müller (Germany)

International IMPAC Dublin Literary Award

First awarded in 1996; this is the largest international literary prize and is open to books written in any language. The award is a joint initiative of Dublin City Council, the Municipal Government of Dublin City, and the productivity-improvement company IMPAC. It is administered by Dublin City Public Libraries. Prize: €100,000, of which 25% goes to the translator if the book was not written in English, and a Waterford crystal trophy. The awards are given at Dublin Castle in May or June.

Man Gone Down by Michael Thomas (U.S.)

Neustadt International Prize for Literature

Established in 1969 and awarded biennially by the University of Oklahoma and *World Literature Today*. Novelists, poets, and dramatists are equally eligible. Prize: \$50,000, a replica of an eagle feather cast in silver, and a certificate.

Patricia Grace (New Zealand), awarded in 2008

Man Booker International Prize

This prize is awarded every other year (beginning in 2005) to a living author of fiction of any nationality who writes in English or whose work is widely translated into English for the body of his work. The prize is supported by the Man Group PLC. Winners are announced in midyear. Prize: £60,000.

Alice Munro (Canada), awarded in 2009

Astrid Lindgren Memorial Award for Literature

This award, first bestowed in 2003 by the government of Sweden, is given annually to one or more living authors who, in the words of the organizers, "in their writing have produced literature for children and young people of absolutely the highest artistic quality and in the humanistic spirit associated with Astrid Lindgren." Organizations that contribute to the literary welfare of children and young people are also eligible. Prize: SKr 5 million.

Tamer Institute for Community Education (Israeli-occupied West Bank and Gaza Strip)

Commonwealth Writers' Prize

Established in 1987 by the Commonwealth Foundation. In 2009 there was one award of £10,000 for the best book submitted, as well as an award of £5,000 for the best first book. In each of the four regions of the Commonwealth, two prizes of £1,000 are awarded: one for the best book and one for the best first book.

Best Book *The Slap* by Christos Tsiolkas (Australia)

Best First Book *A Case of Exploding Mangoes* by Mohammed Hanif (Pakistan)

Regional winners—Best Book

Africa *The Lost Colours of the Chameleon* by Mandla Langa (South Africa)

Caribbean & Canada *Good to a Fault* by Marina Endicott (Canada)

Europe & South Asia *Unaccustomed Earth* by Jhumpa Lahiri (U.K.)

Southeast Asia & South Pacific *The Slap* by Christos Tsiolkas (Australia)

Man Booker Prize

Established in 1969, sponsored by Booker McConnell Ltd. and, beginning in 2002, the Man Group; administered by the National Book League in the U.K. Awarded to the best full-length novel written by a citizen of the Commonwealth or the Republic of Ireland and published in the U.K. during the 12 months ended September 30. Prize: £50,000.

Wolf Hall by Hilary Mantel

Costa Book of the Year

Established in 1971 as the Whitbread Literary Awards (from 1985 Whitbread Book of the Year); Costa Coffee assumed sponsorship in 2006. The winners of the Costa Book Awards for Poetry, Biography, Novel, and First Novel as well as the Costa Children's Book of the Year each receive £5,000, and the winner of the Costa Book of the Year prize receives an additional £25,000. Winners are announced early in the year following the award.

The Secret Scripture by Sebastian Barry (2008 award)

Orange Broadband Prize for Fiction

Established in 1996. Awarded to a work of published fiction written by a woman in English and published in the U.K. during the 12 months ended March 31. Prize: £30,000 and a bronze figurine called the "Bessie."

Home by Marilynne Robinson (U.S.)

Frank O'Connor International Short Story Award

The prize was first awarded in 2005 and recognizes a collection of short stories in English by a living author and published in the previous 12 months. The award is organized by the Munster Literature Centre in Ireland and Cork and underwritten by the Cork City Council in association with the *Irish Times*. Prize: €35,000, shared by the writer and the translators (if any).

Love Begins in Winter by Simon Van Booy (U.K./U.S.)

Bollingen Prize in Poetry

Established in 1949 by Paul Mellon. It is awarded to an American poet every two years by the Yale University Library. Prize: \$100,000.

Allen Grossman (2009 prize)

PEN/Nabokov Award

With this award, in even-numbered years the PEN American Center recognizes a living author for his or her body of work in a variety of genres written in, or translated into, English. The award, named for Vladimir Nabokov and supported by the Vladimir Nabokov Foundation, was first presented in 2000. Prize: \$20,000.

Cynthia Ozick (2008 award)

PEN/Faulkner Award

The PEN/Faulkner Foundation each year recognizes the best published works of fiction by contemporary American writers. The award, named for William Faulkner, was founded by writers in 1980 to honour their peers. Prize: \$15,000.

Netherland by Joseph O'Neill

Pulitzer Prizes in Letters and Drama

Begun in 1917. Awarded by Columbia University, New York City, on the recommendation of the Pulitzer Prize Board for books published in the previous year. Five categories in Letters are honoured: Fiction, Biography, and General Non-Fiction (authors of works in these categories must be American citizens); History (the subject must be American history); and Poetry (for original verse by an American author). The Drama prize is for "a distinguished play by an American author, preferably original in its source and dealing with American life." Prize: \$10,000 for each award.

Fiction *Olive Kitteridge* by Elizabeth Strout

Drama *Ruined* by Lynn Nottage

History *The Hemingses of Monticello: An American Family* by Annette Gordon-Reed

Poetry *The Shadow of Sirius* by W.S. Merwin

Biography *American Lion: Andrew Jackson in the White House* by Jon Meacham

General Non-Fiction *Slavery by Another Name: The Re-Enslavement of Black Americans from the Civil War to World War II* by Douglas A. Blackmon

National Book Awards

Awarded since 1950 by the National Book Foundation, a consortium of American publishing groups. Categories have varied, beginning with 3—Fiction, Nonfiction, and Poetry—swelling to 22 awards in 1983, and returning to the following 4 in 2001. Prize: \$10,000 and a crystal sculpture in each category.

Fiction *Let the Great World Spin* by Colum McCann

Nonfiction *The First Tycoon: The Epic Life of Cornelius Vanderbilt* by T.J. Stiles

Poetry *Transcendental Studies: A Trilogy* by Keith Waldrop

Young People's Literature *Claudette Colvin: Twice Toward Justice* by Phillip Hoose

Frost Medal

Awarded annually since 1930 by the Poetry Society of America for distinguished lifetime service to American poetry.

X.J. Kennedy

WORLD LITERARY PRIZES 2009 (continued)

Association for Library Service to Children (ALSC) Awards

The ALSC, a branch of the American Library Association (ALA), presents a series of awards each year for excellence in children's literature. The two best-established and best-known are the following:

The **Newbery Medal**, first bestowed in 1922 (the oldest award in the world for children's literature), honours the author of the most distinguished contribution in English to American literature for children. The award consists of a bronze medal.

Neil Gaiman, for *The Graveyard Book*

The **Caldecott Medal**, first bestowed in 1938, is awarded to the artist of the most distinguished picture book for children. The award consists of a bronze medal.

Beth Krommes, for *The House in the Night*, by Susan Marie Swanson

Governor General's Literary Awards

Canada's premier literary awards. Prizes are given in 14 categories altogether: Fiction, Poetry, Drama, Translation, Nonfiction, and Children's Literature (Text and Illustration), each in English and French. Established in 1937. Prize: Can\$25,000.

Fiction (English) *The Mistress of Nothing* by Kate Pullinger

Fiction (French) *Le Discours sur la tombe de l'idiot* by Julie Mazzieri

Poetry (English) *The Fly in Autumn* by David Zieroth

Poetry (French) *Thérèse pour joie et orchestre* by Hélène Monette

Griffin Poetry Prize

Established in 2001 and administered by the Griffin Trust for Excellence in Poetry. The award honours first-edition books of poetry published during the preceding year. Prize: Can\$50,000 each for the two awards.

Canadian Award *The Sentinel* by A.F. Moritz

International Award *Rising, Falling, Hovering* by C.D. Wright (U.S.)

Büchner Prize

Georg-Büchner-Preis. Awarded for a body of literary work in the German language. First awarded in 1923; now administered by the German Academy for Language and Literature. Prize: €40,000.

Walter Kappacher (Austria)

Hoof Prize

P.C. Hoofprijis. The Dutch national prize for literature, established in 1947. Prize: €60,000.

Hans Verhagen

Nordic Council Literature Prize

Established in 1961. Selections are made by a 10-member jury from among original works first published in Danish, Norwegian, or Swedish during the previous two years or in other Nordic languages (Finnish, Faroese, Sami, etc.) during the previous four years. Prize: Dkr 350,000.

Jeg forbanner tidens elv by Per Petterson (Norway)

Prix Goncourt

Prix de l'Académie Goncourt. First awarded in 1903 from the estate of French literary figure Edmond Huot de Goncourt, to memorialize him and his brother, Jules. Prize: €10.

Trois femmes puissantes by Marie NDiaye

Prix Femina

Established in 1904. The awards for works "of imagination" are announced by an all-women jury in the categories of French fiction, fiction in translation, and nonfiction. Announced in November together with the Prix Médicis. Prize: not stated.

French Fiction *Personne* by Gwenaëlle Aubry

Strega Prize

Premio Strega. Awarded annually since 1947 for the best work of prose (fiction or nonfiction) by an Italian author in the previous year. The prize is supported by the beverage company Liquore Strega and Telecom Italia. Prize: not stated.

Stabat mater by Tiziano Scarpa

Cervantes Prize for Hispanic Literature

Premio Cervantes. Established in 1976 and awarded by the Spanish Ministry of Culture for a body of work in the Spanish language. Announced in November or December and awarded the following April. Prize: €125,000. José Emilio Pacheco (Mexico)

Planeta Prize

Premio Planeta de Novela. Established in 1951 by the Planeta Publishing House for the best unpublished original novel in Spanish. Awarded in Barcelona in October. Prize: €601,000 and publication by Planeta.

Contra el viento by Ángeles Caso

Camões Prize

Prémio Camões. Established in 1988 by the governments of Portugal and Brazil to honour a "representative" author writing in the Portuguese language. Prize: €100,000.

Arménio Vieira (Cape Verde)

Russian Booker Prize

Awarded since 1992; the Russian Booker Prize has sometimes carried the names of various sponsors—e.g., Smirnov in 1997–2001. In 2004 it was underwritten by the Open Russia Charitable Organization and called the Booker/Open Russia Literary Prize. Awards: \$15,000 for the winner, \$1,000 for each finalist.

Vremya zhenshchin ("Time of Women") by Yelena Chizhova

Big Book Prize

Premiya Bolshaya Kniga. First given out in 2006; it is sponsored by the government of Russia and underwritten by a number of prominent businessmen, who also serve as the jury. Awards: 3 million rubles for first prize, 1.5 million for second, and 1 million for third.

Leonid Yuzefovich for his novel *Zhuravli i karliki* ("Cranes and Dwarfs")

Naguib Mahfouz Medal for Literature

Established in 1996 and awarded for the best contemporary novel published in Arabic. Prize: \$1,000 and a silver medal. The winning work is translated into English and published in Cairo, London, and New York.

Warrak Al-Hub ("The Scribe of Love") by Khalil Sweileh (Syria)

Caine Prize for African Writing

The Caine Prize for African Writing is awarded annually for a short story written by an African writer and published in English. The prize is named for Sir Michael Caine, longtime chairman of Booker PLC, the publishing company, and chairman of the Booker Prize management committee for 25 years. The Caine Prize was first given out in 2000. Award: £10,000 plus a travel allowance.

E.C. Osondu (Nigeria) for "Waiting"

Man Asian Literary Prize

Established in autumn 2007; this prize is awarded annually for an Asian novel unpublished in English. The prize is underwritten by the Man Group PLC and the Hong Kong International Literary Festival Ltd. Prize: \$10,000 for the author and \$3,000 for the translator, plus publication and distribution of the work if other arrangements have not been made.

The Boat to Redemption by Su Tong (China)

Jun'ichirō Tanizaki Prize

Tanizaki Jun'ichirō Shō. Established in 1965 to honour the memory of novelist Jun'ichirō Tanizaki. Awarded annually to a Japanese author for an exemplary literary work. Prize: ¥1,000,000 and a trophy. The prize was not awarded in 2009.

Ryūnosuke Akutagawa Prize

Akutagawa Ryūnosuke Shō. Established in 1935 and now sponsored by the Association for the Promotion of Japanese Literature; the prize is awarded in January and June for the best serious work of fiction by a promising new Japanese writer published in a magazine or journal. Prize: ¥1,000,000 and a commemorative gift.

"Potosuraimu no fune" ("The Lime Pothos Boat") by Kikuko Tsumura (140th prize, second half of 2008)

Tsui no sumika ("The Final Home") by Ken'ichirō Isozaki (141st prize, first half of 2009)

Mao Dun Literary Award

Established in 1981 to honour contemporary Chinese novels and named after novelist Shen Yanbing (1896–1981), whose nom de plume was Mao Dun; awarded every three years. The latest awards were given on Oct. 25, 2008.

Qinqiang ("Qin Opera") by Jia Pingwa

Ergun He you an ("The Right Bank of the Argun River") by Chi Zijian

Hu guang shan se ("The Scenery of Lakes and Mountains") by Zhou Daxin

An suan ("Plotting") by Mai Jia

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are now in a great age of popular science writing. . . . So I like to think the notion of two cultures will soon become entirely extinct, like the dinosaurs."

Certainly, science's impact on culture was a topic raised in the armfuls of histories, primers, and collections published to mark the bicentenary of Darwin's birth and the 150th anniversary of his *On the Origin of Species*. (See Special Report on page 182.) Rated at the top of the list by the *New Scientist* magazine, *Darwin's Sacred Cause*, by Darwin biographers Adrian Desmond and James Moore, controversially located Darwin's motivation for his theory of evolution in his repugnance for the slave trade and his desire to show the ancestral brotherhood of all men. The beautifully written *Darwin's Island*, by Steve Jones, reminded readers of the huge influence that Great Britain had on the naturalist's work, focusing on the numerous books he wrote on topics as diverse as "dogs, barnacles, insect-eating plants, orchids, earthworms, apes, and human emotion." *Darwin's Lost World* was described by its author, University of Oxford scientist Martin Brasier, as a "scientific thriller," a "detective story" crossing much of the world in search of the answer to "Darwin's Dilemma," or why the fossil record suddenly and mysteriously stops prior to the Cambrian Period. The most universally acclaimed contribution to Darwin's legend, however, was the poetical biography *Darwin: A Life in Poems*, by Ruth Padel, his great-great-granddaughter. Borrowing from letters, notebooks, and the Bible and providing marginalia to fill in the poems' historical contexts, Padel was said by a reviewer in *The Economist* magazine to have "caught the quintessence of the man's character, as if in a butterfly net." The *Irish Times* newspaper lauded the volume as "a landmark achievement" worthy of T.S. Eliot. (CAROL PEAKER)

United States. American publishers were assaulted on a number of fronts in 2009, including by the down-trending economy, flat or sagging book sales, the distractions of the Internet, and the now seemingly ever-present ascent of the electronic book. Many readers looked to escapist literature, especially those who flocked to the works of such best-selling authors as James Patterson, Dan Brown, Nicholas Sparks, and Nora Roberts. (See BIOGRAPHIES.) Nevertheless, it was a silver year, if not a golden one, for readers who enjoyed good fiction, poetry, and nonfiction narrative.

Novelist E.L. Doctorow, who had mined American history a number of times—using such templates for his work as the Western frontier, the Julius and Ethel Rosenberg spy case, and the Civil War—chronicled the lives of two famous New York City hoarders in his 2009 novel *Homer and Langley*. Doctorow built on, changed a bit, and transformed the lives of the Collyer brothers into a stately, beautiful performance with great resonance within the narrow range of their housebound lives.

The National Book Award fiction finalist *Lark and Termite* by Jayne Anne Phillips showcased the writer working at the top of her powers. Her first novel in nearly a decade was a dense, sharply rhythmic work of fractured narrative about a nearly broken West Virginia family. The book shifts back and forth over a nine-year period, between South Korea's North Chungchong province in late July 1950, where an American corporal named Robert Leavitt and a band of South Korean war refugees are assaulted by friendly fire, and a West Virginia hamlet in 1959, where Leavitt's mentally challenged son (nicknamed Termite by his family) and the boy's half sister Lark find themselves besieged by rising floodwaters and apparent threats from the local social service agency about the care of young Termite. In this section of the novel, narrated by Lark: "A car horn blares in the alley. Termite blares too then, trying to sound like the horn. 'Elise is here,' Nonie says. 'Don't forget to wash the dishes, and wipe off his hands.' She's already walking off across the grass, but Termite is outside so he doesn't mind her going. Elise waves at me from inside her Ford. She's a little shape in the shine of glare on the window, then the gravel crunches and they're moving off fast, like they're going somewhere important. 'Termite,' I say to him, and he says it back to me. He always gets the notes right, without saying the words. His sounds are like a one-toned song, and the day is still and flat. It's seven in the morning and here and there a little bit of air moves, in pieces, like a tease, like things are getting full so slow no one notices."

Other major writers produced work of serious amplitude and effect. *Little Bird of Heaven*, the title of Joyce Carol Oates's 55th novel, was borrowed from an actual country song (attributed in the novel to an upstate New York woman named Zoe Kruller), but the book, with the murder of the singer at

the centre of it, becomes an American writer's communion with Fyodor Dostoyevsky's *Crime and Punishment*, that soul-searing and soul-wrestling story out of Russia. Murder was also at the centre of John Irving's latest opus, *Last Night in Twisted River*, a novel that carries the reader from a remote New Hampshire logging camp in the mid-1950s to a freezing lake house near Toronto early in the new century. In his latest novel, *Inherent Vice*, Thomas Pynchon, author of whale-sized masterpieces, wrote in under 400 pages a deliciously composed dark comedy—a pastiche of the noir detective novel—about Southern California in the late 1960s and early '70s. Less successful were Philip Roth's latest short novel, *The Humbling*, about an aging actor who tries to cure his stage fright with sexual addiction, and the book-length work by gifted storyteller Lorrie Moore, *A Gate at the Stairs*; though widely praised, the work unaccountably read like a first novel that was some decades into revision.

Well-regarded and enterprising work by writers with smaller followings also gained considerable attention. Irish-born novelist Colum McCann looked at his adopted New York City in *Let the Great World Spin*, which won the National Book Award for fiction. The story begins with a depiction of the real August 1974 illicit high-wire feat of French tightrope walker Philippe Petit, who strung cables between the twin towers of the World Trade Center, stepping out to begin his epic walk. McCann wrote, "He entered the noise of the city, the concrete and glass made a racket, the thrup of the traffic. The pedestrians moving like water around him. He felt like an ancient immigrant. He had stepped onto new shores." The action also follows the stories of a priest, prostitutes, a judge, and an heiress. Mexican American Luis Alberto Urrea's novel *Into the Beautiful North* drew a lot of praise for its lyrical narrative, wedded to a plot similar to Akira Kurosawa's film *Seven Samurai*. "Riverbeds and streambeds looked like long lines of baby powder. . . . Nayeli watched the cattle become more emaciated and spindly. They stood in the sun as if they'd already been slaughtered. . . . Their ribs showed—the farther north the bus drove, the more pronounced the cages. Soon the cows looked like old rugs thrown over wood piles."

Several fine books by even lesser-known writers made it onto the finalist list of the National Book Award for fic-

tion. Bonnie Jo Campbell's short-story collection *American Salvage* offered a look at cold, lonely, methamphetamine-drenched modern working-class life in small-town Michigan. One reviewer found a roughness and even beauty that now and then reached something akin to the rude sublimity of a D.H. Lawrence story. Few of the stories ended with a resolution, but because of their despairing feel and their shape and form, they felt all too real. Probably the best new English-language story writer lived in Pakistan. Daniyal Mueenuddin, the author of another fiction finalist, *In Other Rooms, Other Wonders*, was educated in Pakistan and the U.S., where he attended Dartmouth College, Hanover, N.H., and Yale Law School. As do a number of his characters in these sharp and insightful stories, he lived in the Punjab, which he offered as the centre of the world. Beginning with the opening story, a large cast of characters, ranging from wealthy landowners to servants, pass through his pages, providing a wonderful sense of the strata of contemporary Pakistan—and a great corrective to the cartoonlike representation in current-day newspapers; the latter frequently depicted the country as teeming with fanatics and terrorists but explored nothing about ordinary day-to-day life. The fifth nominee for the National Book Award lived even less of his life in the United States than had

Pakistani American author Daniyal Mueenuddin's debut collection of short stories, In Other Rooms, Other Wonders, was a finalist for the National Book Award for fiction.



Nahal Toosi/AP

Mueenuddin. Marcel Theroux, son of novelist Paul Theroux, was born in Uganda and resided in the United Kingdom. His novel *Far North* offered a dystopic look at the future, with Americans living in encampments along the Russian tundra.

Two new novels of note, *The Way Through Doors* and *Lowboy*, by two young male writers, Jesse Ball and John Wray, respectively, both featured major characters who were rather odd young men. T.C. Boyle nobly attempted an affecting portrait of American architect Frank Lloyd Wright in *The Women*. South African expatriate Lynn Freed focused once again on her native ground in *The Servants' Quarters*. Michael Malone took readers onto his North Carolina turf and into the air above it in *The Four Corners of the Sky*. Valerie Martin explored the psyche of a struggling New York City actor in *The Confessions of Edward Day*, and Jonathan Lethem chimed in with *Chronic City*, a collection of interesting portraits of Manhattanites. Achy Obejas, author of *Memory Mambo* (1996) and *Days of Awe* (2001), chose Havana for the setting of her third novel, the appealing *Ruins*. Brian Kiteley focused on his hometown of Northampton, Mass., in his novel *The River Gods*, taking its title from the popular name for the group of powerful men, the offspring of marriages between the families of ministers and merchants, who ruled this part of New England for about 100 years from the late 17th century into the 18th century; he edged his novel toward meditation, celebration, an investigation, and elegy. Jean Thompson's latest collection of short fiction, *Do Not Deny Me*, won some praise, as did Joanna Scott's novel *Follow Me* and Robert Cohen's *Amateur Barbarians*.

A number of special editions were published. The Library of America published the *Collected Stories* of Raymond Carver—1,000 pages of Carver's work, including variant versions of his most famous short fiction. Another compelling collection of posthumous work was William Styron's Marine Corps sketches titled *Suicide Run*. In addition, Michael Crichton's last fully completed novel, *Pirate Latitudes*, lit up the fall title list.

While the fiction of 2009 shot off sparks and sometimes fireworks, the nonfiction books, whether memoir, criticism, history, or a blend of the above, smoldered rather than exploded. Nick Reding's *Methland: The Death and Life of an American Small Town* offered

a worrisome piece of book-length reportage of a methamphetamine-saturated American heartland. Pulitzer Prize winner Michael Chabon came out with his collected magazine essays titled *Manhood for Amateurs*, on "the pleasures and regrets of a husband, father, and son." Eula Biss published a collection of eccentric and well-composed personal essays on race in American life and various other subjects in *Notes from No Man's Land*. Novelist Jane Vandenburgh's memoir, *A Pocket History of Sex in the Twentieth Century*, was built on a wonderful fusion of insight and eccentricity of vision. The posthumous *The Essays of Leonard Michaels* (edited by Katherine Ogden Michaels) showed off the brilliance of the late story writer in nonfiction prose. Critic Elaine Showalter produced a long-awaited compendium in *A Jury of Her Peers: American Women Writers from Anne Bradstreet to Annie Proulx*. A massive project edited by writer Greil Marcus and Harvard professor Werner Sollors, *A New Literary History of America*, approached American history and culture from a number of sharp angles, with a roster of contributors ranging from historian John Diggins (on John Adams) to Ishmael Reed (on Mark Twain) to Michael Lesy (on *Life* magazine) to the editors (on Hurricane Katrina). Morris Dickstein signed in with *Dancing in the Dark: A Cultural History of the Great Depression*. Alan Cheuse published *A Trance After Breakfast*, a collection of travel essays that ranged in subject from his native New Jersey to the islands of Bali, Indonesia, and New Zealand.

Narrative played a role even among poets. Former poet laureate Rita Dove signed in with *Sonata Mulattica*, a collection of poems about a young African European composer who first won Beethoven's approval and then earned his anger. Campbell McGrath turned his attention to the figure of young George Shannon, the Pennsylvania-born teenage boy who was the youngest member of the Lewis and Clark expedition. In *Shannon* he dramatized George's 16 days of wandering alone across the Great American Desert after becoming separated from the main group of explorers. Novelist Richard Bausch went mostly in the direction of lyric in his book *These Extremes*, which featured prose to his relatives as well as verse based on historical and literary figures.

Hilda Raz shone her light on the natural world around her in *What Happens:*

In Springfield, Nebraska
on the central flyway
in March, the geese
at sunset make such a ruckus as
you can hear for miles
either side of Highway 14

Pamela Uschuk's *Crazy Love* employed the same approach. Marilyn Kallet, longtime resident of Tennessee, brought out *Packing Light*. Miguel Algarin, founder of the Nuyorican Poets Café, produced essays and poems in *Survival Supervivencia*. On the lighter side of brilliance, the Library of America offered *Ira Gershwin: Selected Lyrics*, edited by Robert Kimball.

Among the literary figures who died during the year were John Updike, Hortense Calisher, Marilyn French, Jim Carroll, Elmer Kelton, W.D. Snodgrass, James Purdy, Harold Norse, Frank McCourt, and William Safire. (See OBITUARIES.) Other losses included James D. Houston, whose novels featured California themes; Deborah Digges, an award-winning poet and English professor at Tufts University, Medford, Mass.; Morton Marcus, a celebrated Santa Cruz (Calif.) poet whose verse appeared in numerous journals and books; and Raymond Federman, a French American who specialized in creating works in the experimental style that was best exemplified in his book *Double or Nothing* (1971).

(ALAN CHEUSE)

Canada. Humour and disaster were often uneasy companions in Canadian novels in 2009. Margaret Atwood's *The Year of the Flood* was an inventively witty but bleak account of life on Earth after a long-predicted worldwide disaster has occurred, while Douglas Coupland's darkly comic *Generation A* was set in a future in which bees were nearly extinct and only storytelling—or lies—survived. Tall tales also informed Michael Crummey's *Galore*, set in a remote Newfoundland outpost. The true and tragic capsizing of the oil rig *Ocean Ranger* in 1982 formed the backdrop for Lisa Moore's novel *February*, the story of a family surviving the loss of husband, father, and breadwinner.

Other settings were as various as ancient Macedonia, where Aristotle tutors the future conqueror Alexander; in Annabel Lyon's *The Golden Mean*; a World War II-era factory, where four

women investigate the mystery of malfunctioning aircraft in Jeanette Lynes's quirky *The Factory Voice*; and post-Khmer Rouge Cambodia, where a young woman searches for the lover who disappeared there a decade earlier in Kim Echlin's *The Disappeared*. Anne Michaels's compelling love story *The Winter Vault* took both Egypt and Canada as its setting while also interweaving flashbacks of historical events in post-World War II Poland and England. Barry Callaghan also played with time, present and past, in *Beside Still Waters*, a peripatetic search for a lost love. In contrast, Bonnie Burnard's *Suddenly* was placed squarely in the centre of a cancer patient's family and friends.

The rewriting of real women's lives occupied two novelists. Kate Pullinger, in *The Mistress of Nothing*, reworked the story of a rebellious housemaid and her famous employer, Lucie Duff Gordon, an unconventional, not to say eccentric, literary figure; and Claire Holden Rothman was not too closely bound by the facts in *The Heart Specialist*, an account of the life and career of Maude Abbott, one of Canada's first female doctors.

The pitfalls of expediency and morality were examined in Linden MacIntyre's *The Bishop's Man*, in which a priest is sorely tested when confronted with the

consequences of his cover-ups and self-suppression; by Colin McAdam in *Fall*, a portrait of privileged male adolescents at an Ottawa boarding school; and by Martha Baillie in *The Incident Report*, a fantastic romp of literary references, allusions, and illusions, based loosely on Giuseppe Verdi's opera *Rigoletto*.

Short stories also included the rewriting of real lives, as in Alice Munro's latest collection, *Too Much Happiness*, in which the title story told the tale of the final journey of Sofya Kovalevskaya, a famous 19th-century Russian mathematician. In other collections, Ali Smith demonstrated the versatility of the short-story form in *The First Person, and Other Stories*, as did Deborah Willis in *Vanishing, and Other Stories*, while Mavis Gallant once more utilized her talents for observation in *Going Ashore*. The stories in Alexandra Leggat's *Animal* plumbed the often unrecognized affinities of animals and humans. Two very different world views were offered in *Curry Is Thicker than Water* by Jasmine D'Costa, a deftly witty excursion into tales set in the heart of India, and in George Bowering's *The Box*, a playful riff on Vancouver in the 1960s.

A common theme in many books of poetry was the differences that both separate and unite individuals. Adeena Karasick's *Amuse Bouche* served up a word salad of phrases, concepts, metaphor, and wit in wild and tasty juxtapositions. Marguerite Pigeon's *Inventory* examined the interface between subject and object, where the observer and the observed begin and end; Fred Wah considered the relations between word and thing in *Is a Door*; and Jeanette Lynes contrasted Canadian places and pastimes in *The New Blue Distance*. Douglas Lochhead stayed put and studied his own backyard in *Looking into Trees*. Barry Dempster reveled in the contrasting vagaries of the human heart in *Love Outlandish*.

The charm of departure beguiled many poets during the year. David Zieroth meditated on escaping from oneself in *The Fly in Autumn*, while Carmine Starnino in *This Way Out* looked for exits from modernity, and Sina Queyras's *Expressway* was a direct route into the heart of other times and places. Poetic milestones were marked by Robert Bringhurst's *Selected Poems* and Susan Musgrave's *When*

Canadian author Margaret Atwood attends a photocall in London for a theatrical performance of her novel *The Year of the Flood*.



Marco Secchi/Getty Images

the World Is Not Our Home: Selected Poems, 1985–2000. Margaret Avison's final meditations were published posthumously in her last collection, *Listening: The Last Poems*.

(ELIZABETH RHETT WOODS)

Other Literature in English. Important works written in English by authors from sub-Saharan Africa, Australia, and New Zealand made a strong showing among other noteworthy and award-winning books published in 2009. Much to the delight of readers and critics alike, new releases by several of South Africa's preeminent writers hit bookstores. J.M. Coetzee, the 2003 Nobel Prize-winning laureate in literature, brought out *Summertime*, the final volume in his trilogy of fictionalized memoirs; compatriot André Brink also released an autobiographical volume, *A Fork in the Road*. Poet, author, painter, and activist Breyten Breytenbach offered a vast array of aesthetic, social, and cultural commentary in two of the year's most memorable books, *Intimate Stranger* and *Notes from the Middle World*. Drawing from the 1996 testimony presented to South Africa's Truth and Reconciliation Commission of a mother who lost her son in a massacre, authors Antjie Krog, Nosisi Mpolweni, and Kopano Ratele released their investigative collaboration *There Was This Goat*, illuminating South Africa's racial and cultural misunderstandings. Relative newcomer Damon Galgut confirmed his status as one of South Africa's finest young literary voices with ongoing accolades for his novel *The Imposter* (2008); in June 2009 it was named winner of the 2008 University of Johannesburg Prize.

Elsewhere, Nigerian fiction writer Chimamanda Ngozi Adichie continued her remarkable success with the publication of her debut collection of short stories, *The Thing Around Your Neck*. Emerging author Uwem Akpan made an impressive debut in capturing both the 2009 Commonwealth Writers' Prize for Best First Book (Africa region) and a 2009 PEN/Beyond Margins Award for *Say You're One of Them* (2008), a compilation of stories about children and hope in Africa whose texts often contained a mix of languages. Compatriot and Booker Prize winner Ben Okri employed stylistic innovations of his own in *Tales of Freedom*, creating what he termed *stokus*, a hybrid of short story and haiku.

Australians heralded the publication of David Malouf's novel *Ransom*, his first to appear in more than a decade. The work revisited Homer's *Iliad* and gained widespread praise for its spare,

elegant prose and imaginative rendering of ancient Greece. Colleen McCullough, well known for her prodigious Masters of Rome historical novel sequence, extended her foray into the mystery-suspense genre with *Too Many Murders*, her second novel in the Carmine Delmonico series. Two other Australians, Tim Winton (*Breath*, 2008) and Christos Tsiolkas (*The Slap*, 2008) garnered international attention in receiving the Miles Franklin Literary Award and the Commonwealth Writers' Award (overall winner), respectively.

Highlights of the winners of the annual Montana New Zealand Book Awards for 2009 included *About My Wife* (2008), by Emily Perkins (fiction category); *The Rocky Shore* (2008), by Jenny Bornholdt (poetry); and *Collected Poems 1951–2006* (2008), by C.K. Stead (reference and anthology). Award-winning Aboriginal author Alexis Wright, whose talents became best known with her breakthrough best seller *Carpentaria* (2006), reached an even wider readership with the publication of the novel in the U.S. in 2009. On a sad note, Wilton G.S. Sankawulo, Sr., Liberian political leader, short-story writer, novelist, essayist, and translator, died in February. (DAVID DRAPER CLARK)

GERMAN

The authors of a number of the major German-language works of 2009 were born in the communist part of Europe during the Cold War. The German-speaking literary world was caught off guard on October 8 when the Swedish Academy announced that Herta Müller was the winner of the Nobel Prize for Literature. (See NOBEL PRIZES.) Müller, who came from a German-speaking village in the historic region of Banat, Rom., had moved to West Germany in 1987 in order to escape repression and censorship under the dictatorship of Nicolae Ceausescu. The Ceausescu regime discriminated against ethnic minorities, persecuted political dissidents, and engaged in an ecologically devastating program of destroying villages ostensibly to create more arable land, and living through the ordeal greatly contributed to Müller's primary literary theme: the toll taken on the human soul by dictatorships. Müller's novel *Atemschaukel*, published in August, told the story of a young German-speaking Romanian at the end of World War II and his experiences in a Soviet labour camp.

The winner of the 2009 German Book Prize, announced on October 12 at the

Thomas Lohnes—AFP/Getty Images



Romanian-born German writer Herta Müller won the 2009 Nobel Prize for Literature; her novel *Atemschaukel* was published in August.

beginning of the Frankfurt Book Fair, was Kathrin Schmidt for her novel *Du stirbst nicht*. The novel was about a woman who, like the author herself, loses the ability to speak after a stroke and has to relearn language. Schmidt had published several well-received books in the decade before 2002, when a cerebral hemorrhage forced her to go through that very experience. *Du stirbst nicht* dealt with the way that language and identity are interwoven, and since the novel's protagonist was, like its author, born in East Germany, it also addressed the final years of the East German dictatorship and German reunification.

Hungarian-born Terézia Mora, who had moved to Berlin at the beginning of the 1990s, published *Der einzige Mann auf dem Kontinent*, an exploration of life in the contemporary international business world and what it does to the human personality. The novel's protagonist, Darius Kopp, lives in a synthetic world of computers and office buildings that is no longer connected to the natural world and its rhythms. Written by an author who grew up in the brittle world of socialism in Hungary, the novel explored the fragility of contemporary capitalism and the personality structures associated with it.

Rainer Merkel's novel *Lichtjahre entfernt* dealt with contemporary sexual relationships. Its protagonist was a Munich-based psychotherapist who travels

to New York, meets his girlfriend, and, shortly before his flight back to Germany, ruminates on the reasons why his relationship with her has come to an end. Norbert Scheuer's novel *Überm Rauschen* was also an introspective exploration of personal relationships, this time between two brothers and their father, who is dead. This novel, unlike the novels of Mora and Merkel, showed the interrelationship between humans and nature; the primary activity of its protagonist, Leo Arimond, as well as of his brother and father, is fishing in a country river near his hometown, a village in rural North Rhine-Westphalia. Stephan Thome's novel *Grenzgang* also told a provincial story about life in a small village with its rituals, problems, and interactions with city people.

Swiss novelist Urs Widmer published *Herr Adamson*, a novel about death and its relationship to life. When the novel's protagonist is eight years old, he meets a man named Adamson; it turns out that Adamson emerged from the world of the dead, having died at the precise moment when the novel's protagonist was born. Adamson can be seen only by the novel's protagonist, and he can be released completely into the land of the dead only when the protagonist himself dies. Thus, the living and the dead are united by bonds that are separable only by death, and all of life is a preparation for dying. Logically, the novel is narrated on the day of the protagonist's death.

Jens Petersen was awarded the Ingeborg Bachmann prize in June for his unfinished novel *Bis dass der Tod*. Like *Herr Adamson*, this work also explored issues of life and death; the novel's protagonist, Alex, who cares for his terminally ill and comatose girlfriend, considers the possibility of suicide. Similarly, Judith Hermann's short-story collection *Alice* addressed the prominence of death in life. The five stories in the book revolve around one main figure (the eponymous Alice), various men in her life, and her attempts to deal with their deaths.

On a lighter note, Brigitte Kronauer's novel *Zwei schwarze Jäger* (2008) was a playful self-referential exploration of literature and the way it reflects and enriches life. Its protagonist was the writer Rita Palka, who, over the course of the novel, encounters a number of people with unusual histories. Finally, Lutz Seiler's sombre short-story collection *Die Zeitwaage* returned to the problem of life in socialist East Germany and its negative impact on human life. (STEPHEN M. BROCKMANN)

FRENCH

France. The year 2009 showed a marked decrease in the number of works of autobiographical fiction, or "autofiction," a genre in which authors novelize their lives and which had reigned over the past decade of French literature. Indeed, the title of one of 2009's best-selling works, Emmanuel Carrère's *D'autres vies que la mienne* ("Other Lives than My Own"), could be viewed as the year's literary rallying cry. In this nonfictional work, Carrère explicitly turned his back on the autofiction of his last work, *Un Roman russe* (2007), to tell the stories of others: of his girlfriend's sister Juliette, who died of cancer in 2005, and of a family still reeling from their young daughter's death in the Sri Lankan tsunami of 2004.

The prizewinning author Alain Fleischer subverted autofiction in *Moi, Sándor F.* by treating biography as autobiography. Through the literary legerdemain of channeling his uncle, who had been killed by the Nazis during deportation—the man after whom he had been named and whose personality, by all accounts, he had inherited—Fleischer opened a new literary frontier where novel, biography, and autobiography meet and one man's past elucidates another's present. This process was closely mirrored in another homage to a dead relative, Agnès Desarthe's *Le Remplaçant*, in which the author described the man whom her grandmother had married after her first husband's death at Auschwitz and from whom the author believed herself to have inherited her understanding of storytelling as a weapon against resignation and forgetting.

The decline of autofiction was matched by a resurgence of traditional fiction, particularly in works exploring the close setting of the family. In *Paris-Brest*, Tanguy Viel offered the spectacle of a dysfunctional family in which the narrator, Louis, is trapped between his disgraced, bankrupt father, his domineering mother, and his oppressive grandmother, who has unexpectedly inherited a fortune that Louis hopes to gain for himself. Wielding two weapons, a novel he has written to expose his family's foibles and his friendship for a young hoodlum whom his family despises, Louis attempts a rebellion that is doomed from the outset, in a novel that intertwines humour and despair.

In a similar vein, the celebrated novelist Philippe Djian published *Impardonnables*, in which a has-been writer who lost his wife and one daughter in

a car accident sees his world crumble again when his other daughter disappears. As his quest to find her estranges him from his new family, he begins to worry whether destiny has chosen him as its special victim and whether forgiveness of oneself can ever be anything but an illusion.

One subgenre of fiction, historical fiction, also saw a particular revival in the vacuum left by autofiction. In *Des hommes*, Laurent Mauvignier described the ramifications of the Algerian War on a group of French men who, once drafted, witnessed unspeakable horrors. The novel begins 40 years after the war, with the men suffering from psychological problems, and culminates in a moving flashback describing their experiences in the Algeria of 1960.

Pierre Lartigue completed a historical novel just days before his death. In *Des fous de qualité*, he portrayed the loss of idealism of soldiers who believed in the military virtues of honour, courage, and meritocracy under Napoleon only to return home after Napoleon's defeat to a France where the restoration of the embittered monarchy, eager to bury Napoleon's memory, has replaced honour with the cynical omnipotence of money.

Jean-Marie Laclavetine had the similarly ambitious project of painting a fresco of an entire era in his *Nous voilà*, but the era he examined was his own.

French author Marie NDiaye was awarded the 2009 Prix Goncourt for her novel Trois femmes puissantes.



Martin Bureau—AFP/Getty Images

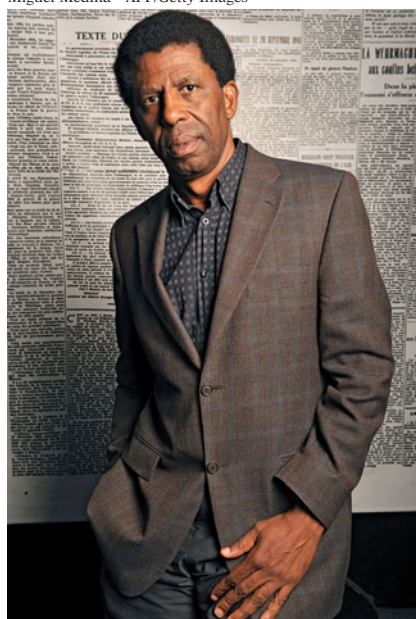
In 1973 former fascists still faithful to Marshal Philippe Pétain steal his coffin in order to rebury it more honourably among patriotic heroes of World War I. When their plot is exposed, Pétain's body passes from hand to hand over the following three decades, to members of both extremes of France's political spectrum.

Ironically, in a year marked by pure fiction's triumph over autofiction, three of the four main literary prizes were awarded to autofictions. The Prix Médicis went to Haitian Canadian Dany Laferrière's *L'Énigme du retour*, in which the author described his homecoming, after decades of political exile, to his native Haiti, a country for which he had longed but to which he had become hopelessly foreign. In the winner of the Prix Renaudot, *Un Roman français*, Frédéric Beigbeder took the opportunity afforded by his infamous 2008 drug bust to reminisce upon the troubled childhood that shaped the hell-bent man he later became. Gwenaëlle Aubry won the Prix Femina for *Personne*, her portrait in 26 chapters, one for each letter of the alphabet, of her father, a lifelong manic-depressive who in the end died homeless.

The Prix Goncourt was awarded to the year's one true literary sensation, Marie NDiaye's *Trois femmes puissantes*, set in three vividly dysfunctional families. Three Senegalese women are trapped by their families: the first, Norah, believes she has escaped her abusive father until years later when she is called back to Senegal to face the debris he has become. The second, Fanta, is living in France with her failure of a husband, who envies her and suspects her of having an affair with his boss. The third, Khady, is a young widow at the mercy of her in-laws, who hate her for not having given her husband a child before his premature death. Though subjected to the worst humiliations as she attempts to reach France, Khady remains poignantly true to herself in a triumph of the human spirit over adversity. (VINCENT AURORA)

Canada. Two fiction titles dominated the literary scene in French Canada in 2009. Haitian-born writer and filmmaker Dany Laferrière matched literary quality with popular success with his novel *L'Énigme du retour*, a story of a man who, after his father's funeral, returns to Haiti to recover what remains of his family. The book won not only the Grand Prix du Livre de Montréal but also France's Prix Médicis. (Recognition from outside Canada always helps local

Miguel Medina—AFP/Getty Images



Haitian-born Dany Laferrière's novel *L'Énigme du retour* won both the Grand Prix du Livre de Montréal and France's Prix Médicis.

authors; this was also the case for Togo-born Edem Awumey, whose novel *Les Pieds sales* was included on the long list for France's Prix Goncourt.) The other dominant title was *Le Ciel de Bay City* (2008) by Catherine Mavrikakis, which in 2009 picked up the booksellers' prize (the Prix des Libraires du Québec) and the increasingly influential Prix Littéraire des Collégiens, an award conferred by secondary-school students. This was Mavrikakis's breakout book—though, like her earlier works, it featured a dark and brooding atmosphere. In competition for the Grand Prix du Livre de Montréal was a graphic novel, *Paul à Québec* by Michel Rabagliati. This was the first time that such a work had been considered for a major prize. The year saw the continued flowering of the Aurélie Laflamme phenomenon; the character was the creation of writer India Desjardins, who understood the need for a local series of novels for teen and preteen girls. The sixth volume in the series, *Ça déménage!*, was published in 2009. An all-but-overlooked novel, Julie Mazzieri's *Le Discours sur la tombe de l'idiot* (2008), won the Governor General's Literary Award for French-language fiction for a story that depicted a society falling apart after the village idiot is killed. The winner for French-language poetry was Hélène Monette's *Thérèse pour joie et orchestre*; the award provided overdue recognition of her long career. In nonfiction, *La Renarde et*

le mal peigné, a collection of letters, looked back on Quebec's recent past by resurrecting the romantic relationship between two important cultural figures, Pauline Julien (a singer) and Géraud Godin (a poet and politician). The suicide of novelist Nelly Arcan (see OBITUARIES) at age 36 shocked Quebec society. Sadly, she did not live to see the publication later in the year of her book *Paradis, clef en main*, ironically a novel that ultimately argued against suicide.

(DAVID HOMEL)

ITALIAN

Tiziano Scarpa's novel *Stabat mater* (2008), recipient of the 2009 Strega Prize, focuses on the impact of Antonio Vivaldi's innovative music on his contemporaries. Abandoned at birth, 16-year-old Cecilia spends her nights writing letters to her unknown mother and conversing with a personification of her own death. For Cecilia, Vivaldi's most talented pupil at the Ospedale della Pietà in Venice, music is only a mechanical activity until she gets to play the Red Priest's unconventional scores. Shocked at first, she gradually perceives the revolutionary power of music. In her journey of discovery, writing and music eventually coincide and lead her to pursue her freedom.

In Edith Bruck's *Quanta stella c'è nel cielo*, recipient of the Viareggio-Rèpaci Prize for fiction, the protagonist, Anita, who is also 16 years old, summons the strength to escape from an oppressive reality. After surviving the Auschwitz concentration camp, she finds herself in Czechoslovakia, treated as an object by members of her own family, who, like her, are Jewish, living in a precarious condition, in perpetual wait to leave for Palestine. Maternity makes her regain control of herself and her body and gives her the courage to rebel and begin a journey to reach the Promised Land. Elena Lowenthal's *Conta le stelle, se puoi* (2008) is a family saga told in a "counterhistorical" perspective. The author, a Hebrew studies scholar, imagines that Mussolini died in 1924 of a stroke and that 1938, instead of being the annus horribilis of racial laws in Italy, was the annus mirabilis of the birth of the state of Israel. Antonia Arslan, a pioneer of Italian women's studies, published *La strada di Smirne*, the sequel to her successful first novel, *La masseria delle allodole* (2004; *Skylark Farm*, 2006). After leaving behind the horror of the Armenian genocide, in which the men of the family were killed,

Gustau Nacarino—Reuters/Landov

Shushanig and her children land in northern Italy, where a relative and his family live a bourgeois lifestyle. Their hopes to find their own “promised land” seem to burn along with Smyrna (now Izmir, Tur.) during the terrible fire that devastated that city in 1922.

Through a fast-paced, humorous, captivating narration, *Almeno il cappello* by Andrea Vitali brings to life the small intrigues, lies, mysteries, quarrels, and reversals of destiny that animate Bellano, a small town on Lake Como, in Fascist-era Italy. The creation of a brass band in the town exposes the protagonists of this endeavour to petty power games between the podesta and the parish.

Cesarina Vighy's *L'ultima estate*, winner of the Campiello Prize for a first novel, is a caustic coming-of-age narrative told partially by an internal narrator, who coincides with the author, and partially by an omniscient narrator, who is intermittently present to disseminate a sense of ironic detachment in what is announced as a painful inner excavation. Shadows from the internal narrator's past populate the limited physical and sensorial space in which she has been confined by illness, and these shadows urge her to make them live through her. She will tell their stories but warns that “This is not going to be a watercolour painting, but an autopsy.”

Antonio Scurati's *Il bambino che sognava la fine del mondo* tells a story inspired by the case of alleged pedophilia at a school in Rignano Flaminio, which received enormous media attention in 2007. Through a complex interplay of fiction and nonfiction, autobiographical fiction and autobiography, the author—a media and communications specialist—reflected on the manner in which the media often amplify collective fears, thereby making the distinction between illusion and reality very thin. After publishing *Gomorra* (2006; Eng. trans., 2007), Roberto Saviano continued to write as an act of resistance, in the obstinate belief that truth “exists in spite of everything” and is to be found in the proliferation of accounts of “microstories” that are often neglected by the media. *La bellezza e l'inferno*, a collection of essays that he had written and in part published between 2004 and 2009, was his second book.

Space and time cross and overlap in two significant works published during the year. In Daniele Del Giudice's *Orizzonte mobile*, accounts of his expedition to the Antarctic in 1990 and of an imag-



Continuing to attract attention was Italian writer Roberto Saviano, who followed up his 2006 novel *Gomorra* with *La bellezza e l'inferno*, a collection of essays.

inary journey to the same lands set in 2007 alternate with excerpts from two notebooks by 19th-century explorers Giacomo Bove and Adrien de Gerlache de Gomery. By switching continuously between different times and perspectives, the author re-creates the “moving horizon” referenced in the title. Eraldo Affinati's *Berlin* is an homage to that city 20 years after the fall of the Berlin Wall. Seven chapters, each with a different narrator, render the multifaceted image of a city that still carries the marks and wounds of 20th-century history, along with the signs of the promise of a multiethnic, productive future.

Fernanda Pivano, whose work as a translator and essayist was pivotal in the diffusion of 20th-century American literature in Italy, died in August. Another loss to Italian letters was that of Alda Merini, one of the country's most important contemporary poets.

(CRISTINA GRAGNANI)

SPANISH

Spain. Many of the novels published in Spain in 2009 had a generational content and a tendency to refer to past times in order to explain the present. Many also featured determined and persevering characters.

Set in the political transition of the 1970s and reissued 30 years after its original publication, *Crónica del des-*

amor (1979) by Rosa Montero explored the worries of the post-Franco generation of women and gay men that felt powerful and disoriented at the same time and their uncertainty about how to manage personal freedom. In Arturo Pérez-Reverte's *Ojos azules*, the Aztecs prepare for their next revenge while the Spaniards are hurrying away, leaving behind the gold for which they crossed the Atlantic—all but one: a blue-eyed soldier who is determined to keep a sack of gold, knowing that it could lead to his capture. Pérez-Reverte presented a violent story about ambition and miscegenation; his novel depicted the most dramatic night in Mexico's conquest.

In his first short-story collection, *Tres vidas de santos*, Eduardo Mendoza presented pseudosaintly characters who are willing to give up everything in the pursuit of an idea. Ángeles Caso won the Planeta Prize with *Contra el viento*, the story of a young Cape Verdean woman who seeks a better life on the Iberian Peninsula but discovers that life is still harsh and challenging. *La sombra de lo que fuimos*, by Chilean Luis Sepúlveda, was awarded the Primavera Prize. It was a generational novel about a group of Chileans who recall their youth, their relationship with the Communist Party, Augusto Pinochet's coup, and their exile and eventual return to a democratic Chile. Kirmen Uribe won the National Prize

Spanish journalist and novelist Rosa Montero observed the 30th anniversary of the publication of her first work of fiction, *Crónica del desamor*.



Quim Llenas—Cover/Getty Images

for Narrative with *Bilbao–New York–Bilbao* (2008), which was written in Basque and had not yet been translated into Spanish.

Pandora al Congo (2005; in Catalan), reissued in 2009 as *Pandora en el Congo*, by Albert Sánchez Piñol, was the story of a ghostwriter who is given a strange and ambitious assignment: to write the story of Marcus Garvey—awaiting trial in Africa for the murder of the two sons of a duke—with the intent of saving Garvey and establishing the truth. Luis Leante's *La luna roja* was a novel of secrecy and passion, about the love for books and storytelling. It narrated the parallel lives of a writer and his translator and the ruthless woman between them.

The Nadal Prize was awarded to Maruja Torres for her novel *Esperadme en el cielo*, a novel about friendship and “ghosts.” After dying, the protagonist is reunited with two of her friends in heaven, where they look back at their lives in Barcelona during the 1960s and their childhood in postwar Spain.

The Alfaguara Prize was awarded to Argentine-born Andrés Neuman for *El viajero del siglo*, an ambitious experiment in which he looked back at the 19th century from a 21st-century perspective, analyzing issues such as immigration, multiculturalism, and the transformation of gender roles.

The highest distinction in Spanish letters, the Cervantes Prize, went to Mexican poet, short-story writer, and novelist José Emilio Pacheco. Among the writers who died in 2009 was the winner of the 1991 prize, Spanish novelist Francisco Ayala. (See OBITUARIES.)

(VERÓNICA ESTEBAN)

Latin America. One of the best surprises of 2009 was the novel *El viajero del siglo*, which was awarded the Alfaguara Prize. Its author, Andrés Neuman, was born in Argentina and lived in Spain. Set in an imaginary German town at the beginning of the 19th century, this beautifully written novel was a love story as well as a novel about ideas, literary criticism, philosophy, and politics, with multiple levels of meaning.

La muñeca rusa, by the Argentine Alicia Dujovne Ortiz, provided a fictional account of the life of África de las Heras, one of the wives of the Uruguayan writer Felisberto Hernández, who never suspected that she was a Russian spy. Another Argentine author, Claudia Piñeiro, published *Las grietas de Jara*, a thriller with elements of the psychological and the existentialist novel. The protagonist, a weak man

who is submissive to his boss and his wife, finally breaks free of the humiliation and submission he suffers.

Todos los hombres son mentirosos (2008), by the Argentine Alberto Manguel, a resident of France, was a novel that could be read, in part, as a continuation of the author's essays on the art of writing and reading. It not only was a meditation on the art of narration and a tale about Argentina's recent past but also represented for Manguel a nostalgic, sometimes funny, sometimes desperate, return to Latin America, its language, and its realities.

The Guatemalan Rodrigo Rey Rosa published *El material humano*, about the Guatemalan civil wars. Using documents recently discovered in the police archives in Guatemala, Rey Rosa created a journal-like narrative in which historical reality, fiction, and autobiographical elements alternate. The result was an exploration of the capacity of fiction to depict the ugly reality of repression. The Chilean Luis Sepúlveda used the techniques of the grotesque in *La sombra de lo que fuimos* (winner of the 2009 Primavera Prize) in order to convey the disenchantment of a generation of old political activists who return to Chile after years of forced exile.

Both *El material humano* and *La sombra de lo que fuimos* were in part autobiographical novels, and the same was true of *Demasiados héroes*, by the Colombian author Laura Restrepo, who fictionalized her revolutionary activities in the Argentina of the 1970s. The book questioned memory, authenticity, the limits of heroism, and the search for personal identity.

Memorias de una dama, by the Peruvian Santiago Roncagliolo, was a tragicomic novel about the Mafia, Caribbean dictators, and the relationship between the upper classes and political power in Latin America. The novel also wittily satirized literary circles.

The Mexican Jorge Volpi published *Oscuro bosque oscuro*, a novel in free verse that examined the horrors of Nazi brutality during World War II. It was, according to the author, a “moral fable”: it showed how ordinary people can participate in horrible massacres. It also represented Volpi's further exploration of the genre of the poetic narrative, which began with *El jardín devastado* (2008), a novel about the Iraq War.

La isla bajo el mar, by the Chilean American Isabel Allende, was the story of Haitian slaves told through a well-built narrative populated with charac-

Quim Llenas—Cover/Getty Images



Peruvian author Santiago Roncagliolo earned praise for his tragicomic novel *Memorias de una dama*.

ters of diverse races and nationalities. It focused on one of the slaves, Zarité, and her masters, large landowners who had escaped to New Orleans after their slaves rebelled and their plantation was burned. After being humiliated repeatedly and after having children by her master, Zarité achieves her freedom.

Santiago Gamboa, a Colombian author residing in New Delhi, chose, as in his previous novels, an international setting for *Necrópolis*. In it, a series of persons of different origins and professions attend a conference in Jerusalem, where a homicide occurs, and the narrator contrasts various versions of the same story.

Israel was the setting in another novel, *Aquarium*, by the Argentine Marcelo Figueras. The novel told a love story: a man and a woman fall in love, but they speak different languages and are unable to understand each other. This lack of communication was intended as a metaphor for the ongoing Israeli-Palestinian conflict.

Argentine Carlos María Domínguez, a resident of Uruguay, published *La costa ciega*, a short experimental novel in which different voices were superimposed and confused. *La alemana*, a

short, playful novel by the Uruguayan Gustavo Escanlar, centred on an iconoclast narrator who presents picturesque characters from marginal neighbourhoods in Montevideo, using their colloquial language.

At the end of 2008, William Ospina, from Colombia, received the Rómulo Gallegos Prize for *El país de la canela*, the second novel of a trilogy based on the *crónicas*, or chronicles, written during the exploration and colonization of Latin America.

A new book by the Argentine novelist and short-story writer Julio Cortázar, who died in 1984, appeared: *Papeles inesperados*, a collection of previously unpublished works and texts discarded by the author but retained in his archives. Among those writers who died in 2009 was the Uruguayan Mario Benedetti. (See OBITUARIES.) (LEDA SCHIAVO)

PORTUGUESE

Portugal. The most important trophy of Portuguese-language literatures, the Camões Prize, was awarded in June 2009 to Cape Verdean poet, fiction writer, and journalist Arménio Vieira. Vieira had engaged in Portuguese anti-colonial politics in the 1960s and '70s; he published *Poemas* (1981), the novella *O eleito do sol* (1990), the novel *No inferno* (1999), and the poetry collections *Mitografias* (2006) and *O poema, a viagem, o sonho* (2009). Although he wrote in opposition to the colonial and postcolonial political authorities and the established literary canons, Vieira's poetry was rooted in the tradition of the foundational Cape Verdean literary movement *Claridade* and glorified Western classics such as Homer.

The second-ever Leya Prize, a prominent literary honour awarded to unpublished works, sponsored by the powerful recently founded Portuguese publisher Leya (which acquired several iconic independent publishing houses), went to the novel *O olho de Hertzog* by Portuguese-born Mozambican historian and fiction writer João Paulo Borges Coelho. The story centred on European colonial rivalries in Africa and depicted Mozambique and its neighbours as proto-independent countries in the period around World War I. Among Coelho's previous fictional works were *As duas sombras do rio* (2003), *As visitas do Dr. Valdez* (2004), *Crónica da rua 513.2* (2006), and *Hinyambaan* (2007).

The Portuguese literary scene was agitated in 2009 by the publication of No-



Portuguese writer António Lobo Antunes released his 24th novel, *Que cavalos são aqueles que fazem sombra no mar?*, which chronicled the lives of members of a dysfunctional family.

bel Prize winner José Saramago's novel *Caim*. The polemic against *Caim* by Roman Catholic leaders recalled the one provoked years earlier by Saramago's *O evangelho segundo Jesus Cristo* (1991; *The Gospel According to Jesus Christ*, 1991), when Catholic authorities responded impetuously to his deconstruction of the divine origin of Christ. In *Caim* he revisited the Bible, this time the Old Testament story of Cain and Abel, with an anticlerical perspective that subverted the traditional relationship between an envious and resentful God and the suffering Man. Another internationally recognized Portuguese novelist, Saramago's literary rival António Lobo Antunes, celebrated the 30th anniversary of his prolific literary career—his first novel, *Memória de elefante*, had been published in 1979—with the release of his 24th novel, *Que cavalos são aqueles que fazem sombra no mar?* The latter book narrated the lives of members of a dysfunctional family in seven chapters named after the formal moves of traditional bullfighting in the family's native province of Ribatejo. In his own words, Antunes “wanted to write a novel in the classic manner that would destroy all novels written in the classic manner.” (VICTOR K. MENDES)

Brazil. Among new works of Brazilian fiction in 2009 was a family saga, Chico Buarque's novel *Leite derramado*,

which narrated in parallel fashion the evolution of a Brazilian family and the transformation of Brazilian society over the past two centuries. In Tatiana Salem Levy's first novel, *A chave de casa* (2007), awarded the 2008 São Paulo Prize for first works of literature, the protagonist travels to Turkey, her family's homeland, as she discovered what it means to be a Jewish-Brazilian descendant of immigrants. Also of interest was Alberto Mussa's *Meu destino é ser onça*, a work of fiction bordering on an essay about the origins of Brazil and the meaning of “being Brazilian.” The very short stories in Mario Sabino's collection *A boca da verdade* highlighted unhappiness as a key element of life.

The poet Rosa Lia Dinelle published *Enquanto os sinos plangem*, a collection of poems with a wide variety of forms and styles, from classical stanzas to popular Brazilian national forms with contemporary ecological themes. Carlos Newton Júnior's essay on Lampião, a legendary *cangaceiro* (backlands bandit), introduced his anthology *O cangaço na poesia brasileira*, which offered an original viewpoint on the importance of popular poetry (*trovas, literatura de cordel*) within Brazilian literature.

Among new works of literary criticism were the outstanding English-language biography of Clarice Lispector, *Why This World*, by Benjamin Moser; Rita Olivieri-Godet's study of the works of João Ubaldo Ribeiro; a collected volume of essays, *Nas tramas da ficção*, on the relationship between Brazilian literature and Brazilian history, which was edited by Clóvis Gruner and Cláudio DeNipoti; and a volume of literary essays by Susana Vernieri, *Vozes da estante*. Nélida Piñon published a memoir, *Coração andarilho*.

Throughout 2009 there were celebrations of the centenary of the death of Euclides da Cunha, author of *Os sertões* (1902; *Rebellion in the Backlands*, 1944), a classic narrative of life in the backlands. Salim Miguel was awarded the Machado de Assis Prize by the Brazilian Academy of Letters for his body of literary works.

The death of Augusto Boal in May 2009 merited particular note. (See OBITUARIES.) During the harshest years of the military dictatorship, Boal founded and led the Teatro do Oprimido (“Theatre of the Oppressed”) and was arrested, tortured, and sent into exile by the regime. His decades-long influence on Brazilian and international theatre was profound. (IRWIN STERN)

RUSSIAN

In purely creative terms, 2009 was not particularly eventful in Russian literature, especially with regard to new prose writing. Among the works that garnered the most attention was Mariya Galina's *Malaya Glusha* ("Little Glusha"). Galina, who was also a talented poet, wrote science fiction that she tried to raise to the level of "serious literature." In her latest work she used provincial life in a Soviet-era city as the setting for a voyage to the land of the dead. Another writer working on the border between the real and the fantastic was Leonid Yuzefovich. The protagonists of his novel, *Zhuravli i karliki* (2008; "Cranes and Dwarfs"), were the real-life 17th-century adventurer Timofey Ankudinov and a fictional contemporary researcher working on a biography of Ankudinov. The novel's climax takes place in a Buddhist monastery in Mongolia; it won the 2009 Big Book Award.

A second trend in contemporary Russian prose could be distinguished in Roman Senchin's novel *Yeltyshevy* ("The Yeltyshevs"), a dark, naturalistic saga of contemporary peasant life that was stylistically reminiscent of the "country prose" of the late Soviet period. Andrey Gelasimov's novel *Stepnyye bogi* (2008; "Gods of the Steppe") and Aleksandr Terekhov's *Kamenny most* ("The Stone Bridge") occupied an intermediate zone in that landscape. *Stepnyye bogi* combined a heartfelt realistic description of life in the Baikal countryside in 1945 with elements of a mystical thriller, while *Kamenny most*, a taut psychological thriller, was based on the true story of a double murder committed in 1943. Gelasimov's novel received the National Best Seller award for 2009. The novels of Yuzefovich, Terekhov, and Senchin were nominated for the Russian Booker Prize. Also on that list were the novels *Vremya zhenshchin* ("Time of Women") by Yelena Chizhova, who won the prize, *Zhili-byli starik so starukhoy* (2006; "Once There Lived an Old Man and His Wife") by Yelena Katishonok, and *Vcherashnyaya vechnost* (2008; "Yesterday's Eternity") by the venerable former Russian dissident Boris Khazanov.

Another notable work, *Asan* (2008; "Asan"), Vladimir Makanin's novel about the Chechen war that won the Big Book Award in 2008, continued to be vigorously discussed by critics in 2009. The novel *Okolonolya* ("Almost Zero") provoked something of a sensation as much because of its author as because of its content. The work, a satiric look at circles close to govern-

ment power, was signed by the pseudonymous author Natan Dubovitsky. Most suspected its real author to be none other than Vladislav Surkov, one of the most influential figures in the current Russian government.

In September a heated discussion about the state of Russian publishing broke out when the poet Olga Martynova published a brief article—in German—in a German newspaper. Soon after, the article was anonymously translated into Russian and posted on the very influential Russian Web site Openspace. The article, which she agreed to expand and write in Russian, argued that Russia's dominant publishers (including, among others, Eksmo, Ad Marginem, and Limbus Press) had decided to ignore aesthetically and intellectually complex works in favour of a kind of mishmash of mass market and "serious" literature that was reminiscent of Soviet literary norms. Martynova criticized a number of Russia's best-known and most popular writers, including Lyudmila Ulitskaya, Dmitry Bykov, Zakhar Prilepin, and Vladimir Sorokin.

The situation in poetry was considerably more favourable. The year saw the publication of new books by Igor Bulatovsky, Ilya Kucherov, Dmitry Grigoryev, Natalya Chernykh, Aleksey Porvin, Boris Khersonsky, Aleksandr Mironov, Gali-Dana Zinger, and Vadim Mesyats. Although most of the authors in this list were representatives of the Petersburg School, their publishers were Moscow-based, which signaled a healthy openness. Another highlight of the year was the entry into literature of several young poets whose reputation was based exclusively on Internet publication and who had not yet attempted printed publication. This group included the 20-year-old poets Vera Polozkova and Alya Kudryashova. Although neither had yet produced a masterpiece, their work showed promise, and its level of professionalism was considerably higher than that of the "Web poets" of previous years.

Many writers died during the year, including acclaimed popular prose writer Vasily Aksyonov and 96-year-old Sergey Mikhalkov, the very official author of both the Soviet national anthem and the new Russian national anthem. (See OBITUARIES.) Other literary lights extinguished were literary critic Vladimir Glotser; poet Vsevolod Nekrasov, founder of Russian concrete poetry and precursor of Russian Conceptualism; Lev Losev, poet and member of the Leningrad philological school who

spent the latter part of his life in the United States; philosopher, essayist, and prose writer Aleksandr Pyatigorsky; Yevgeny Saburov, poet and playwright who turned successful politician in the 1990s; Aleksey Parshchikov, a major figure of the "metarealist" school of Russian poets of the 1970s and '80s; Mikhail Gendeleev, poet and prose writer and an unofficial leader of Russian-language culture in Israel; cultural critic and literary historian Aleksey Peskov, who also wrote popular fiction under the pseudonym Alex Sandow; Aleksandr Mezhirov, the last major poet of the so-called war (World War II) generation; poets Mikhail Pozdnyayev, Olga Rozhanskaya, and Natalya Khatkina; and prose writers Mikhail Kononov and Yegor Radov. Not since the end of World War II and Joseph Stalin's terror had Russian literature lost so many writers in a single year. (VALERY SHUBINSKY)

PERSIAN

Literary production in Iran continued to suffer from restrictive government measures and was eclipsed in the latter part of 2009 by the political turmoil that followed the disputed June presidential election. The year also saw governmental efforts to revive the 1980s cultural policy of sponsoring propaganda packaged as literature and an increase in literary scholarship directed toward the medieval heritage of Persian literature.

State politicization of literature and literary production was visible at the 22nd Tehran International Book Fair, held in May. The few notable independently published works of fiction were led by Amir Hassan Cheheltan's *Akhlāq-e mardom-e khiyābān-e Enqelāb* ("The Morals of the People of Revolution Avenue"; published in German as *Teheran Revolutionsstrasse*). *Herfeh-ye man khavāb didan ast* ("My Profession Is Dreaming"), a collection of short stories by Fatimah Zari'i, was among the year's most innovative works of short fiction.

Attention to the classics of Persian poetry was manifested in the publication of *Gozideh-ye Ghazaliyat-e Shams* (2008, edited by Mohammad Reza Shafi'i Kadkani), which contained extensive annotated selections from Rūmī's *Divān-e Shams-e Tabrizī* ("The Collected Poems of Shams of Tabriz"). *Censoring an Iranian Love Story*, based on an unpublished original Persian manuscript by Shahriar Mandanipour, addressed the issue of censorship in a novel way and led an impressive array of literary translations from Persian.

Sheida Mohamadi, a Los Angeles-based poet and fiction writer, rose to prominence during the year. Her works—including *Afsānah-ye Bābā Laylā* (“The Legend of Baba Layla”), a poetic novel published in a heavily censored version in Tehran in 2006, and ‘*Aks-e fowri-ye ‘eshq-bāzi*’ (“A Snapshot of Love-Making”), a collection of poems published by the author in Los Angeles in 2007—attracted much attention after they were posted on the author’s Web site.

Two literary events ranked among the most noteworthy. The Courrier International’s literary prize was awarded to Zoya Pirzad for Christophe Balaÿ’s French translation of her collection of short stories, titled *Le Goût âpre des kakis* (“The Bitter Taste of Persimmon”), and novelist Isma‘il Fasiḥ—whose notable works included *Sorayyā dar eghmā* (“Sorayya in a Coma”) and *Zemestān-e 62* (“Winter of ‘62”)—died in Tehran. (AHMAD KARIMI-HAKKAK)

ARABIC

There was concern among Arab publishers in 2009 about the continuing impact of the global financial crisis that had begun the previous year. The situation, though alarming to many, offered one positive result: cheaper paper. That in turn translated into lower book prices and thus made books more affordable for the general public. New writers, however, who traditionally published their first work at their own expense, could not afford to do so.

Arab writers were generally dissatisfied with aspects of the cultural life in their countries. Complaints abounded about censorship, weak distribution of their works, biased award systems, and what many felt was the undue recognition of writers with strong connections to government publishing houses. Arab writers also showed a growing interest in translation, with some questioning both the quality of the books selected by national translation organizations and the intentions of Western publishers.

Among those writers whose work echoed the most pressing problems of the region was Iraqi writer In‘ām Kajajī. In *Al-Ḥafīdah al-amrīkiyyah* (2008; “The American Granddaughter”), Zaynah, the protagonist, is an American Iraqi who faces her multiple identities while working as an interpreter with the U.S. Army in Iraq. By exploring the contempt Iraqis feel for their Americanized compatriots, whom they consider traitors, the novel re-

vealed the harsh reality in Iraq, where sectarian and religious divisions destroyed a society that prided itself on religious tolerance.

Mourid Barghouti’s second memoir, *Wulidtu hunāk, wulidtu hunā* (“I Was Born There, I Was Born Here”), celebrated his Egyptian-born son Tamim’s first visit to the West Bank and the affirmation of his Palestinian identity. The book provided an account of the hardships of the Palestinians and praised those who battle Israeli restrictions and find creative strategies for overcoming hurdles on a daily basis. But Barghouti, a Palestinian, was also critical of his own society. He denounced religious intolerance, divisions between various political factions, and abuses of power.

Sahar Khalifeh remained close to her Palestinian heritage in the novel *Aṣl wa faṣl* (“Of Lineage and Class”). Narrating the story of the Qahtan family from the Ottoman era to the period of the British mandate, the book denounced Britain’s role in Palestine, revealed the weaknesses of the early Palestinian liberation movement, and provided insight into Palestinian traditions in marriage and discrimination against women.

Wāsinī al-A‘raj moved beyond his native Algeria and placed the action of his novel *Sūnātā li-ashbāḥ al-Quds* (“Sonata for the Ghosts of Jerusalem”) in the wider world of the Palestinian diaspora, through the story of a female painter and her famous musician son in New York City. In Syria Fawwāz Ḥaddād defied censorship with ‘*Azf munfarid ‘alā al-biyānū*’ (“Solo Piano Playing”). Depicting various Islamic groups as being manipulated by the state, the novel paints an atmosphere of fear and secrecy in which the characters are pawns, secretly maneuvered and manipulated.

In the short-story collection *Fī hijā’ al-bashar wa-madiḥ al-bahā’im wa al-ḥasharāt* (“Scoffing at Human Beings and Praising Animals and Insects”), Libyan writer Aḥmad Ibrāhīm al-Faqīh explored human interactions and found strong compassion on the part of animals and insects toward humans and an absence of compassion in humans’ relationships among themselves. Muḥammad al-Bisāṭī remained close to his society’s problems with his novel *Aswār* (“Walls”), about life in Egypt being akin to life in a prison.

In his novel *Fi kull usbu‘—yawm Jum‘ah* (“On Friday of Every Week”), Ibrāhīm ‘Abd al-Majīd moved into territory that was relatively new for Arab



*Mourid Barghouti released a second memoir during the year, *Wulidtu hunāk, wulidtu hunā*, which chronicled the hardships faced by Palestinians.*

writers: the Internet. The story revolves around a chat room that becomes accessible to new members every Friday and that gives young people in particular the opportunity to discuss their problems freely and anonymously.

Despite awards for poetry, such as those presented by the Foundation of Abdul Aziz al-Babtain, which are among the most prestigious in the Arab world, poetry continued to lose readers to fiction, especially the novel. The staunchest critic of weakening interest in verse, the Egyptian poet and literary critic ‘Abd al-Mu‘ī Hījāzī, continued to defend the genre tirelessly. He attributed its loss of popularity in Egypt to a poor educational system that failed to provide students with a solid knowledge of classical Arabic. The death in 2008 of Palestinian Maḥmūd Darwīsh, one of the most prominent and popular Arab poets, perhaps contributed to poetry’s waning popularity. His last collection of poems, *Lā urīdu li-hādhī al-qaṣīdah an tantahī* (“I Do Not Want This Poem to End”), was published posthumously and was well received.

‘*Azāzīl*’ (“Beelzebub”) by the Egyptian novelist Yūsuf Zaydān won the International Prize for Arabic Fiction (sometimes called the Arabic Booker) for 2009. The novel did not attract much attention when it first appeared, in 2008, but it later became the subject of strong criticism from the Coptic Orthodox Church.

The Arab world mourned the deaths of Sudanese novelist al-Ṭayyib Ṣāliḥ and Francophone Moroccan writer and sociologist Abdelkebir Khatibi. (See OBITUARIES.) (AIDA A. BAMIA)

CHINESE

Of some 3,000 new Chinese novels published in print in 2009, few found favour with the critics. One of the few exceptions was *Yi ju ding yiwan ju* ("One Sentence Tops Ten Thousand") by well-known writer Liu Zhenyun, though it too had a few detractors. Composed of 400,000 Chinese characters, the novel told the story of a peasant, Yang Baishun, who leaves his home in Yanjin (also Liu's home village) after the death of his adopted daughter in search of someone who can fill her place in his life. Decades later the daughter's son, Niu Jianguo, who had left the village, returns to it with the same strong desire for personal connection. Using a fine, delicate narrative style, the author probingly examined the concept of *friendlessness*—which differs from what in English is called *loneliness*—and attempted to redefine the meaning of *friend*.

Perhaps the most notable literary trend of the year was the continuing growth of *wangluo wenxue* (Internet literature). Since 1997, when the first literary Web site in mainland China (www.rongshuxia.com) was established, digital publishing had developed rapidly. In 2009 it seemed to reach an explosive point: an online call for new literary works, presented as *Quanqiu xiezuo da zhan* (global writing exhibition), accepted submissions from March 3 to November 15. Organizers reported that during that period more than 70,000 new works, including fiction, essays, and plays, were submitted online. Votes cast via cell phone and through selected Web sites would determine the top 100 entries of each category. The work of the winners would be published on *Qidian Zhongwen wang* (Starting Point Chinese Web [SPCW]), www.qidian.com, the official Web site of the project. (Qidian's target audience was young men.)

This project was organized by Shengda Literature Ltd. (SDL), the leading Web-based interactive entertainment media company in China. SDL owned the three biggest Chinese literary Web sites, including *Jinjiang yuanchuang wang* (Jinjiang Web of Original Creation), www.jjwxc.net, which was believed to be the largest literary Web site in the world devoted to

female writers, and *Hongxiu tianxiang xiaoshuo wang* (Hongxiu tianxiang Fiction Web), www.hongxiu.com, in addition to Qidian. Hou Xiaoqiang, the chief executive officer of SDL, declared that his company would use copyright as a core tool to seek a new shape for the literary industry.

Two Chinese-born nonagenarians died in 2009—Nien Cheng, whose 1986 memoir *Life and Death in Shanghai* recounted her tribulations during the Cultural Revolution, and Yang Xianyi, the most noteworthy Chinese translator of the 20th century. (See OBITUARIES.)

(WANG XIAOMING)

JAPANESE

The most notable event in 2009 for Japanese literature was undeniably the publication of Haruki Murakami's *1Q84*. So many people preordered the two-volume novel that it appeared on best-selling lists as soon as it was released in late May. Public interest in *1Q84* was only increased by the silence Murakami and his publisher—and the Japanese media broadly—maintained about the content of the book prior to its publication. It immediately sold out at many bookstores the day it was released.

1Q84 consisted of two parallel worlds, described in a third-person narrative, that have at their centres Aomame and Tengo. Aomame, a 30-year-old woman who works for a secret agent whose aim is to kill those who hurt others, is driven by a strong memory of Tengo, a childhood friend, and seeks him out. Tengo, who teaches school but aspires

Ken'ichirō Iozaki



Sankei/Getty Images

to be a novelist, in turn seeks her. One day he receives a ghostwriting job from a publisher that had rejected his work, and it is that job that brings him close to Aomame. The novel's title, according to Murakami, is intended as a play on that of George Orwell's dystopian *1984*—the English letter Q and the Japanese word for the number 9 are pronounced identically.

Murakami also stirred some controversy by accepting the Jerusalem Prize for the Freedom of the Individual in Society in early 2009, just after the cessation of hostilities between Hamas and Israel in the Gaza Strip. Resisting calls by pro-Palestinian groups, Murakami insisted that it would be better to attend the ceremony and deliver his speech (about the role of novelists in the world) than to keep silent.

One of the other best-selling books of 2009 was Ken'ichirō Iozaki's *Tsui no sumika* ("The Final Home"), a short novel—first published in the literary magazine *Shincho*—that won the year's first Akutagawa Prize, normally awarded twice a year to promising Japanese writers. Iozaki's stylish sentences were highly praised. The selection committee declined to award the year's second Akutagawa Prize.

Among other remarkable works of the year were Teru Miyamoto's *Gaikotsu biru no niwa* ("The Garden of the Skeleton Building"), Noboru Tsujihara's *Yurusarezaru mono* ("Unforgiven"), and Naoyuki Ii's story about an imaginary animal, *Poketto no naka no rewaniwa* ("The Rewaniwa in My Pocket").

Shirin Nezamafi won the Bungakukai New Writer's Prize with *Shiroi kami* ("White Paper"), becoming only the second non-Japanese winner of the prize. Nezamafi was born in Iran and had lived in Japan since 1999. Sō Kurokawa's *Kamome no hi* (2008; "The Day of the Seagull") received the Yomiuri Prize for Literature. The Yasunari Kawabata Prize, given to the year's most accomplished short story, went to Nanae Aoyama's "Kakera" ("A Fragment"), first published in the November 2008 issue of *Shincho*. The Kenzaburō Ōe Prize was awarded to *Hikari no mandara* ("The Mandala of Lights"), an essay on Japanese literature, by the literary critic Reiji Andō.

Deaths in 2009 included Kaoru Kurimoto, who wrote science fiction (most notably the *Guin Saga*); she also wrote literary criticism under the name Azusa Nakajima. Novelist and short-story writer Junzō Shōno also died.

(YOSHIHIKO KAZAMARU)

Military Affairs

The long **CIVIL WAR** in Sri Lanka ended, as did the conflict in Darfur. But **WAR INTENSIFIED** in Afghanistan, where the U.S. and NATO prepared to send more troops, and in Pakistan, where the government launched new offensives.

The 26-year rebellion waged by the Liberation Tigers of Tamil Eelam (Tamil Tigers) to establish an independent homeland in Sri Lanka was crushed in 2009 by government forces, who overran the last area of rebel-held territory in May. During the final battle Tiger leader Velupillai Prabhakaran was killed. (See OBITUARIES.)

WMD, ARMS CONTROL, AND DISARMAMENT

The UN Security Council unanimously adopted Resolution 1874, tightening an existing arms embargo against North Korea. The action occurred after Pyongyang conducted its second-ever underground nuclear explosion in May.

A treaty establishing Africa as a nuclear-weapon-free zone (NWFZ) came into force in July after Burundi became the 28th African country to ratify it. The Treaty of Pelindaba prohibited the possession, development, manufacture, testing, or deployment of nuclear weapons on the African continent.

Russian Pres. Dmitry Medvedev and U.S. Pres. Barack Obama announced the launch of bilateral talks to succeed the 1991 Strategic Arms Reduction Talks treaty. START I expired in December 2009 without agreement on a successor even though diplomats had been negotiating a new treaty since April. Talks were set to resume in January 2010.

CONFLICTS

Africa. Except for sporadic violence and banditry, the six-year war between The Sudan's pro-government forces and rebels in Darfur effectively ended, according to the UN's military commander in the region. Since fighting began, an estimated 300,000 people had died in Darfur and a further 2.7 million had been displaced.

The Democratic Republic of the Congo (DRC) continued to be plagued by insecurity and violence. More than 1,000 civilians were killed in the east of the country during joint DRC army–UN operations against the Democratic Forces for the Liberation of Rwanda (FDLR), a Rwandan rebel group linked to the Hutu extremists responsible for the genocide of Rwandan Tutsis in 1994. Forces from the Ugandan Lord's Resistance Army (LRA) continued to operate in the DRC's northeast, but a joint offensive by Congolese and Ugandan troops forced most of them into neighbouring Central African Republic.

Islamist groups and warlords fought for control of much of southern Somalia. After Ethiopia pulled its troops out of the country in January 2009, the extremist Islamic group al-Shabaab, thought to have links with the terrorist group al-Qaeda, began to dominate the struggle. There had been no effective government in Somalia since 1991, and the transitional government, backed by the UN and the African Union, controlled only small parts of the capital, Mogadishu. Only about half of the 8,000 troops authorized for the UN-backed African Union Mission to Somalia (AMISOM) had been deployed by the end of 2009.

The Americas. The president of Honduras, Manuel Zelaya, was removed from office by the military and forced into exile in June. Zelaya managed to secure the support of the Organization of American States (OAS) and to have himself smuggled into the Brazilian embassy in Tegucigalpa, but neither his supporters nor the OAS was able to prevent an interim government from holding elections to decide on Zelaya's successor.

Mexico deployed thousands of troops along the country's northern border to stem violence between gangs supplying illegal drugs to the United States. Such

violence in Ciudad Juarez, a city of 1.5 million people, for example, resulted in nearly 2,000 drug-related murders in the first 10 months of 2009. (See Special Report on page 176.)

Middle East. Violence in Iraq fell to its lowest level since the U.S.-led invasion in 2003. Iraqi forces took control of security in Baghdad's fortified Green Zone and assumed more authority over foreign troops based in the country. U.S. troops withdrew from many towns and cities across the country, and British combat operations officially ended in April.

Saudi Arabian forces and Shi'ite Yemeni rebels clashed along the border between the two countries in November and December. During 2009 sporadic fighting between Yemeni security forces and the rebels resulted in hundreds of casualties and an estimated 150,000 internal refugees.

South and Central Asia. In April Russia declared its nearly decade-old "counterterrorism operation" against separatist rebels in Chechnya to be over. However, violence in the region continued throughout the year. In November a Muslim group from the Caucasus set off a bomb that derailed an express passenger train between St. Petersburg and Moscow, killing 26 people.

The war in Afghanistan grew in intensity and spread to the country's north, which had been relatively peaceful since the Taliban were overthrown in 2001. At the end of 2009, there were approximately 71,000 troops (about half from the U.S.) from 43 countries contributing to the NATO-led International Security Assistance Force (ISAF) supporting the Afghan government. An additional 36,000 U.S. troops not part of ISAF were also in the country. In December U.S. Pres. Barack Obama announced that more than 30,000 additional troops would be sent to the country, and NATO Secretary-General Anders Rasmussen announced that European members would contribute another 7,000. Among the approximately 500 foreign troops killed during the year, about 60% of the deaths resulted from improvised explosive devices (IEDs).

The government of Pakistan launched several offensives during 2009 to wrest control from the Taliban and other militants in northwestern tribal districts bordering Afghanistan. Pakistan

claimed that hundreds of militants were killed as well as dozens of security force personnel, but independent verification was impossible. The militants responded with attacks on government and civilian targets across Pakistan.

MILITARY TECHNOLOGY

The Ion Tiger, a small unmanned aerial vehicle (UAV) developed by the U.S. Naval Research Laboratory, flew for more than 26 hours in November. The UAV set an unofficial endurance record for fuel-cell powered flight. (See Special Report on page 186.)

The U.S. Navy commissioned the amphibious assault ship *Makin Island*. It was the first navy ship to use a combination of gas-turbine engines and electric drive for propulsion to reduce fuel usage and maintenance costs.

The U.S. Air Force Research Laboratory in 2009 test-fired two new laser weapons in flight for the first time. The Advanced Tactical Laser, designed to destroy ground targets up to 20 km (12 mi) away, was fired from an NC-130H Hercules aircraft. The much larger Airborne Laser (ABL), designed to shoot down ballistic missiles, was fired from a converted Boeing 747.

The U.K.'s Ministry of Defence announced that it was fielding a new generation of lightweight textile-based armour designed to protect vehicles against rocket-propelled grenades. Named TARIAN (Welsh for "shield"), the new armour was deployed on heavy trucks serving with the British army in Afghanistan.

India launched its first nuclear-powered submarine in July. The 6,000-metric-ton *INS Arihant* would be capable of launching missiles at targets 700 km (435 mi) away. India thus became the sixth country capable of building its own nuclear-powered submarines, joining China, France, Russia, the U.K., and the U.S.

ARMED FORCES AND POLITICS

France rejoined NATO's military command in March after having left it in 1966. Albania and Croatia officially joined the alliance in April.

Russia announced plans to set up an Arctic Group of Forces to protect its interests in the far north. Establishment of the new command was influenced by the growing importance of oil and gas reserves in the region. The group would coordinate activities of the armed forces, border guard, and coast guard.

The seven-member Collective Security Treaty Organization (CSTO), comprising Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan, agreed to establish a rapid-reaction force to defend member states against foreign military aggression, terrorism, and drug trafficking. The force would also offer assistance in recovery from natural disasters.

In October Turkey banned Israel from participating in a planned NATO military exercise. In the same month, Israel and the U.S. held their largest-ever joint exercise, simulating the defense of Israel against a ballistic-missile attack.

MILITARY AND SOCIETY

To combat piracy around the Horn of Africa, approximately 30 ships plus aircraft from 17 countries began operating together in January as Combined Task Force 151. The International Maritime Bureau reported an "unprecedented increase" in activity by Somali pirates in the first nine months of 2009, identifying 147 incidents in the Gulf of Aden and in Somali coastal waters, compared with 63 for the same period the previous year.

Turkey enacted new legislation to give civilian courts the authority to try military personnel who threaten national security. The law also prohibited military courts from prosecuting civilians during peacetime.

By a vote of 25–6, the UN Human Rights Council backed a report that accused both Israel's armed forces and Palestinian militants of war crimes that occurred during the 2008–09 Israeli offensive in Gaza. An estimated 1,300 Palestinians and 10 Israeli soldiers were killed during the fighting. Three

Israeli civilians died in Palestinian rocket attacks.

A Rwandan man convicted of war crimes committed in 1994 was jailed for life by a Canadian court in October. Désiré Munyaneza, 42, was found guilty in May in the first court case brought under Canada's Crimes Against Humanity and War Crimes Act.

In August the U.S. Air Force established its first numbered air force dedicated to fighting in cyberspace. The 24th Air Force, based in Texas, comprised the 688th Information Operations Wing and the 67th Network Warfare Wing.

The Japanese government relaxed its long-standing self-imposed ban on arms exports to allow more joint development and production of weapons with other countries. Exports to countries that sponsor terrorism, violate human rights, or have inadequate controls over arms sales continued to be outlawed.

In the first 10 months of 2009, an estimated 140 active-duty U.S. Army personnel died of self-inflicted wounds, compared with 140 in all of 2008 and 115 in 2007. The number of suicides in 2009 was set to make it the fifth straight year that such deaths had set a record within the U.S. armed forces.

U.S. Secretary of Defense Robert Gates ordered a high-level review of military policies after army psychiatrist Maj. Nidal Malik Hasan shot dead 13 people and wounded at least 29 more at Ft. Hood, Texas, in November. A separate review of the way in which intelligence agencies handled information about Hasan before the killings was ordered by President Obama. For years before the shootings, Hasan, a devout Muslim, had expressed misgivings to colleagues about the wars in Iraq and Afghanistan. (PETER SARACINO)

British Royal Marines intercept a Somali pirate vessel in the Gulf of Aden on June 2.



Alex Cave—Royal Navy/AP

Performing Arts

Rising young musical stars in 2009 included symphony conductor **ALAN GILBERT** and singer-songwriter **TAYLOR SWIFT**. The dance world celebrated the **100TH ANNIVERSARY** of Serge Diaghilev's **BALLETS RUSSES**. A spate of musicals **BOOSTED** theatre attendance on Broadway, while **3-D FILMS** thrilled moviegoers.

MUSIC

Classical. It was a frigid day in Washington, D.C., on Jan. 20, 2009, when classical music, literally, took centre stage at the inauguration of U.S. Pres. Barack Obama. As part of the festivities, cellist Yo-Yo Ma, violinist Itzhak Perlman, clarinetist Anthony McGill, and pianist Gabriela Montero performed the debut of *Air and Simple Gifts*, composed for the event by John Williams. The performance went off without a hitch—not surprisingly, given that it had actually been prerecorded and was mimed at the event by the illustrious musicians.

When the deception was revealed days later, a controversy began to stir. The media made references to Milli Vanilli, the infamous lip-syncing pop duo. The furor subsided quickly, however, when it was reported that the cold had prevented a “live” performance because of the effect low temperatures have on musical instruments. In fact, Ma and Perlman had put soap on their bows to dull the sound of their instruments so as not to intrude on the recording, which had been made the previous Sunday at a Marine barracks in Washington. (The piece was subsequently given its concert debut January 23 by the Pittsburgh Symphony Orchestra.) It was that sort of year in classical music, when the controversies surrounding the music tended at times to obscure the music itself.

Earlier in January, Argentine-born Israeli conductor Daniel Barenboim canceled performances in Doha, Qatar, and in Cairo because of security concerns related to the ongoing fighting between Israeli forces and Hamas. The concerts were part of the 10th anniversary tour of Barenboim's West-Eastern Divan Or-

chestra, which was composed of young musicians from Israel, Palestine, and Arab countries.

In March a West Bank children's orchestra, the Strings of Freedom, was shuttered by local residents after it performed a concert for Holocaust survivors in Israel. An official of the Jenin refugee camp accused the orchestra's leader of having exploited the children for political purposes in what was billed as a Good Deeds Day event organized by an Israeli billionaire.

Polish pianist Krystian Zimerman created a stir of his own when in April he announced during a performance at the Walt Disney Concert Hall, Los Angeles, that because of his objection to U.S. foreign policy, he would no longer perform in the United States. “Get your hands off my country,” he told stunned concertgoers.

During the summer the New York Philharmonic made political waves when it announced that it was considering performing in Havana. When continuing U.S. restrictions on travel to Cuba ultimately forced the concerts to be canceled, the Cuban government proclaimed its outrage and blamed the fracas on the U.S. government.

Meanwhile, two opera stars who had previously announced their retirement changed their minds. In May, Spanish tenor José Carreras, 62, announced that “my [opera] career is done.” In August, New Zealand soprano Dame Kiri Te Kanawa, 65, said that her opera career was coming to an end as well. While neither singer had ruled out future recital appearances, they both subsequently withdrew any plans to quit the world of opera. Meanwhile, Plácido Domingo, 68—no longer able to hit the high notes that made him one of the most illustrious tenors of his genera-

tion—drew a standing ovation when in October he made his debut appearance in a baritone role in a production of Giuseppe Verdi's *Simon Boccanegra* at the Staatsoper in Berlin.

Oddly, given its role as a perennial source of familial (soap) opera, the 2009 edition of Germany's Bayreuth Festival opened with a children's version of Richard Wagner's *The Flying Dutchman*. Children were even encouraged to participate in the newly conceived truncated version of the opera, which was the brainchild of new festival co-directors, Eva Wagner-Pasquier and Katharina Wagner. The half sisters, both great-granddaughters of the composer, took over the reins of the annual Wagner festival from their father, Wolfgang, who had ruled the festival roost for more than half a century. Katharina Wagner told the press that “it is a matter of the heart for me to bring opera to the people.” As part of that effort, the new directors also announced a deal with London's Royal Opera House's Opus Arte production company to release the festival's productions on DVD, and on August 9 they offered the festival's performance of *Tristan und Isolde* live on the Internet.

As it had often in recent years, the world of classical music continued to embrace the Internet as a way of extending its outreach and influence. In June the New York Philharmonic announced that it was creating an online archive of concert data reaching back to its first performance on Dec. 7, 1842. The service offered online users the ability to search its database by composer, artist, and individual concert programs.

The Berlin Philharmonic Orchestra pursued a more commercial course with its online “digital concert hall,” in which performances were made available either live or via reruns on the Internet. The fee for a single concert was €9.90, and the cost of a season ticket was €149 (1€ = about \$1.40). Sir Simon Rattle kicked off the online offerings in January with a performance of Brahms's *Symphony No. 1*.

In July, Classical TV, an online streaming video service, was launched, offering both free and pay-per-view opera, ballet, and theatre performances. In addition to more than a dozen productions from New York's

Metropolitan Opera (the Met), Classical TV also presented broadcasts by the English National Opera, the Royal Shakespeare Company, the Zürich Opera, and others. The price of an on-line viewing was set at \$4.99 or \$9.99 per performance.

Twitter, the online social network phenomenon, was the star of the show in September at London's Royal Opera House. The company presented *The Twitter Opera*, with music by composer Helen Porter and a libretto made up of the site's signature short messages submitted by the public via the ROH's @youropera Twitter feed. Twitter was also the focus of a concert by the National Symphony Orchestra in July. During the orchestra's performance of Beethoven's *Sixth (Pastoral) Symphony*, concertgoers could follow the music with 50 "tweets" about the score that were sent to their Web-enabled mobile devices from the conductor, who had prewritten such helpful tweetful insights as "In my score Beethoven has printed Nightingale=flute Quail=oboe Cuckoo=clarinet—a mini concerto for woodwind/birds." (See also COMPUTERS AND INFORMATION SYSTEMS: Sidebar.)

Not to be outdone, another Internet site entered the action when on April 15 the YouTube Symphony Orchestra made its debut at New York City's Carnegie Hall. The orchestra was made up of 93 musicians who had been selected from some 3,000 audition videos that had been submitted to the Web site from more than 70 countries. Fifteen million online visitors voted on the winners, who were led in the debut performance by conductor Michael Tilson Thomas. The U.K.'s *Gramophone* magazine hailed the orchestra "for democratising classical music on a global scale, making it truly all-inclusive."

Even as the classical world embraced the future, it was confronted by the disturbing economic realities of the present. While the nonprofit group Americans for the Arts estimated that the ongoing recession in 2009 would force as many as 10,000 arts organizations out of business, classical orchestras and opera and ballet companies tried to weather the economic storm. Both the Met and the Los Angeles Opera cut productions from their seasons and cut salaries; the Los Angeles Opera laid off 17 people in the process. The Connecticut Opera closed after 67 seasons, as did the Opera Pacific, Santa Ana, Calif., and the Baltimore (Md.) Opera declared bankruptcy. Budgetary problems caused the San Francisco Opera

Stan Honda—AFP/Getty Images



Conductor Michael Tilson Thomas (right) applauds the YouTube Symphony Orchestra during its debut performance at New York City's Carnegie Hall on April 15; the orchestra's musicians were selected entirely through online auditions.

to cancel a production of Benjamin Britten's *Peter Grimes* and a revival of Puccini's *La Bohème*.

Financial difficulties were not confined to the U.S. Russia's Bolshoi Theatre was forced to cancel a tour of Mexico and the premiere of its new production of Verdi's *Otello*. Italy's Maggio Musicale Fiorentino called off productions of Verdi's *Macbeth* and Britten's *Billy Budd* that were to have been featured at the Florence festival. South Korea particularly felt the impact when tours to that country by the Radio France Philharmonic Orchestra, the Vienna Symphony, and the Cincinnati (Ohio) Symphony were called off for reasons of belt-tightening.

After a career that spanned 45 years, the legendary Guarneri String Quartet called it quits in 2009. Three of the group's members had founded the ensemble at Vermont's Marlboro Music Festival in 1963 and were in their 70s.

As some books were closed, new chapters for others were opened. In an October program at the Hollywood Bowl, entitled "Bienvenido Gustavo," 28-year-old Venezuelan conductor Gustavo Dudamel made his debut as music director of the Los Angeles Philharmonic. In June Lorin Maazel led his last performance as music director of the New York Philharmonic with a concert at Avery Fisher Hall before being succeeded in the post in September by Alan Gilbert. (See BIOGRAPHIES.) In October Rattle reaffirmed his commit-

ment to the Berlin Philharmonic when he signed a contract to continue as the artistic director through 2018.

Throughout the year orchestras in the U.S. and Europe marked the 200th anniversary of the birth of composer Felix Mendelssohn with performances of his works. In one of the most notable events, 13 of the German composer's long-lost works were performed in January at New York's Museum of Jewish Heritage. Two previously unknown works by Mozart were heard for the first time in August when the International Mozarteum Foundation, based in Salzburg, Austria, unveiled them in a performance by pianist Florian Birsak, who played the pieces on the composer's own fortepiano. In October the sound of Frederick the Great's flute was heard for the first time in more than 200 years when the instrument was played at the Usedom Music Festival on the eponymous Baltic island.

An opera by popular singer-songwriter Rufus Wainwright debuted in July at the Manchester (Eng.) International Festival. The work, *Prima Donna*, was originally commissioned by the Met, but the company withdrew when Wainwright decided to write the libretto in French. Canadian playwright-director John Murrell's English libretto for composer Leos Janacek's opera *The Cunning Little Vixen* received its premiere in August at the Banff (Alta.) Centre. In February the New York Philharmonic performed the debut of an

orchestral work, *Laboratory*, by 13-year-old George Frankle of Scarsdale, N.Y., during a School Day Concert.

In one of the more glittering events of the year, the Met presented its 125th Anniversary Gala in March. The four-hour performance included appearances by Roberto Alagna, Angela Gheorghiu, Domingo, Renée Fleming, Dmitry Hvorostovsky, Natalie Dessay, and a host of others in selections from 23 operas, some featuring re-creations of sets and costumes from fabled productions of the company's past.

The 50th anniversary of New York City's Lincoln Center was celebrated in May with a performance in the centre's recently renovated Alice Tully Hall. The New York Philharmonic re-created conductor Leonard Bernstein's performance of Aaron Copland's *Fanfare for the Common Man*, which Bernstein had led at the centre's groundbreaking in 1959.

In May the New York Philharmonic's principal clarinetist, Stanley Drucker, went onstage at the last moment to fill in for a missing first clarinetist in a performance of Dmitry Shostakovich's *Violin Concerto No. 1*. Drucker, 80, who was not scheduled to play that night and who had not performed the piece since the 1950s, reportedly did not drop a note. It was a delightful and unexpected coda to a career that ended with his retirement in 2009 after 60 years with the orchestra.

The classical world was saddened during the year by the passing of several of its most beloved performers, including sopranos Hildegard Behrens of Germany and Elisabeth Söderström of Sweden and conductor Erich Kunzel, Jr., who helmed the Cincinnati Pops Orchestra for more than 30 years. (See OBITUARIES.) Other losses included those of soprano Lois Hunt, one of the champions of the American musical theatre, who passed away on July 26 at age 84 in New York City, and classical music critic, author, educator, and program annotator Michael Steinberg, who left a lasting legacy when he died, July 26, near Minneapolis, Minn., at age 80. (HARRY SUMRALL)

Jazz. According to the Survey of Public Participation in the Arts released in June by the National Endowment for the Arts (NEA), the audience for live jazz events slipped to 7.8% of American adults in 2008, reversing a two-decade growth trend. Moreover, the median age of jazz listeners rose to 46, and the number of young jazz musicians declined.

The NEA's survey inflamed disputes in the jazz community. Was it accurate?

Did it over- or underestimate the size of the jazz audience? Most of all, what did it mean for the future of jazz? Even though classical audiences were older than jazz audiences and had experienced a comparable decline in their total numbers, the jazz community was especially sensitive to public perceptions of the art form. Jazz, a fundamentally African American music, was a comparatively young art without the weight of centuries of tradition; it had been generally accepted as a legitimate art form only since the mid-20th century. There were few significant jazz institutions with resources equal to those of major-city art museums, symphony orchestras, and opera companies. In a year when the top recording companies had largely abandoned jazz and two of the major living jazz artists, Ornette Coleman and Sonny Rollins, turned 79, the NEA survey reinforced fear that jazz was a gradually disappearing art.

Moreover, the premier jazz festival in New York City, the historic centre of jazz, vanished. The JVC Jazz Festival, to have been held in June, was canceled by its producer, Festival Network, which had bought it in 2007 from founder George Wein. Earlier in 2009, Wein, who founded the Newport Jazz Festival in 1954, had rescued that and the Newport Folk Festival for 2009 after Rhode Island had canceled Festival Network's license to operate those two events. After the JVC festival debacle, Wein agreed to come out of retirement and produce New York City's 2010 jazz festival, with a new name and new corporate sponsor, the medical technology company CareFusion, which already sponsored festivals in Chicago and in Monterey, Calif. To its readers' relief, *Jazz Times* magazine did not disappear. The 39-year-old monthly did suspend activity in June, but a new owner resumed publication with the old editorial staff in July.

In contrast to the bad news was the activity of the dynamic Wynton Marsalis, who since the mid-1980s had fostered appreciation of jazz as a fine art. On Martin Luther King, Jr., Day, January 19, one day before the inauguration of U.S. Pres. Barack Obama, Marsalis led his Jazz at Lincoln Center (JALC) Orchestra in an all-star "Let Freedom Swing" concert at the Kennedy Center for the Performing Arts, Washington, D.C. On his album released in March, the trumpeter-composer alternated music by his quintet with the recitation of his original poem "He and She," which was also the title of the album. Marsalis spoke before a U.S. House of Representa-

tatives appropriations committee to urge increased funding for the NEA. In June, in the East Room of the White House, 150 young jazz students received music lessons from Wynton, his father, Ellis (piano), his brothers Branford (saxophone), Delfeayo (trombone), and Jason (drums) Marsalis, and members of the JALC Orchestra. First lady Michelle Obama, hostess of the event, told the crowd that "there's probably no better example of democracy than a jazz ensemble."

The Living Theatre, which had ignited controversy in 1959 with its jazz- and drug-themed Off-Broadway production of Jack Gelber's *The Connection*, revived the play for its 50th anniversary. This time saxophonist Renè McLean led the onstage band; his father, Jackie McLean, was the saxophonist during the play's original run. A highlight of the Chicago Jazz Festival was the triumphant lyric duets by clarinetist Buddy DeFranco and pianist Johnny O'Neal. New York City's Vision Festival, the leading free-jazz festival in the U.S., featured a tribute to veteran saxophonist Marshall Allen, leader of the Sun Ra Arkestra since Ra's death in 1993.

Notable new releases included singer Madeleine Peyroux's *Bare Bones*, for which she composed or cocomposed all the songs, and piano-bass-drums trio the Bad Plus's *For All I Care*, with interpretations of music by Wilco, Nirvana, the Bee Gees, György Ligeti, Milton Babbitt, and Igor Stravinsky. Younger brass improvisers, including cornetist Josh Berman (*Old Idea*), trumpeter Darren Johnston (*The Edge of the Forest*), and trumpeter Peter Evans (*Nature/Culture*), also released impressive albums. Pianist Satoko Fujii continued to perform in Japan and the U.S., issuing *Sanrei* with her Orchestra Nagoya, *Summer Suite* with her Orchestra New York, *Chun*, duets with her trumpeter-husband, Natsuki Tamura, and *Under the Water*, duets with fellow pianist Myra Melford. Charles Tyler's *Saga of the Outlaws*, Bobby Bradford's *With John Stevens and the Spontaneous Music Ensemble*, Lester Bowie's *All the Numbers*, and an eight-CD boxed set of Anthony Braxton's *Complete Arista Recordings* (1974–80) led the year's parade of reissues. Among other releases by the prolific Braxton were *Creative Orchestra (Bolzano)* 2007 with the Italian Instabile Orchestra, *Creative Orchestra (Guelph)* 2007 with the AIMToronto Orchestra, and *Quartet (Moscow)* 2008.

An airplane crash took the lives of saxophonist Gerry Niewood and gui-

tarist Coleman Mellett, of the Chuck Mangione band, as they were flying to a concert in Buffalo. The year's other deaths included those of drummer Rashied Ali, singers Chris Connor and Blossom Dearie, composer George Russell, saxophone partners Hank Crawford and David Newman, drummer Louie Bellson, saxophonists Bud Shank (see OBITUARIES) and Charlie Mariano, and percussionist Manny Oquendo.

(JOHN LITWEILER)

Popular. *International.* The year 2009 was dominated by music from unexpected areas. In the United Kingdom unknown Scottish vocalist Susan Boyle (see BIOGRAPHIES) exploded onto the global stage with breathtaking performances on the television show *Britain's Got Talent*. A video clip of her rendition of "I Dreamed a Dream" from *Les Misérables* made her a YouTube sensation and led to one of the year's top-selling albums. Achieving celebrity on the other side of the globe was Geoffrey Gurrumul Yunupingu, a blind Aboriginal singer-songwriter from Australia's Arnhem Land. He accompanied himself on acoustic guitar and sang in the Gumatj dialect for his debut effort, simply titled *Gurrumul* (2008). It was recorded for an independent label in Darwin, Australia, but became a surprise success across the country and then in Britain, where it topped the World Music album charts. Gurrumul's songs attracted an international audience, thanks to his thoughtful and soulful vocals and melodies that echoed Western gospel and folk themes. Aus-

Blind Aboriginal singer-songwriter Geoffrey Gurrumul Yunupingu performs during the Indigenous Music Awards on August 21, in Darwin, Australia.



Peter Eve/Getty Images

tralian music was also buoyed by the Black Arm Band, a collective of Aboriginal and white performers whose multimedia revue highlighted the "two worlds of Australia" with stories of Aboriginal suffering and survival matched against music that included rock, reggae, and the Aboriginal didgeridoo.

From Africa there were also unexpected newcomers who moved from poverty and obscurity to playing in major concert halls. Staff Benda Bilili, a group of paraplegic polio victims and abandoned children who lived on the grounds surrounding the zoo in Kinshasa, Democratic Republic of the Congo, survived by performing on the streets. They came to the attention of Western musicians who were appearing in Kinshasa and rightly won praise for their debut album, *Très très fort*, which matched rumba Congolese influences and funk with some extraordinary solos by Roger Landu on an instrument that he called the *satonge*, which he constructed from a tin can, a piece of wood, and one guitar string.

Elsewhere in Africa, Mali's Bassekou Kouyate, the virtuoso exponent of the ancient West African lute, the *ngoni*, released *I Speak Fula*, a further demonstration of his rapid-fire improvised playing that featured veteran singer Kasse Mady Diabate and kora star Toumani Diabaté. In Senegal there was a further display of African innovation with the first studio album in eight years by Baaba Maal, in which he was joined by New York-based electro-dance exponents the Brazilian Girls. Maal was the first artist signed by Palm Pictures, a label run by Island Records founder Chris Blackwell, and he made a dramatic appearance at the London festival celebrating Island's 50th anniversary. Maal was joined onstage by U2 for a memorable set of songs that included "One Love" written by reggae legend and Blackwell discovery Bob Marley.

From Latin America there were further reminders that world music artists were becoming increasingly keen to collaborate and experiment. RadioKijada, a band that set out to create "new sounds from black Peru," was a

Michael Loccisano/Getty Images



Senegalese pop star Baaba Maal sings at the Mandela Day concert at Radio City Music Hall in New York City on July 18.

collaboration between Peruvian composer and percussionist Rodolfo Muñoz and Christoph H. Muller, the Swiss electronica artist who reimagined tango with the best-selling Gotan Project. On the album *Nuevos sonidos afro peruanos*, their aim was to transform Afro-Peruvian styles, making use of rhythm instruments invented by African slaves whose drums had been banned.

The growing success of global fusion styles was also demonstrated by American producer Mark Johnson with his *Playing for Change* album, *Songs Around the World*. Johnson traveled around the world, recording both street musicians and celebrities playing soul standards and then mixed the results together. The resulting album was a Top 10 hit in the U.S., and videos of individual recordings generated more than 15 million hits on YouTube.

Sri Lankan rapper M.I.A. (see BIOGRAPHIES), whose infectious dance-floor-friendly world beats had been club favorites for years, scored a surprising crossover hit with the single "Paper Planes." It earned her a Grammy Award nomination for record of the year and featured prominently on the sound track of Danny Boyle's (see BIOGRAPHIES) hit film *Slumdog Millionaire*.

One of the tragedies during the year was the death of Tlahoun Gessesse at age 68. Gessesse, Ethiopia's best-loved singer, first came to fame in the era of Emperor Haile Selassie singing with the Imperial Bodyguard Band.

(ROBIN DENSELOW)

United States. The death of iconic pop star Michael Jackson (see OBITUARIES) and the remarkable success of 19-year-old singer-songwriter Taylor Swift (see BIOGRAPHIES) were the top stories of the American popular music year in 2009.

Jackson died of drug-induced cardiac arrest on June 25, and American television networks devoted hundreds of hours to remembering and celebrating his legacy. In the two and a half weeks following his death, consumers purchased 2.3 million Jackson albums, guaranteeing that the late "King of Pop" would be one of the year's biggest-selling artists.

Swift's album *Fearless* (2008), named best album at the Academy of Country Music Awards in April 2009, overtook Jackson's compilation *Number Ones* as the year's best-selling album, with Jackson further pushed into third place by the debut album of Scottish singer Susan Boyle. (See BIOGRAPHIES.) Swift saw her song "Love Story" top charts internationally, and she sold out Madison Square Garden in one minute. She also became the object of much public sympathy in September when rapper Kanye West grabbed the microphone from her at the MTV Video Music Awards as she was attempting to accept an award for Best Female Video. "But Beyoncé had one of the best videos of all time," West protested in front a largely confused industry audience that soon stood and cheered for Swift. She capped the year with an impressive showing at the Country Music Association (CMA) awards in November, sweeping all four categories in which she was nominated and becoming the CMA's youngest-ever entertainer of the year.

Sales of physical CDs, digital CDs, and what Nielsen SoundScan termed "track-equivalent albums" (10 tracks sold from a particular album equaled one album sale) in the first half of 2009 declined 8.9% from the first half of 2008, and digital sales slowed from a 30% increase in growth in 2008 to a 13% increase in 2009. Despite some aberrations—a sales spike in the wake of Jackson's death and better-than-expected sales of remastered Beatles albums—the pop-music market was in free fall for much of the year.



Rapper Kanye West brazenly interrupts singer-songwriter Taylor Swift's acceptance speech for Best Female Video at the MTV Video Music Awards on September 13.

In January Bruce Springsteen performed on the steps of the Lincoln Memorial in Washington, D.C., singing through the winter chill at the kick-off concert in honour of the inauguration of U.S. Pres. Barack Obama. Springsteen called 89-year-old folk singer Pete Seeger, a former communist who had been demonized by conservatives in the 1950s, to the stage with him to lead an emotional rendition of "This Land Is Your Land." In August rock historians marked the 40th anniversary of the Woodstock Music and Art Fair. (See Special Report on page 184.)

Former Led Zeppelin front man Robert Plant and bluegrass thrush Alison Krauss seemed an unlikely pairing on paper, but the duo's *Raising Sand* (2007), helmed by all-star producer T Bone Burnett (see BIOGRAPHIES), won album of the year honours at the 51st Annual Grammy Awards on February 8. Plant and Krauss were the night's biggest winners, also notching four other Grammy trophies. Lil Wayne, who planned a late-2009 release for his *Rebirth* album, won four awards, including best rap album. Backstage, Plant talked about his pleasure in being associated with the Americana genre after so many years of being labeled a rock and roller. "It's great to be considered to be part of the movement that is healthy and has some discrimination," Plant said. Later in 2009 Americana was given its own Grammy Awards category.

In independent music critical praise and crossover success greeted Pacific Northwest-based rockers the Decemberists and hyperliterate multi-instrumentalist Andrew Bird. (See BIOGRAPHIES.) Experimental pop ensemble Animal Collective, introspective singer-songwriter Bon Iver, and alt-country chanteuse Neko Case were also lauded.

New members inducted into the Rock and Roll Hall of Fame included Metallica, Run-DMC, Jeff Beck, Bobby Womack, Little Anthony and the Imperials, Spooner Oldham, D.J. Fontana, and Bill Black. Rockabilly singer Wanda Jackson was inducted in the Early Influence category.

In country music Darius Rucker ended 2008 as the first African American solo artist to have scored a number one country single since Charley Pride in 1983. In November Rucker was named best new artist at the CMA awards, becoming the first African American performer to win in a major individual category since 1972.

Musician and guitar innovator Les Paul died at age 94. (See OBITUARIES.) Other losses included Memphis-based producer, musician, and singer Jim Dickinson, California roots music luminaries Duane Jarvis and Amy Farris, songwriter and musician Stephen Bruton, Nashville producer Aubrey Mayhew, former Grand Ole Opry manager Hal Durham, and country singer Vern ("the Voice") Gosdin.

(PETER COOPER)

DANCE

North America. The centenary of Russian-born arts patron and impresario Serge Diaghilev's founding of the renowned Ballets Russes dance company gave the year 2009 cause for focus and reflection. Major events held to mark the occasion and document the 20-year run of Diaghilev's Ballets Russes included the symposium "Diaghilev's Ballets Russes, 1909–1929: Twenty Years that Changed the World of Art," which was held in April at the Harvard Theatre Collection. The exhibition "Diaghilev's Theater of Marvels: The Ballets Russes and Its Aftermath" opened in June at the New York Library for the Performing Arts.

Various companies around the U.S. as well as around the world acknowledged Diaghilev's legacy by presenting works from his era and by commissioning works to reflect the innovative thrust of the Ballets Russes. Boston Ballet commissioned from its resident choreographer, Jorma Elo, a new work inspired by Igor Stravinsky's *The Rite of Spring*, whose ballet's notorious 1913 premiere caused a riotous stir with its unexpected modernist aspects, both musical and choreographic.

New York City's (NYC's) now annual Fall for Dance season, with all seats priced at \$10, featured a number of offerings related to the Ballets Russes and to its aftermath. These included a performance by Ballet West (Salt Lake City, Utah) of Bronislava Nijinska's *Les Biches* (1924) and a production of Belgian choreographer Stijn Celis's recent "contemporary response to Nijinska's *Les Noces*" by Les Grands Ballets Canadiens de Montréal.

American Ballet Theatre (ABT) offered its annual spring season at NYC's Metropolitan Opera House (MOH). The all-Prokofiev program included *The Prodigal Son*, George Balanchine's 1929 creation for Diaghilev, as well as an original effort by ABT's newly installed artist in residence, Aleksey Ratmanský: *On the Dnieper*, a world premiere using a Prokofiev score that was dedicated to Diaghilev.

New York City Ballet (NYCB) began the year with a salute to mark the 75th anniversary of the company's affiliate academy, the School of American Ballet. During its spring season, NYCB was part of the festivities celebrating the 50th anniversary of the cultural institution of which it was part, Lincoln Center (LC). A "Live from Lincoln Center" national telecast was given of *Romeo + Juliet*, in the 2007 staging by NYCB's

ballet master in chief, Peter Martins. Later in the year NYCB launched its next phase of LC celebrations by presenting the premiere of Martins's latest work, set to John Adams's *Naïve and Sentimental Music*, in LC's newly renovated David H. Koch Theater (formerly the New York State Theater).

At year's end NYCB played the Kennedy Center (KC) with seven performances of mixed repertory. Among KC's foreign offerings was a visit by Moscow's Bolshoi Ballet with its production of *Le Corsaire*, a landmark work of 19th-century ballet theatre, historically researched by Ratmanský and his team when he was Bolshoi Ballet director.

ABT gave a much-shortened NYC fall season, spanning only four days, at LC's Avery Fisher Hall, where Ratmanský presented *Seven Sonatas*, his latest ABT premiere. Newly prominent at ABT was Cory Stearns, who in March won the eighth international competition for the Erik Bruhn Prize from the National Ballet of Canada. Much-admired Julie Kent returned for the fall season from maternity leave. At the end of the spring MOH season, veteran ABT guest artist Nina Ananiashvili gave a series of farewell performances, marking in June her very last appearance with the company as Odette/Odile in *Swan Lake*.

Longtime San Francisco Ballet (SFB) ballerina Tina LeBlanc was likewise celebrated at her farewell from the

company in May. Part of SFB's year included the presentation of a new production of *Swan Lake*, in a staging by SFB artistic director Helgi Tomasson. Because it was less difficult to ship, the new staging substituted for Tomasson's 1988 production on SFB's three-city, 12-day fall tour to China. Also on the touring circuit to China was ABT, which played a 4-day season in Beijing in November.

Prior to the death in July of legendary modern dance choreographer Merce Cunningham (see OBITUARIES), the Brooklyn Academy of Music (BAM) marked his 90th birthday in April with a presentation of his grand new work, *Nearly Ninety*. Not long afterward, Cunningham's foundation announced the launch of a plan that would oversee the dissemination of his work after his death, including the disbanding of the Merce Cunningham Dance Company itself after a two-year world tour.

Pacific Northwest Ballet (Seattle) showed the dances of former Cunningham dancer Ulysses Dove, who died in 1996, on an all-Dove bill the company took to the Jacob's Pillow Dance Festival. Among the festival's other offerings was a program of hip-hop works by Rennie Harris Puremovement and a program by the Canadian choreographer Crystal Pite.

Former Cunningham dancer Karole Armitage made her presence felt early in the year when her own company,

Dancers of the Paul Taylor Dance Company perform in New York City at the dress rehearsal for Paul Taylor's Beloved Renegade on February 25.



Bill Perlman—Star Ledger/Corbis

Armitage Gone! Dance, gave “Think Punk!”—a retrospective of her dances inspired by punk-rock music—at the Kitchen in New York City. Near the end of the year, the company presented the U.S. premiere of *Itutu* as part of BAM’s Next Wave Festival. Paul Taylor, a Cunningham dancer before leading his own world-renowned troupe, the Paul Taylor Dance Company, arranged a jam-packed season at New York City’s City Center (CC) with an almost breathless rotation of 19 Taylor works over 18 programs. Among other works, the program included *Changes* (to recordings of the 1960s folk-rock group the Mamas and the Papas), *Beloved Renegade* (to the music of Francis Poulenc), and one rare reconstruction from 1963, the dark and compelling *Scudorama* (with artful designs by Alex Katz and music by Clarence Jackson).

The Martha Graham Dance Company (MGDC) played a brief NYC season following a successful run in Paris. Graham’s nowadays little-seen multiact *Clytemnestra* was the season’s most prominent offering, in a staging by MGDC artistic director Janet Eilber, who was especially concerned with returning the work to its full breadth.

Other prominent multiact dances included the Houston Ballet’s (HB’s) premiere of *Marie*, a Marie-Antoinette-inspired ballet by HB artistic director Stanton Welch to the music of Shostakovich. Additionally, the Joffrey Ballet of Chicago presented its first performance of Lar Lubovitch’s *Othello*. The Mark Morris Dance Group played LC with *Romeo and Juliet*, on *Motifs of Shakespeare*, Morris’s 2008 modern-dance rendering of Prokofiev’s score. Later at LC’s Mostly Mozart Festival, Morris showed two new dances: *Empire Garden* (to the music of Charles Ives) and *Visitation* (to the music of Beethoven). The Bill T. Jones/Arnie Zane Dance Company presented Jones’s *Fondly Do We Hope . . . Fervently Do We Pray: A Dance Theater Tribute to [Abraham] Lincoln* at the Ravinia Festival near Chicago and on tour, while his *Fela!* made it to Broadway.

The Alvin Ailey American Dance Theater rounded out its 50th anniversary at BAM in June. The company’s December season at CC offered a retrospective look at the legacy of Judith Jamison, who would be leaving the troupe’s directorship in 2011.

Lucinda Childs, an experimentalist from the 1960s, gained prominence after a number of years of low-key pres-

ence in the dance world by overseeing a reconstruction of *Dance*, her 1979 collaborative work with composer Philip Glass and visual artist Sol LeWitt. It was presented at Bard Summerscape and then went on a national tour to select cities. Experimental choreographer Stephen Petronio marked the 25th anniversary of his own troupe and repertory, with a special season at NYC’s Joyce Theater.

The bicontinental British-born choreographer Christopher Wheeldon had his work shown at the Vail (Colo.) International Dance Festival, where his Morphoses company had been launched three years earlier. At CC he offered two programs of his own works alongside those of choreographers Tim Harbourn, Lightfoot León, and Ratmansky.

The National Ballet of Canada (NBC) offered a bill called “Innovation,” which featured works by Sabrina Matthews (*Dextris*), Peter Quanz (*In Colour*), and Pite (*Emergence*). Pite’s work won four Dora Mavor Moore awards for NBC. In May ballerina Chan Hon Goh retired from her career with NBC in the title role of the troupe’s production of *Giselle*. Ballet British Columbia saw the departure of its longtime artistic director John Alleyne and the appointment of Emily Molnar as interim artistic director. Eduardo Vilaro was named artistic director of Ballet Hispanico in NYC, replacing founding director Tina Ramirez, who left in June.

Deaths, besides that of Cunningham, included those of dancers Eva Evdokimova, Pearl Lang, Frankie Manning, and Georgina Parkinson and dancer-turned-actor Patrick Swayze. (See OBITUARIES.) Dancers Haynes Owens, Marjorie Mussman, George Zoritch, Nora Kovach, Carolyn George d’Amboise, Bruce Bain, Dick Beard, and Lola MacLaughlin and dance teachers Gage Englund Bush, Gerald E. Myers, and Fernando Schaffenburg were other notable losses. (ROBERT GRESKOVIC)

Europe. The centenary of the first performances of Serge Diaghilev’s Ballets Russes provided the central theme of the European ballet world in 2009, inspiring several new works as well as commemorative galas, exhibitions, and film shows. In Paris the Théâtre du Châtelet—where it all began—contented itself with two evenings of documentary films, but the Théâtre des Champs-Élysées hosted a season by the Kremlin Ballet from Moscow, with guest appearances by leading dancers from the Bolshoi and Mariinsky companies. The program followed a pattern

also seen in other cities, combining revivals of original ballets by Diaghilev’s great choreographers—Michel Fokine and Bronislava Nijinska in this case—with a contemporary reworking of Fokine’s *Thamar*, choreographed by Jurius Smoriginas. The Paris Opéra Ballet waited until December to show a program of works by Leonide Massine and Vaslav Nijinsky as well as two works by Fokine.

A weeklong Diaghilev festival held in St. Petersburg in October included major exhibitions, an international gala, and an evening presentation by John Neumeier’s Hamburg Ballet, which included Neumeier’s ballet about Nijinsky, *Vaslav*, as well as his own version of *Le Pavillon d’Armide*. With its original choreography by Fokine, *Le Pavillon d’Armide* had formed part of the historic debut of Ballets Russes on May 18, 1909. The Hamburg company had already shown a tribute program in its home theatre, as had the Bavarian State Ballet in Munich, the Rome Opera Ballet, and many others. In London the Royal Ballet introduced *Sensorium*, a new piece by house choreographer Alastair Marriott, into a program otherwise by Fokine. Meanwhile, the English National Ballet (ENB), with *Faun(e)*, and the Scottish Ballet showed reworkings of Nijinsky’s *L’Après-midi d’un faune* and Fokine’s *Petrushka* by David Dawson and Ian Spink, respectively. ENB’s two Ballets Russes programs brought them some very respectful reviews, despite the gossip-column publicity given to a new costume design by Karl Lagerfeld for Fokine’s *The Dying Swan*.

Celebrating the present rather than the past, there was new work to be seen in many European theatres. The prolific Neumeier choreographed a version of *Orpheus* for his own company, and England saw a spate of science-inspired works: David Bintley created *E=mc²* for the Birmingham Royal Ballet, while Mark Baldwin of the Rambert Dance Company choreographed *The Comedy of Change* in honour of Charles Darwin and his evolutionary theory. The Royal Ballet used its smaller theatre for a new work based on Bach’s *Goldberg Variations*, choreographed by Kim Brandstrup in close collaboration with his principal dancer, Tamara Rojo.

The major revival of the Royal Ballet’s season was a cut-down version of Kenneth MacMillan’s 1981 two-act ballet, *Isadora*, based on the life of dancer Isadora Duncan. MacMillan’s widow, who did the adaptation, dropped several episodes that were peripheral to

the story and used film to establish the historical background to Duncan's life and work. The result, however, was no more popular with the critics than the original had been. In July the company made its first-ever visit to Cuba, fulfilling the dream of guest artist Carlos Acosta, whose enthusiasm and hard work were well rewarded by the responsive and welcoming local audiences.

Elsewhere in the U.K., two companies celebrated their 40th anniversaries. Northern Ballet Theatre (NBT) toured with a special program, including a revival of one of its home-grown classics, Gillian Lynne's *A Simple Man* (originally made for television in 1987), based on the life and work of the painter L.S. Lowry. The ballet's return to the repertoire was especially welcome for the memories it evoked of the former company director Christopher Gable, who had created the leading role. Scottish Ballet continued its rise in public and critical estimation in its 40th year of existence by introducing Frederick Ashton's *Scènes de Ballet* and William Forsythe's *Workwithinwork* to its repertoire.

In France the Paris Opéra Ballet gave its first performances of John Cranko's *Onegin*, a piece widely performed elsewhere in Europe. After the first performance, Isabelle Ciaravola and Mathias Heymann—who danced Tatyana and Lensky, respectively—were both promoted to *étoile* (principal dancer).

The Royal Danish Ballet's (RDB's) year included a visit to Japan, a Jerome Robbins evening featuring the company premieres of *Dances at a Gathering* and *West Side Story Suite*, and a Balanchine triple bill including another first for the RDB, the *Symphony in Three Movements*. Ballet master Sorella Englund and artistic director Nikolaj Hübbe collaborated on a controversial new production of one of the company's treasures, August Bournonville's *Napoli*, setting it in the rough environment of Naples in the 1950s and replacing the lost second act with completely new choreography to a commissioned score. The National Ballet of Finland showed a program of works by Jiří Kylián and David Dawson, while Kylián's former company, Nederlands Dans Theater, celebrated its 50th anniversary and showed a number of retrospective pro-

Luke MacGregor—Reuters/Landov



Dancers of the English National Ballet rehearse Apollo as part of the Ballets Russes programs at Sadler's Wells Theatre in London in June.

grams as well as new work by Johan Inger, Lightfoot León, and Kylián himself.

At the beginning of the year, Yuri Burlaka succeeded Aleksey Ratmansky as director of the Bolshoi Ballet. Burlaka started and ended the year with revivals of two big 19th-century works (one of his special interests). In March, Maria Aleksandrova and Ruslan Skvortsov danced the leading roles on the first night of Sergey Vikharev's reconstruction of *Coppélia*, and in December, Burlaka programmed his own new production of *La Esmeralda*. In between, the company toured the U.S. and Spain, while at home the rebuilding project at the Bolshoi Theatre was disrupted by yet more delays. The theatre had closed in 2005 and was due to reopen in 2009, but the expected date was pushed back to 2013 amid reports that the original budget had been seriously overspent.

The Mariinsky Ballet also toured the U.S., and in August the company was in London for two weeks, selling well at the Royal Opera House despite some complaints about the unadventurous repertoire. Opening night was devoted to Leonid Lavrovsky's 1940 version of *Romeo and Juliet*, with Alina Somova making her debut in the leading role; neither she nor the ballet was to the taste of most of the London critics, but the young Romeo, Vladimir Shklyarov, had a big success. At home in St. Petersburg, the annual White Nights Fes-

tival included a revival of Leonid Yakobson's Tatar-inspired *Shurale*. Leading the cast were Yevgeniya Obraztsova, Aleksandr Sergeyev, and Denis Matvienko.

Several of Europe's leading dancers made their farewells during the year: Manuel Legris at the Paris Opéra, Silja Schandorff at the RDB, and Thomas Edur and Agnes Oaks at ENB. Legris was chosen to take over as artistic director of the Vienna State Opera Ballet in 2010; Schandorff moved into a backstage role in Copenhagen; and Edur and Oaks returned to their native Estonia, where Edur took over as artistic director of the National Ballet.

More tragically, the year was marked by the sudden death of the German choreographer Pina Bausch (see OBITUARIES), one of the giants of the dance-theatre movement. Her company, Tanztheater Wuppertal, continued with the touring schedule that it had already planned, but there was no announcement about the company's long-term future. Other losses during the year included those of Danish dancer, director, and choreographer Flemming Flindt, ballerinas Ekaterina Maximova and Eva Evdokimova (see OBITUARIES), and two leading male dancers, André Prokovsky and David Ashmole.

(JANE SIMPSON)

THEATRE

Great Britain and Ireland. In spite of the economic recession, which started to bite hard into the pockets and lives of most British citizens in 2009, figures from the Society of London Theatre showed that total attendances in the West End had risen by 2.5%. Box office receipts increased by 3.5% compared with 2008.

Money itself, and the collapse of the world markets, became the hot theatre topic of the year in plays by 10 new writers at the small Soho Theatre under the group title *Everything Must Go*. Second-time playwright Lucy Prebble and director Rupert Goold offered *Enron*, an epic satiric drama of that company's demise, produced by Goold's touring company, Headlong, at the Chichester Festival Theatre and the Royal Court Theatre. *Enron* aroused comparisons with Caryl Churchill's *Serious Money*, a zippy 1987 satire on the

Joel Ryan/AP

Big Bang (the radical deregulation of the London Stock Exchange in 1986), but the play seemed even more timely in its skillful anatomization of the financial shenanigans in the fantasy world of projected profits and phantom companies, with Samuel West's outstanding portrayal of Enron's disgraced president, Jeffrey Skilling, assuming the tragic heft of a Shakespearean hero.

The financial crisis was explored more broadly in David Hare's *The Power of Yes* at the National Theatre (NT) in an attempt, said the playwright, to break through the protective attitude of the bankers. Hare spent an intense period of research on his play, and it attracted enormous interest, not least for his view that in rescuing the banks the British government was replacing capitalism with a socialism that bailed out the rich alone.

The theatre seemed to be catching the mood of the country all year as big, important plays appeared in rapid succession across the London stages. The comparatively unknown playwright Steve Waters produced a stunning double-header on climate change, *The Contingency Plan*, at the little Bush Theatre; the two plays—*Resilience* and *On the Beach*—painted an apocalyptic scenario of Britain disappearing beneath rising sea levels while politicians wrangled over minor details following a Conservative Party election victory in 2010. Jez Butterworth returned to the theatre after a long absence with two new plays—*Parlour Song* and *Jerusalem*. They were both directed by Ian Rickson and suggested that nature would take revenge on suburban town dwellers and that the process of disintegration had already begun. Butterworth's *Parlour Song* at the Almeida Theatre (first seen in New York City in 2008) proved to be, however, a mere curtain-raiser (with very funny scenes) to his magnum opus *Jerusalem* at the Royal Court. This was a dystopian hymn to hippie values down in the forest on St. George's Day, with Johnny Byron—the Pied Piper of the drunk, disenfranchised, and disaffected—leading the dance against the incursions of the authorities who wanted to wipe out his mobile home. Byron, as played by Mark Rylance in a performance of Falstaffian swagger and humanity, was a modern Lord of Misrule summoning the mysteries of Stonehenge and the legends of old Albion. The play was destined for a West End transfer after Rylance—having garnered uniformly rave reviews and selling out at the box office—completed an engage-



British performer Ricko Baird plays the role of Michael Jackson in *Thriller Live* at the Lyric Theatre in London on January 8.

ment in Simon McBurney's revival of Samuel Beckett's *Endgame* in late 2009.

The other big play of the year was Simon Stephens's *Punk Rock* at the Lyric Hammersmith, a scintillating comedy of high-school classroom anxieties and friendship culminating in a terrible tragedy in the school library. The echoes of the 1999 Columbine High School massacre (Littleton, Colo.) were the least of the play's strengths, which also covered ground similar to *Spring Awakening* and many British plays such as Julian Mitchell's *Another Country* and Alan Bennett's *The History Boys*. Nevertheless, Stephens was a unique and increasingly powerful voice on the British stage, and the vigour and perceptiveness of his dialogue as well as the brilliance of the acting in a cast of mostly unknowns—Tom Sturridge (a new Ben Whishaw, possibly), Jessica Raine, Henry Lloyd-Hughes, and Nicholas Banks were all outstanding—ensured against cliché and banality.

Punk Rock marked a new era at the Lyric, one of London's leading outer-ring theatres, under the artistic directorship of Sean Holmes, who was making a point of building his policy around a youth theatre scheme, much

as Dominic Cooke had channeled the Royal Court's young writers onto the main stage. Polly Stenham followed her remarkable 2007 debut play, *That Face*, with *Tusk Tusk*, a similar almost-anthropological account of young teenagers left to fend for themselves in a middle-class limbo without adults; their mother had gone missing on a drink-and-drugs binge.

The Royal Court also celebrated its historic collaboration with New York City playwright Wallace Shawn (see BIOGRAPHIES) in a season in which three of his plays were staged. The productions included two revivals, *The Fever* (in which the self-lacerating monologist was played by Clare Higgins) and *Aunt Dan and Lemon*, and the world premiere of *Grasses of a Thousand Colours*, in which Shawn, directed by his old friend and colleague André Gregory and abetted by Miranda Richardson as his feline wife and Jennifer Tilly as his lubricious mistress, played a self-satisfied scientist who rhapsodizes on his sexual obsessions in a fantastical memoir.

Grasses was a genuinely controversial play, but it struck a firm chord in a year that also saw several fine West End revivals. Bennett's one-time flop *Enjoy*, was restored, in performances by Alison Steadman and David Troughton, as a plangent and bitter comedy of old age with more than a touch of both Joe Orton and Beckett. Other notable revivals were Alan Ayckbourn's remarkable *Woman in Mind*, with Janie Dee fantasizing an alternative life in her own back garden; Tom Stoppard's *Arcadia*, an almost indecently enjoyable comedy of conflicting time periods, biography, mathematics, and gardening; Richard Greenberg's *Three Days of Rain*, starring James McAvoy; and Arthur Miller's *A View from the Bridge*, with Ken Stott easily the best British Eddie Carbone since Michael Gambon.

The Donmar Warehouse's season in the West End at Wyndham's Theatre wrapped with Dame Judi Dench leading an extravagantly costumed cast in Yukio Mishima's tiresome *Madame de Sade*, which not even Michael Grandage's classy but stilted direction could save from critical odium, and Grandage's production of Jude Law's *Hamlet*. It was Law's performance, however, that flattered to deceive in its monotonous anger and conspicuous lack of wit; it was not apparent that Hamlet was actually a very funny character.

Back at base, the Donmar reeled off some more excellent revivals, just about deflecting suspicions that the

house style (black brick wall, flagstones, dry ice, great sound tracks, quick acting) was wearing thin. Jonathan Pryce breathed fresh life into Athol Fugard's *Dimetos*, while Gillian Anderson and Toby Stephens played a compelling duet in Henrik Ibsen's *A Doll's House* (updated to resonate with more financial scandal). Rachel Weisz scored a personal success as Blanche DuBois in an overrated *A Streetcar Named Desire* (directed by choreographer Rob Ashford), and Dominic West returned from television (*The Wire*) to lead a new look at Pedro Calderón de la Barca's classic *Life Is a Dream*.

The West End smash hits, apart from Law's *Hamlet*, were Sir Ian McKellen and soon-to-be-Sir Patrick Stewart in *Waiting for Godot* at the Theatre Royal Haymarket, both in top form and very funny, and a bevy of discreetly naked respectable actresses, including Sian Phillips and Patricia Hodge, in the stage version of the sentimental film *Calendar Girls*. More film titles boosting the box office included *The Shawshank Redemption* and *Breakfast at Tiffany's*, the latter starring Anna Friel, with both adaptations claiming to bypass the movies and reanimate the darker heart of the original novellas by Stephen King and Truman Capote, respectively.

At the NT the temperature rose with two scorching presentations: Peter Flannery's skillful stage version of the Russian movie *Burnt by the Sun*, which featured knockout performances by Ciaran Hinds, Michelle Dockery, and Rory Kinnear and direction by Howard Davies; and Helen Mirren as the tragically smitten queen in Jean Racine's *Phèdre*. The latter, which used the old Ted Hughes translation, was directed by Nicholas Hytner and set the action on a sunbaked Mediterranean design by Bob Crowley. At year's end, Hytner (with Stewart) was awarded a Knighthood in the New Year's honours list.

Phèdre was the first NT production to be screened live, as performed onstage, in Britain and abroad; it was the latest move by Hytner, the NT's artistic director, to sustain as wide a public interest as possible in the work. His own production of Richard Bean's *England People Very Nice* was a cartoon résumé of immigration to Britain, flaring in a public row over the Muslim section when antiracism campaigners led the first onstage demonstration of the NT's history, which disrupted a preperformance discussion. The theatre stood firm in its commitment to the play, and the furor soon abated. Bennett's latest

play, also directed by Hytner, *The Habit of Art*, centred on a fictional meeting between the poet W.H. Auden and the composer Benjamin Britten (portrayed, respectively, by Richard Griffiths and Alex Jennings) and played entertainingly with more high-brow, less controversial concerns.

The rare sightings of the Royal Shakespeare Company (RSC) in London were eclipsed anyway by Marianne Elliott's fairy-tale production of *All's Well That Ends Well* at the National and the consistent standards at Shakespeare's Globe, where Naomi Frederick was a truly delightful Rosalind in *As You Like It*. In the temporary Courtyard Theatre in Stratford-upon-Avon, the RSC offered tepid revivals of *As You Like It* and *The Winter's Tale* but a more interesting *Julius Caesar*, with a "virtual" crowd on film that railed against the conspirators in the Forum and then took a bow—and waved to the audience. Director Lucy Bailey and designer William Dudley thus scored a first. Greg Hicks was superb as both Leontes and Caesar.

The Chichester Festival Theatre offered Joseph Fiennes in *Cyrano de Bergerac*, directed by Trevor Nunn, and Diana Rigg as Judith Bliss in a poor revival of Noël Coward's *Hay Fever*. Nunn popped up again at the Old Vic to direct Kevin Spacey and David Troughton in a barnstorming revival of the old Broadway Darwinian warhorse *Inherit the Wind*. Spacey's Old Vic also celebrated the 80th birthday of Ireland's greatest living dramatist, Brian Friel, with a gorgeous in-the-round production of *Dancing at Lughnasa*, and Friel was further represented at the Edinburgh International Festival in a trilogy of plays from the Gate Theatre in Dublin.

Other Irish playwrights with new work at the Dublin Theatre Festival included Sebastian Barry, Enda Walsh, and Conor McPherson, who continued the screen-to-stage craze with *The Birds*. Though McPherson returned to Daphne du Maurier's short story, the publicity material included a reference to the 1963 Alfred Hitchcock movie, a ploy to boost ticket sales.

Another highlight of the Edinburgh Festival was an orgiastic version of Goethe's *Faust* by Romanian director Silviu Purcarete in a huge out-of-town warehouse arena, while Edinburgh's Traverse Theatre participated with Rona Munro's *The Last Witch*, based on accounts of the last woman to be burned for witchcraft in Scotland, in

1727. The Traverse also ran a full program of new work on the fringe at their home base next to the Usher Hall, notably *Midsummer* (*A Play with Songs*) by David Greig and Gordon McIntyre; the searing *Orphans*, yet another look at the dysfunctional-family front line, by the talented Dennis Kelly; and the enchanting reminiscences of a politicized drag queen, *A Life in Three Acts*. The latter, which perhaps owed something to Harvey Fierstein's *Torch Song Trilogy*, was written and performed by Bette Bourne and Mark Ravenhill.

Those who departed the stage for good in 2009 included the playwrights Hugh Leonard and Keith Waterhouse, the actors Natasha Richardson and Anna Manahan, and the barrister and writer Sir John Mortimer (see OBITUARIES). Other losses were the actors Dilys Laye, Edward Judd, Harry Towb, and Iain Cuthbertson and the playwrights Tom McGrath and Mike Stott.

(MICHAEL COVENEY)

U.S. and Canada. It was the best of times and the worst of times for theatre in the U.S. in 2009 as Broadway racked up record profits while nonprofit regional theatres coped with shrinking resources, cutbacks, and even closures. An all-time-high average paid admission of \$84.60 for all shows accounted for some of the New York commercial theatre's gain, as did the presence on the Rialto of 19 tourist-friendly musicals, including high-grossers *Billy Elliot*, *Mary Poppins*, *Wicked*, *Jersey Boys*, and (still prowling, after 12 years) *The Lion King*. Some arts pundits speculated that hard times fueled the impulse for escapist entertainment—as was the case during the Great Depression—and the bottom-line success of these musicals gave some credence to their thesis. Broadway's sheen was enhanced as well by an eye-catching sales installation, the \$19 million TKTS Discount Booth that opened in late 2008 on the triangular patch of Times Square where Broadway and Seventh Avenue intersect. The booth's ruby-red, 27-stair glass-step design won awards and approbation from the ticket-buying public.

Across the country, though, the mood was less sanguine. Theatre organizations both large and small watched donations from foundations and corporations shrink or run dry, and all-important individual contributions dwindled as well. Some major companies cut staffs and shortened seasons to make ends meet. The 55-year-old North Shore Music Theatre of Beverly, Mass., unable to contend with a \$10 million

debt, was one of several closures (though late in the year a potential investor raised hopes that the company, known for its lavish musicals staged in the round, would reopen).

Paradoxically, despite hard times, a spate of newly created and innovatively improved theatre spaces sprang up in the U.S. during the year. Two of the most prominent were in Dallas, where the venerable Dallas Theater Center moved out of its longtime home designed by Frank Lloyd Wright into a new \$354 million performing-arts complex downtown, and in Washington, D.C., where the historic Ford's Theatre and Museum sported a glistening renovation.

Probably the most-honoured play of the year was Lynn Nottage's *Ruined*, a humanist exposé about the brutalization of women in the decade of conflict in the Democratic Republic of the Congo, which was co-produced by the Manhattan Theatre Club and Chicago's Goodman Theatre. In addition to winning the Pulitzer Prize for drama, *Ruined* racked up Drama Desk, Outer Critics Circle, Obie, New York Drama Critics' Circle, and Lucille Lortel awards for best play. Other notable new works included 29-year-old Tarell Alvin McCraney's *Brother/Sister Plays*, an award-winning trilogy of poetic dramas that meld tales of African-American life in the Louisiana bayous with esoteric Yoruban myth; the plays were elegantly mounted by the McCarter Theatre Center of Princeton, N.J., and New York City's Public Theater. *Coming Home* and *Have You Seen Us?*, a pair of new works by 77-year-old South Africa playwright and activist Athol Fugard were both mounted during 2009 by director Gordon Edelstein at New Haven, Conn.'s Long Wharf Theatre. Up-and-comer Sarah Ruhl's *In the Next Room (or the vibrator play)*, a sly meditation on Victorian-era relationships and gadgets for "women's health," moved to Broadway from California's Berkeley Repertory Theatre.

The Berkeley company, under the savvy artistic leadership of Tony Taccone, was also the source of a much-talked-about musical, *American Idiot*, adapted from a 2004 multiplatinum album by the superstar pop-punk trio Green Day. The unusual project, despite mixed critical response, was likely to

have a rich future life on American stages. The year's most widely performed plays (as tabulated by the national theatre service organization Theatre Communications Group) were *boom*, Peter Sinn Nachtrieb's self-described "explosive comedy about the end of the world," followed by Irish playwright Conor McPherson's *The Seafarer* and Stephen Karam's *Speech & Debate*.

Experimental work by small ensembles continued to break fresh ground. One of the most distinctive was Nature

ager Michael Ross, who jointly took the reins of Connecticut's stalwart Westport Country Playhouse, and *Angels in America* director George C. Wolfe, who was hired to help design a museum in Atlanta, slated to open in 2012 as the Center for Civil & Human Rights. Director Bartlett Sher, at the top of his game thanks to such successes as Lincoln Center Theater's long-running *South Pacific* revival, announced that Kate Whoriskey (who helmed *Ruined*) would succeed him as artistic director of Seattle's Intiman Theatre in 2011. Two other women of prominence, Kate Warner (formerly of Dad's Garage Theatre Company in Atlanta) and Raelle Myrick-Hodges (the founder of Philadelphia's Azuka Theatre), took over Massachusetts's New Repertory Theatre and San Francisco's feminist-oriented Brava Theater Center, respectively.

Statistics indicating that 83% of all produced plays were written by men and that women were wildly underrepresented in the field generated a series of town-hall-style gatherings (following in the footsteps of a conference of the Black Women Playwrights' Group held in September 2008 at Loyola University in Chicago) at New York City's New Dramatists and at Princeton University. Princeton English and theatre professor Jill Dolan, who organized the latter convocation, declared that "We need to agitate continually

about women's place in the field." Playwright Marsha Norman, who also taught dramatic writing at the Juilliard School, took up the torch of gender equality in a sharply worded essay in the November issue of *American Theatre* magazine that sparked a flurry of debate in the arts blogosphere.

The impact of a bleak economy was felt north of the border as well, as Canada's legitimate theatre scene attempted to hold itself together in the face of canceled shows, soft sales, and slashed prices. In a typical move, Toronto's Buddies in Bad Times, a 30-year-old nonprofit devoted to gay themes and artists, scotched its final mainstage show of the 2008-09 season. At the same city's largest theatre, the Canadian Stage Company—which won kudos for its 20th-anniversary production of *7 Stories*, a breakthrough sur-

Sara Krulwich—The New York Times/Redux



Actresses Laura Benanti (left) and Maria Dizzia share a laugh during a scene from *In the Next Room (or the vibrator play)*, Sarah Ruhl's Victorian-era comedy that opened on Broadway at the Lyceum Theatre.

Theater of Oklahoma, a troupe based in New York City (despite its moniker, lifted from a passage in Franz Kafka's novel *Amerika*) and devoted to unearthing the theatrical in the quotidian and the mundane. *Poetics: a ballet brut*, which Nature Theater performed at the Public in New York and on tour, was a whimsical wordless work that began with the simplest of everyday gestures and developed into an epic dance extravaganza. Philadelphia's versatile Pig Iron Theatre Company also made its mark with such shows as *Chekhov Lizardbrain*, a heady deconstruction of the Russian master's mind-set, and *Welcome to Yuba City*, a genial and exuberant send-up of the American West, with 7 actors playing some 40 characters.

Among the major theatre figures moving into new jobs in 2009 were high-profile director Mark Lamos and man-

Twentieth Century-Fox Film Corporation/The Kobal Collection

realist comedy by Morris Panych—reports leaked out that total sales amounted to only about a third of the seating capacity. Even highly publicized commercial musicals were belt-tightening—David Mirvish's *Dirty Dancing* and the Queen songfest *We Will Rock You* were hawking reduced-price seats, as was Dancap's hit production of *Jersey Boys*. Even the Stratford Shakespeare and Shaw festivals suffered from stalled tourism, though strong reviews and a government marketing initiative helped to avert big losses.

Noteworthy theatre figures who died during 2009 included playwright and screenwriter Horton Foote (whose acclaimed *Orphan Home Cycle* premiered posthumously); the lighting designer Tharon Musser; Brazilian dramatist Augusto Boal; and actors Karl Malden, Harve Presnell, and Zakes Mokae. (See OBITUARIES.) Other losses included playwright Lynne Alvarez, designer Ursula Belden, historian and poet Stefan Brecht, and iconoclastic director Tom O'Horgan.

(JIM O'QUINN)

MOTION PICTURES

United States. In 2009, 3-D films, a brief fashion of the 1950s, roared back as a significant theatrical attraction. The biggest spectacle was James Cameron's *Avatar*, the director's first feature since *Titanic* (1997). This ecologically minded science-fiction parable about earthlings and humanoids on the planet Pandora took cinema fantasy to new levels of realistic detail, thanks to developments in 3-D photography, 2,500 special-effects shots, and an apocalyptic production cost of more than \$230 million. Other films available in the format included Disney's *A Christmas Carol* (Robert Zemeckis), *Cloudy with a Chance of Meatballs* (Phil Lord, Christopher Miller), Henry Selick's fancifully ghoulish stop-motion animation *Coraline*, and the year's best animated achievement, *Up* (Pete Docter), Pixar's captivating film about a balloon seller, a boy explorer, and old dreams fulfilled.

The year's family films also included the digitally enhanced *Where the Wild Things Are*, Spike Jonze's gradually disappointing take on Maurice Sendak's classic children's picture book about a neglected boy's flights of fancy. Disney returned to traditional hand-drawn animation for *The Princess and the Frog* (Ron Clements, John Musker), derivative in style and ingredients but blessed with a marketable lead character in the African American Tiana.



Sam Worthington stars as Jake Sully and Zoe Saldana portrays the character Neytiri in the 3-D science-fiction film *Avatar*, directed by James Cameron.

Old-fashioned human star power was not forgotten. George Clooney's subtle acting and physical charisma lit up the screen in *Up in the Air* (Jason Reitman), a lightly thoughtful diversion about a corporate hired gun addicted to business-class life. He also appeared as a crazed "psychic spy" in Grant Heslov's brilliant satire *The Men Who Stare at Goats*. Clooney served as the voice of the title character in *Fantastic Mr. Fox*, Wes Anderson's uneven stop-motion puppet adaptation of Roald Dahl's children's book. Jeff Bridges drew renewed acclaim as a broken-down country singer in *Crazy Heart* (Scott Cooper), while Colin Firth was touching as a gay man dealing with personal loss in *A Single Man*, an atmospheric first attempt at directing by fashion designer Tom Ford.

Star directors were also evident. Quentin Tarantino offered his deliberately misspelled *Inglourious Basterds*, a violent and violently absurd war film that reshaped the facts of World War II. Christoph Waltz's ripe performance as the fictional Jew-hating Col. Hans Landa won him the Cannes Festival's best actor award. Sobriety and sensitivity characterized *Invictus*, Clint Eastwood's even-handed drama about Nelson Mandela, South African unity, and rugby football. Joel and Ethan Coen also showed their strengths in *A Serious Man*, a wryly comic account of divine fate at work among a Jewish family in Midwestern suburbia in the 1960s.

New films were added to several popular franchises. Increased reality entered the mix for the technically sumptuous *Harry Potter and the Half-Blood*

Prince (David Yates), made in England. Followers of Stephenie Meyer's *Twilight* series of vampire novels flocked to its second and darker movie installment, *New Moon* (Chris Weitz). J.J. Abrams's *Star Trek* reinvigorated its veteran franchise with a fresh cast and a fast-paced, witty "prequel" narrative. Following *The Da Vinci Code* (2006), Ron Howard and lead actor Tom Hanks teamed up again in the moderately improved *Angels & Demons*, adapted from an earlier Dan Brown novel of ponderous religious intrigue. Roland Emmerich, specialist in science-fiction bonanzas, returned with the doomsday drama *2012*, visually spectacular but dramatically laughable.

Proper comedies were frequent, though mostly unremarkable. Charting the adventures of a flamboyantly gay Austrian fashionista, *Brüno*, from the *Borat* team of Sacha Baron Cohen and director Larry Charles, followed the earlier film's mock-documentary technique, but its mean spirit dampened some audience laughter. *Night at the Museum: Battle of the Smithsonian* (Shawn Levy) continued the popular adventures of Ben Stiller's former museum security guard.

Films agonizing over U.S. fields of military conflict were less conspicuous. Kathryn Bigelow's *The Hurt Locker*, concerning the activities of an elite U.S. bomb squad in Iraq, easily stood out for its physical intensity and claustrophobia. Nora Ephron kept to the domestic sphere in *Julie & Julia*, an agreeable confection based on Julie Powell's book about testing the published recipes of television cook Julia Child (winningly played by Meryl Streep) and on Child's

memoir *My Life in France*. Julia Roberts returned to star prominence in *Duplicity* (Tony Gilroy), a sophisticated romantic thriller about the convoluted activities of two corporate spies. Among independent filmmakers, Todd Solondz in *Life During Wartime* rigidly stuck to his standard topic, the misfortunes of social misfits, but new blood pulsed through Cary Fukunaga's *Sin nombre* (*Without Name*), an exceptionally strong debut film about the efforts of Central American immigrants struggling to reach the American border. Lee Daniels's *Precious: Based on the Novel "Push" by Sapphire* also attracted much attention for its unsparing yet tender story of a pregnant Harlem teenager, an abject victim of parental abuse.

British Isles. The realist tradition in British cinema continued to bear fruit with Andrea Arnold's *Fish Tank*, a gripping drama about bleak lives on a housing estate, told observantly and tautly, without moralizing judgments. Nonprofessional Katie Jarvis was mesmerizing as the surly unloved teenager at the plot's centre. Lone Scherfig's *An Education* painted a vibrant portrait of an English teenage girl's dubious romance with an older man. Realist stalwart Ken Loach drifted slightly awkwardly into fantasy-tinged romantic comedy with *Looking for Eric*, about a postal worker obsessed with association football (soccer) who receives visitations and advice from the philosophical footballer Eric Cantona. Soccer also provided material for *The Damned United* (Tom Hooper), a bouncy film about the 1970s soccer manager Brian Clough. Another popular hero, John Lennon, received unusually conventional attention in *Nowhere Boy*, cautiously directed by the conceptual artist Sam Taylor-Wood. Jane Campion's *Bright Star*, produced with Australia and France, stood out for its tender, detailed depiction of the last years of the poet John Keats, viewed through the eyes of his lover and betrothed, Fanny Brawne.

Terry Gilliam's exuberantly fantastic *The Imaginarium of Doctor Parnassus*, completed with some ingenuity following actor Heath Ledger's 2008 death during filming, stirred much curiosity, though its convoluted tale about a traveling-sideshow operator trying to wriggle free of his pact with the Devil appealed most to the director's die-hard fans. A cooler stylistic temperature prevailed in the American co-production *Moon*, a cerebral science-fiction drama from feature film neophyte Duncan Jones (son of David Bowie). In Ireland, Neil Jordan pitted fairy-tale myths

against the grating modern world in the esoteric *Ondine*. Wider tastes were catered to in Conor McPherson's emotional drama *The Eclipse* and in John and Kieran Carney's *Zonad*, a lunatic comedy about a drunk in a red vinyl suit mistaken for a superior life form.

Canada, Australia, and New Zealand. Canadian cinema was relatively dormant, though 20-year-old Xavier Dolan stirred much interest with his semiautobiographical *J'ai tué ma mère* (*I Killed My Mother*), a biting, at times funny account of a 16-year-old homosexual's turbulent relationship with his mother. Dolan wrote, produced, directed, and played the lead role. From Australia, Sarah Watt pondered on the travails of a Melbourne mother recovering from a serious illness in the funny and affecting *My Year Without Sex*. The low-budget *Samson & Delilah*, directed, written, and photographed by Warwick Thornton, attracted much praise for its sensitive treatment of the messy lives of two Aboriginal teenagers in the outback, while troubled teenagers and their anxious mothers in suburban Melbourne absorbed Ana Kokkinos's attention in the raw and compassionate *Blessed*. In *The Boys Are Back* (Scott Hicks), a sportswriter unaccustomed to home responsibilities struggles with being a single parent following his wife's tragic death, a situation explored without maudlin sentiment. New Zealand's biggest filmmaker, Peter Jackson, lent his weight as producer to *District 9* (Neill Blomkamp), an original, gritty science-fiction drama about a slum ghetto of extraterrestrials in South Africa.

Western Europe. The European film that stirred most controversy was the maverick Danish director Lars von Trier's *Antichrist*. Shot in gloomily hued images, von Trier's two-character drama imprisoned its audience in the sadomasochistic aftermath of a domestic tragedy (the death of a couple's young child). In other Danish films, Martin Pieter Zandvliet's *Applaus* (*Applause*) packed some biting wit into its tale of a prickly alcoholic actress endeavouring to get her life in order, while Nicolo Donato made an impressive directing debut with *Broderskab* (*Brotherhood*), a solidly packaged account of a gay relationship between members of a neo-Nazi organization. The film took the top prize at the Rome Film Festival.

Veterans of the French New Wave (Nouvelle Vague) movement of the 1950s and '60s continued in business. Alain Resnais, at 86, offered another playfully artificial diversion, *Les Herbes*

folles (*Wild Grass*), while 81-year-old Jacques Rivette tickled a select few with the cerebral and talkative *36 vues du Pic Saint-Loup* (*Around a Small Mountain*). Claude Chabrol, 78, reached a wider audience with *Bellamy*, an enjoyably old-fashioned and witty *policier*, with Gérard Depardieu as a police inspector cast in the friendly domestic mold of Georges Simenon's famous character Maigret.

The films with most audience appeal and the hottest fire, however, came from the younger generations. Director Jacques Audiard cemented his stature with *Un Prophète* (*A Prophet*), a tough and absorbing drama about the thriving life of a young Arab French petty criminal. Tahar Rahim grabbed all eyes with the detail and intense physicality of his lead performance; the film won the Grand Prix at Cannes. In a lighter vein, Anne Fontaine's *Coco avant Chanel* (*Coco Before Chanel*) pleased wide audiences with its prettily mounted portrait of the early years of the fashion designer Coco Chanel, disarmingly impersonated by Audrey Tautou. Bruno Dumont continued his austere examinations of community life with *Hadewijch*, concerning a devout young woman's extreme crisis of faith. Jean-Pierre Jeunet pursued a livelier path in *Micmacs à tire-larigot* (*Micmacs*), a broad hyperactive tale about Paris misfits banding against arms dealers, featuring the comic Dany Boon. Closer to reality, Jean-Paul Lilienfeld's provocative *La Journée de la jupe* (*Skirt Day*) was overloaded with social issues but brought Isabelle Adjani back into the limelight as a teacher in a suburban school driven to take her pupils hostage. André Téchiné took a more sophisticated view of social malaise in *La Fille du RER* (*The Girl on the Train*), a kaleidoscopic drama based on the true story of a woman train passenger who falsely declared herself the victim of a racist attack. Disillusion and deceptions among spies formed the material of Christian Carion's intelligent and riveting *L'Affaire Farewell* (*Farewell*). Across the border two Belgian films about family life stood out: Felix Van Groeningen's visually boisterous *De helaasheid der dingen* (*The Misfortunates*) and *Un Ange à la mer* (*Angel at Sea*), a striking feature debut by director Frédéric Dumont, about a family struggling to cope with a suicidal father.

Germany generated one of the most powerful and visually refined films of the year in *Das weiße Band* (*The White Ribbon*), Michael Haneke's brooding drama about malicious and mysterious

events unfolding in a German rural village prior to World War I. With its cruel view of human behaviour, this was a film to admire rather than love, though Haneke's craft, the detailed performances, and beautiful black-and-white photography still made for a significant achievement. Warmth radiated from Fatih Akin's *Soul Kitchen*, a friendly portrait of multicultural Germany seen through the microcosm of a Hamburg restaurant. Heinrich Breloer's adaptation of Thomas Mann's novel *Buddenbrooks* settled too easily for surface melodrama, though the noteworthy cast, headed by Armin Müller-Stahl, injected some dignity. Shot in English, *The Last Station* (Michael Hoffman), co-produced with Russia and the U.K., conjured solid middlebrow entertainment from the tempestuous last year of Tolstoy's life. Livelier commercial fare was offered by Alain Gsponer's *Lila, Lila*, a neatly turned romantic comedy about a waiter (Daniel Brühl, a rising star) who passes off an unpublished manuscript as his own work.

Spain's output was dominated by Pedro Almodóvar's *Los abrazos rotos* (*Broken Embraces*), a labyrinthine tale about obsessive love, revenge, and cinema, circling around the travails of a former film director blinded in a car crash. Almodóvar's medley of styles and genres ensured continual interest, as did the presence of Penélope Cruz (see BIOGRAPHIES), though the film remained a clever exercise rather than a drama from the heart. Serious attention was also paid to *La teta asustada* (*The Milk of Sorrow*), Claudia Llosa's sober but vividly realized drama about a Peruvian housemaid so afraid of being raped that she blocks access to her vagina with a potato. The film took the top prize at the Berlin International Film Festival. The most spectacular Spanish film was Alejandro Amenábar's *Agora* (*Mists of Time*), an emotionally cool but visually succulent epic about love and conflicting beliefs in 4th-century Alexandria. In Portugal, Manoel de Oliveira entered the record books by completing a film at the age of 100: *Singularidades de uma rapariga loura* (*Eccentricities of a Blonde-Haired Girl*), a brief, mannered story of misguided love.

Giuseppe Tornatore's *Baaria*, sentimental and vacuous, opened the Venice Film Festival with a blast of hot air. There was meaty Italian matter elsewhere, however. Marco Risi's *Fortapàsc*, about the last months of a Neapolitan journalist killed by the Mafia, painted a precise and grungy picture of the

Neapolitan scene. *Vincere*, directed by Marco Bellocchio with operatic panache, related the story of Mussolini's cruelly discarded first wife and son. Luca Guadagnino's *Io sono l'amore* (*I Am Love*), featuring Tilda Swinton, explored the world of a wealthy Milanese family with vigour, detail, and psychological penetration. In Greece, Giorgos Lanthimos contributed *Kynodontas* (*Dogtooth*), the weirdly absorbing tale of three children trapped in an alternate universe created by their cruel parents on their isolated country estate.

From Scandinavia, Norway offered *Nord* (*North*), Rune Denstad Langlo's agreeably quirky comic drama about a dejected man who gradually warms up on a long Arctic journey. Swedish director Lukas Moodysson made his first international production, *Mammoth*, a three-pronged drama about parents, children, and global capitalism, smoothly made but not quite the equal of its ambitions.

Eastern Europe. Romania's recent cinema renaissance continued with the episodic film *Amintiri din epoca de aur* (*Tales from the Golden Age*), a patchy but watchable panorama of the absurdities of life under communist rule, conceived, written, and partly directed by Cristian Mungiu. Episodes (directed by five separate filmmakers) ranged in tone from sharp light comedy to black irony. Another leading Romanian talent, Corneliu Porumboiu, returned with *Politist, adj.* (*Police, Adjective*), a thoughtful drama about a policeman's unwilling surveillance of a teenager suspected of selling marijuana. Turkey made a small mark with *Mommo* (*The Bogeyman*), Atalay Tasdiken's heart-tugging, limpidly filmed debut feature about two young siblings from an Anatolian village who are threatened with separation. Slovenia's *Slovenka* (*Slovenian Girl*), directed by Damjan Kozole, told of an amoral student led into prostitution by dreams of riches; the film was strengthened by the lead performance of stage actress Nina Ivanisin. Andrzej Wajda, Poland's greatest veteran director, offered the well-meaning but unsatisfying *Tatarak* (*Sweet Rush*)—at heart a mournful tale about a middle-aged woman lured by an attractive young man, but the tale goes astray with the interweaving of personal monologues from Krystyna Janda, Wajda's lead actress. Stronger dramatic fare was provided by *Rewers* (*Reverse*), a promising dramatic debut by documentary maker Borys Lankosz, tracing the effect of an encounter with com-

munist Poland's secret police on three generations of women.

Latin America. Latin American filmmakers continued to flourish. In Mexico, Rigoberto Pérezcano's *Norteados* (*Northless*) gave unhackneyed treatment to the familiar topic of immigrants struggling to enter the United States. Chile secured international attention with *La nana* (*The Maid*), Sebastián Silva's tensely wrought drama about an obsessive, gloomy, territorial maid. Veteran Chilean director Miguel Littin showed his muscles in *Dawson Isla 10*, a harrowing drama about the treatment of political prisoners by the regime of Augusto Pinochet, while Alejandro Fernández Almendras trod more gently in *Huacho*, a touching family saga following 24 hours in the life of a poor provincial family. Productions from Uruguay, though small in number, continued to reveal talent. Adrián Biniez's *Gigante* tenderly pursued the comic fortunes of a shy supermarket security guard, nervously in love with one of the store's janitors. Argentina enjoyed a big local success with Juan José Campanella's *El secreto de sus ojos* (*The Secret in Their Eyes*), a complex but gripping romantic thriller. In Brazil, Esmir Filho impressed with his *Os famosos e os duendes da morte* (*The Famous and the Dead*), the delicately surreal tale of a Bob Dylan fan whose main connection with the world is through the Internet.

Middle East. Israeli filmmakers proved the most prolific and successful in exploring the region's conflicts. Samuel Maoz's *Lebanon*, winner of the Golden Lion prize at Venice, placed the viewer inside an Israeli tank on the first day of the 1982 invasion of Lebanon. Visceral camera work gave the film a claustrophobic power, though characterizations stayed relatively drab. *Ajami*, co-directed by Israeli Yaron Shani and Palestinian Scandar Copti, focused sharply on a revenge killing in Jaffa and its tragic repercussions. The mood stayed intense in *Einaym Pkuhot* (*Eyes Wide Open*), Haim Tabakman's courageous film about a married male butcher in Jerusalem, a strict Orthodox Jew, in love with a seductive male student. Political restrictions pressed down on Iranian filmmakers, but Abdolreza Kahani managed a touching portrait of working-class life in *Bist* (*Twenty*), an ensemble drama about the staff of a Tehran reception hall faced with closure. More provocatively, Bahman Ghobadi's *Kasi az gorbehaye irani* (continued on page 288)

INTERNATIONAL FILM AWARDS 2009

Golden Globes, awarded in Beverly Hills, California, in January 2009

Best drama	<i>Slumdog Millionaire</i> (U.K.; director, Danny Boyle)
Best musical or comedy	<i>Vicky Cristina Barcelona</i> (Spain/U.S.; director, Woody Allen)
Best director	Danny Boyle (<i>Slumdog Millionaire</i> , U.K.)
Best actress, drama	Kate Winslet (<i>Revolutionary Road</i> , U.S./U.K.)
Best actor, drama	Mickey Rourke (<i>The Wrestler</i> , U.S./France)
Best actress, musical or comedy	Sally Hawkins (<i>Happy-Go-Lucky</i> , U.K.)
Best actor, musical or comedy	Colin Farrell (<i>In Bruges</i> , U.K./U.S.)
Best foreign-language film	<i>Vals im Bashir</i> (<i>Waltz with Bashir</i>) (Israel/Germany/France/U.S./Finland/Switzerland/Belgium/Australia; director, Ari Folman)

Sundance Film Festival, awarded in Park City, Utah, in January 2009

Grand Jury Prize, dramatic film	<i>Push: Based on the Novel by Sapphire</i> (<i>Precious: Based on the Novel "Push" by Sapphire</i>) (U.S.; director, Lee Daniels)
Grand Jury Prize, documentary	<i>We Live in Public</i> (U.S.; director, Ondi Timoner)
Audience Award, dramatic film	<i>Push: Based on the Novel by Sapphire</i> (<i>Precious: Based on the Novel "Push" by Sapphire</i>) (U.S.; director, Lee Daniels)
Audience Award, documentary	<i>The Cove</i> (U.S.; director, Louie Psihoyos)
World Cinema Jury Prize, dramatic film	<i>La nana</i> (<i>The Maid</i>) (Chile; director, Sebastián Silva)
World Cinema Jury Prize, documentary	<i>Rough Aunties</i> (U.K.; director, Kim Longinotto)
U.S. directing award, dramatic film	Cary Fukunaga (<i>Sin nombre</i> [<i>Without Name</i>], Mexico/U.S.)
U.S. directing award, documentary	Natalia Almada (<i>El general</i> [<i>The General</i>], Mexico/U.S.)

British Academy of Film and Television Arts, awarded in London in February 2009

Best film	<i>Slumdog Millionaire</i> (U.K.; director, Danny Boyle)
Best director	Danny Boyle (<i>Slumdog Millionaire</i> , U.K.)
Best actress	Kate Winslet (<i>The Reader</i> , U.S./Germany)
Best actor	Mickey Rourke (<i>The Wrestler</i> , U.S./France)
Best supporting actress	Penélope Cruz (<i>Vicky Cristina Barcelona</i> , Spain/U.S.)
Best supporting actor	Heath Ledger (<i>The Dark Knight</i> , U.S./U.K.)
Best foreign-language film	<i>Il y a longtemps que je t'aime</i> (<i>I've Loved You So Long</i>) (France/Germany; director, Philippe Claudel)

Berlin International Film Festival, awarded in February 2009

Golden Bear	<i>La teta asustada</i> (<i>The Milk of Sorrow</i>) (Spain/Peru; director, Claudia Llosa)
Silver Bear, Jury Grand Prix	<i>Alle anderen</i> (<i>Everyone Else</i>) (Germany; director, Maren Ade); <i>Gigante</i> (Uruguay/Argentina/Germany/Spain; director, Adrián Biniez)
Silver Bear, best director	Asghar Farhadi (<i>Darbareye Elly</i> [<i>About Elly</i>], Iran)
Silver Bear, best actress	Birgit Minichmayr (<i>Alle anderen</i> [<i>Everyone Else</i>], Germany)
Silver Bear, best actor	Sotigui Kouyaté (<i>London River</i> , U.K./France/Algeria)

Academy of Motion Picture Arts and Sciences (Oscars; U.S.), awarded in Los Angeles in February 2009

Best film	<i>Slumdog Millionaire</i> (U.K.; director, Danny Boyle)
Best director	Danny Boyle (<i>Slumdog Millionaire</i> , U.K.)
Best actress	Kate Winslet (<i>The Reader</i> , U.S./Germany)
Best actor	Sean Penn (<i>Milk</i> , U.S.)
Best supporting actress	Penélope Cruz (<i>Vicky Cristina Barcelona</i> , Spain/U.S.)
Best supporting actor	Heath Ledger (<i>The Dark Knight</i> , U.S./U.K.)
Best foreign-language film	<i>Okuribito</i> (<i>Departures</i>) (Japan; director, Yojiro Takita)
Best animated feature	<i>WALL•E</i> (U.S.; director, Andrew Stanton)

Césars (France), awarded in Paris in February 2009

Best film	<i>Séraphine</i> (France/Belgium; director, Martin Provost)
Best director	Jean-François Richet (<i>Mesrine</i> , France/Canada)
Best actress	Yolande Moreau (<i>Séraphine</i> , France/Belgium)
Best actor	Vincent Cassel (<i>Mesrine</i> , France/Canada)
Most promising actor	Marc-André Grondin (<i>Le Premier Jour du reste de ta vie</i> [<i>The First Day of the Rest of Your Life</i>], France)
Most promising actress	Déborah François (<i>Le Premier Jour du reste de ta vie</i> [<i>The First Day of the Rest of Your Life</i>], France)

Cannes Festival, France, awarded in May 2009

Palme d'Or	<i>Das weisse Band</i> (<i>The White Ribbon</i>) (Austria/Germany/France/Italy; director, Michael Haneke)
Grand Prix	<i>Un Prophète</i> (<i>A Prophet</i>) (France/Italy; director, Jacques Audiard)
Jury Prize	<i>Fish Tank</i> (U.K.; director, Andrea Arnold); <i>Bakjwi</i> (<i>Thirst</i>) (South Korea; director, Park Chan-Wook)
Best director	Brillante Mendoza (<i>Kinatay</i> [<i>The Execution of P</i>], Philippines/France)
Best actress	Charlotte Gainsbourg (<i>Antichrist</i> , Denmark/Germany/France/Sweden/Italy/Poland)
Best actor	Christoph Waltz (<i>Inglourious Basterds</i> , U.S./Germany)
Caméra d'Or	<i>Samson and Delilah</i> (Australia; director, Warwick Thornton)

INTERNATIONAL FILM AWARDS 2009 (continued)

Locarno International Film Festival, Switzerland, awarded in August 2009

Golden Leopard	<i>She, a Chinese</i> (U.K./France/Germany; director, Xiaolu Guo)
Special Jury Prize	<i>Buben, baraban</i> (Russia; director, Aleksey Mizgirev)
Best actress	Lotte Verbeek (<i>Nothing Personal</i> , Ireland/Netherlands)
Best actor	Antonis Kafetzopoulos (<i>Akadimia Platonos [Plato's Academy]</i> , Germany/Greece)

Montreal World Film Festival, awarded in September 2009

Grand Prix of the Americas (best film)	<i>Korkoro (Freedom)</i> (France; director, Tony Gatlif)
Best actress	Marie Leuenberger (<i>Die Standesbeamtin [Will You Marry Us?]</i> , Switzerland)
Best actor	Cyron Bjørn Melville (<i>Vanvittig forelsket [Love and Rage]</i> , Denmark)
Best director	Kichitaro Negishi (<i>Viyon no tsuma [Villon's Wife]</i> , Japan)
Special Grand Prix of the Jury	<i>Fang zhi gu niang (Weaving Girl)</i> (China; director, Quanan Wang)
Best screenplay	<i>Je suis heureux que ma mère soit vivante (I'm Glad that My Mother Is Alive)</i> (France; screenplay by Alain Le Henry)
International film critics award	<i>Fang zhi gu niang (Weaving Girl)</i> (China; director, Quanan Wang)

Venice Film Festival, awarded in September 2009

Golden Lion	<i>Lebanon</i> (Germany/Israel/France/Lebanon; director, Samuel Maoz)
Special Jury Prize	<i>Soul Kitchen</i> (Germany; director, Fatih Akin)
Volpi Cup, best actress	Kseniya Rappoport (<i>La doppia ora [The Double Hour]</i> , Italy)
Volpi Cup, best actor	Colin Firth (<i>A Single Man</i> , U.S.)
Silver Lion, best director	Shirin Neshat (<i>Zanan-e bedun-e mardan [Women Without Men]</i> , Germany/Austria/France)
Marcello Mastroianni Award (best new young actor or actress)	Jasmine Trinca (<i>Il grande sogno [The Big Dream]</i> , Italy/France)
Luigi De Laurentiis Award (best first film)	<i>Engkwentro (Clash)</i> (Philippines; director, Pepe Diokno)

Toronto International Film Festival, awarded in September 2009

Best Canadian feature film	<i>Cairo Time</i> (director, Ruba Nadda)
Best Canadian first feature	<i>The Wild Hunt</i> (director, Alexandre Franchi)
Best Canadian short film	<i>Danse macabre</i> (director, Pedro Pires)
International film critics award	<i>Paltadacho munis (The Man Beyond the Bridge)</i> (India; director, Laxmikant Shetgaonkar); <i>Hadewijch</i> (France; director, Bruno Dumont)
People's Choice Award	<i>Precious: Based on the Novel "Push" by Sapphire</i> (U.S.; director, Lee Daniels)

San Sebastián International Film Festival, Spain, awarded in September 2009

Best film	<i>Nanjing! Nanjing! (City of Life and Death)</i> (China/Hong Kong; director, Lu Chuan)
Special Jury Prize	<i>Le Refuge (The Refuge)</i> (France; director, François Ozon)
Best director	Javier Rebollo (<i>La mujer sin piano [Woman Without Piano]</i> , Spain)
Best actress	Lola Dueñas (<i>Yo, también [Me Too]</i> , Spain)
Best actor	Pablo Pineda (<i>Yo, también [Me Too]</i> , Spain)
Best cinematography	Yu Cao (<i>Nanjing! Nanjing! [City of Life and Death]</i> , China/Hong Kong)
New directors prize	Philippe Van Leeuw (<i>Le Jour où Dieu est parti en voyage [The Day God Walked Away]</i> , France/Belgium)
International film critics award	<i>Los condenados (The Condemned)</i> (Spain; director, Isaki Lacuesta)

Vancouver International Film Festival, awarded in October 2009

Most Popular Canadian Film Award	<i>65_RedRoses</i> (directors, Philip Lyall and Nimisha Mukerji)
People's Choice Award	<i>Soundtrack for a Revolution</i> (U.S./France/U.K.; directors, Bill Guttentag and Dan Sturman)
National Film Board Most Popular Canadian Documentary Award	<i>65_RedRoses</i> (directors, Philip Lyall and Nimisha Mukerji)
Canwest Award for Best Canadian Feature Film	<i>J'ai tué ma mère (I Killed My Mother)</i> (director, Xavier Dolan)
Environmental Film Audience Award	<i>At the Edge of the World</i> (U.S.; director, Dan Stone)
Dragons and Tigers Award for Young Cinema	<i>Hwioribaram (Eighteen)</i> (South Korea; director, Jang Kun-Jae)

Chicago International Film Festival, awarded in October 2009

Gold Hugo, best film	<i>Mississippi Damned</i> (U.S.; director, Tina Mabry)
Gold Hugo, best documentary	<i>Cooking History</i> (Slovakia/Czech Republic/Austria/Finland; director, Péter Kerekes)
Silver Hugo, Special Jury Award	<i>Fish Tank</i> (U.K.; director, Andrea Arnold)

European Film Awards, awarded in December 2009

Best European film	<i>Das weiße Band (The White Ribbon)</i> (Austria/Germany/France/Italy; director, Michael Haneke)
Best actress	Kate Winslet (<i>The Reader</i> , U.S./Germany)
Best actor	Tahar Rahim (<i>Un Prophète [A Prophet]</i> ; France/Italy)

(continued from page 285)

khahar nadareh (*No One Knows About Persian Cats*) burrowed into Tehran's underground music scene for an uneven quasi-documentary blend of limp narrative and fiery music. Moroccan cinema continued to brighten. A new director, Nour-Eddine Lakhmari, won popular success with *Casanegra*, an energetic dark-hued tale about two small-time hustlers in Casablanca.

South Asia. In a barren year artistically, Bangladeshi director Mostofa Sarwar Farooki made a mark with *Third Person Singular Number*, a stylistically polished and striking drama about a single Muslim's woman's struggle for an independent life. Bollywood product continued to proliferate with boisterous concoctions, such as Anurag Singh's *Dil bole hadippa!* (*My Heart Goes Hadippa*), the absurd tale of a cricket-crazy Punjabi girl who joins an international cricket team in disguise, and the romantic comedy *What's Your Raashee?* (Ashutosh Gorawiker). Dev Benegal's lightly likable *Road, Movie*, following the cross-country trek of a disaffected young man, paid greater heed to international tastes.

East and Southeast Asia. China marked the 60th anniversary of communist rule with *Jian guo da ye* (*The Founding of a Republic*; Han Sanping, Huang Jianxin), a lavish depiction of the post-World War II battles between communists and nationalists. Within a month of its release, it had become China's biggest-grossing film. Lu Chuan's *Nanjing! Nanjing!* (*City of Life and Death*) viewed history with more sophistication, exploring the 1937–38 Nanjing (Nanking) Massacre with a convincing blend of realistic action and thoughtful reverie. Hong Kong's commercial cinema offered a sprawling new vehicle for action star Jackie Chan, *San suk si gin* (*Shinjuku Incident*; Tung-Shing Yee). Subtler tastes were satisfied with *Tin shui wai dik ye yu mo* (*Night and Fog*), Ann Hui's vividly acted drama about domestic violence.

South Korea sold plenty of popcorn with *Haeundae* (Yun Je-Gyun), a rousing disaster movie about a popular beach resort struck by a tsunami. Life was taken more seriously in *Yeo-haeng-ja* (*A Brand New Life*), Ounie Lecomte's absorbing drama based on her own experiences as an orphan sheltered by nuns. *Kwasok scandale* (*Speed Scandal*; Kang Hyeong-Cheol) spun popular comedy around the clever tale of a self-obsessed radio host whose life spins out of control. Those hunting for the offbeat found



In a scene from director Lu Chuan's film *Nanjing! Nanjing!* (*City of Life and Death*), Chinese women are blindfolded before being taken to Japanese soldiers as prostitutes during the 1937–38 Nanjing Massacre.

National Geographic Entertainment/Everett Collection

some pleasure with Park Chan-Wook's *Bakjwi* (*Thirst*), the outlandish result of fusing vampire comedy with elements from Émile Zola's novel *Thérèse Raquin*.

Hirokazu Koreeda, one of the most idiosyncratic of Japanese directors, continued his musings on lost souls and love in *Kuki ningyo* (*Air Doll*), a fragile modern fairy tale about a waiter and his favourite partner, an inflatable doll. Working in the popular register, Yukihiro Tsutsumi pleased many with the final two episodes of his manga-based adventure trilogy *20-seiki shonen* (*20th Century Boys*). In the Philippines, in *Kinatay* (*The Execution of P*), Brilante Mendoza's directorial skills barely salvaged his coarse narrative about a police trainee losing his innocence in Manila's urban hell. The theme of imperiled innocence was also found in the attractively mounted Malaysian film *Sham moh* (*At the End of Daybreak*; Ho Yuhang).

Africa. Local filmmaking on the continent remained sparse. The veteran Malian director Souleymane Cissé produced his first film in 14 years with *Min Ye* (*Tell Me Who You Are*), a talkative tale of infidelity and polygamy among Mali's upper classes. (GEOFF BROWN)

Documentary Films. Environmental issues continued to have a major presence in the documentary arena during 2009. In *The Cove*—an Audience Award winner at the Sundance, Hot Docs, and Silverdocs film festivals—veteran *National Geographic* still photographer Louie Psihoyos probed abuses suffered by commercially exploitable dolphins in Japan. His crew included Richard O'Barry, the former dolphin trainer of *Flipper* TV-series fame. Robert Kenner's *Food, Inc.* scrutinized the history of the world food chain and the ramifications

of its current control by multinational corporations. Joe Berlinger's *Crude* reported the effects of oil drilling on communities along the Amazon River in Ecuador. The irrepressible Michael Moore returned with *Capitalism: A Love Story*. The film was highly critical of the U.S.'s handling of the recent economic crisis and its bailouts of corporations and banks.

Other prominent documentaries explored issues in less-developed countries. A Grierson Award winner, *Burma VJ* by Anders Østergaard, followed the efforts of reporters in Myanmar (Burma) who, armed with video cameras, risked their lives to expose political and social repression in their country. British director Havana Marking's *Afghan Star*, winner of two awards at Sundance, explored Afghanistan's version of the TV show *American Idol*, the program's open voting system, and its implications for the country's democratic process. Screened at numerous festivals internationally, Hamid Rahmanian's *The Glass House* looked at the plight of four young Iranian women striving to break free from repression and exploitation with support from a rehabilitation centre in Tehran.

Winner of the International Documentary Association's award for best feature documentary, British director Sacha Gervasi's *Anvil! The Story of Anvil* examined the Canadian rock group's unique career. In the United States, Peter Esmonde's *Trimpin* was a portrait of a truly original composer who used unorthodox instruments. Aviva Kempner's *Yoo-Hoo, Mrs. Goldberg* celebrated Gertrude Berg's extraordinary contributions to radio and television, including the innovation of the character-driven situation comedy. (BEN LEVIN)

Physical Sciences

Chemists made advances in the synthesis and use of **GRAPHENE** and improved techniques involving **NUCLEAR MAGNETIC RESONANCE** to study proteins in living cells. Physicists observed the chemical structure of a **SINGLE MOLECULE** and came closer to the development of an **OPTICAL MICROCHIP**. Scientists **DISCOVERED** significant amounts of **WATER** on the **MOON** and evidence that stars had formed not very long after the big bang. Future plans for manned missions to the **MOON** and **MARS** were reevaluated, and the Kepler satellite began searching for **EARTH-SIZE PLANETS**.

CHEMISTRY

Materials Chemistry. In 2009 there was a notable surge in research on graphene—an atom-thick layer of carbon atoms tightly arranged in a honeycomb structure. The exceptional mechanical, structural, and electronic properties of graphene had propelled this form of carbon to the forefront of academic and commercial materials research. Graphene had great strength and stiffness, and at room temperature it conducted electrons faster than any other material. Conceptually, graphene was not new. Crystals of the form of carbon known as graphite had long been described as being composed of multiple layers of graphene, and carbon nanotubes and buckyballs were seen essentially as rolled-up forms and spherical enclosures of graphene, respectively. Single free-standing graphene sheets had first been isolated only a few years earlier, in work carried out by Andre K. Geim and Kostya S. Novoselov of the University of Manchester, Eng. The team had succeeded in isolating graphene by turning to a rudimentary method—they stuck small specks of graphite onto adhesive tape. Then by folding the sticky sides of the tape against each other and repeatedly pulling them apart, the researchers eventually cleaved some of the flakes to a single-atom thickness. In 2009 scientists reported many advances in graphene synthesis, including methods

of forming graphene strips by “unzipping” carbon nanotubes chemically and physically, using surfactant-guided molecular self assembly, and deoxygenating graphite oxide (an inexpensive precursor) photothermally by means of a camera flash. They also reported advances in the development of graphene applications, including electrically conductive coatings and polymer composites, ultracapacitors, nanoscale field-effect transistors, and ultrafast photodetectors.

Nuclear Chemistry. In June 2009 the International Union of Pure and Applied Chemistry (IUPAC) officially recognized a group of scientists led by Sigurd Hofmann of the Institute for Heavy Ion Research (GSI) in Darmstadt, Ger., as the first to have produced nuclei of element 112. GSI had reported producing element 112 in experiments conducted in 1996 in which a target containing atoms of lead was bombarded with high-velocity ions of zinc. As a result of the IUPAC action, GSI was entitled to name the element. The research group chose the name copernicium and symbol Cp in honour of Polish astronomer Nicolaus Copernicus, and the IUPAC was expected to approve the new name and symbol in early 2010.

In September researchers working at Lawrence Berkeley National Laboratory at the University of California, Berkeley, independently confirmed the results of an experiment that had been conducted a decade earlier by scientists at the Joint Institute for Nuclear Research in Dubna, Russia, who claimed

that they had synthesized nuclei of element 114. The Lawrence Berkeley group used high-velocity ions of calcium to bombard a target containing plutonium. The probability that a target nucleus and a projectile nucleus would fuse into a single massive particle was extremely low, and only two nuclei of element 114 were observed in a week's worth of bombardment. Such unfavourable statistics made it especially challenging, yet critically important, to independently confirm heavy-element synthesis results.

Organic Chemistry. According to the classic textbook formulation of electrophilic aromatic substitution reactions, the presence of substituents on aromatic rings such as benzene guides incoming substituents to specific ring positions. Amines and other electron-donating groups, for example, direct newly arriving reactants to the ortho and para positions (one and three carbon atoms away from the amine group, respectively) on the ring. Nitro and other electron-withdrawing groups guide the reactants to the meta position (two carbon atoms away). It appeared that these time-honoured organic-chemistry rules might need to be qualified, however. Matthew J. Gaunt and Robert J. Phipps of the University of Cambridge showed that the presence of a copper catalyst caused unexpected aromatic substitution reactions in which acyl amines yielded meta-substituted products. The unconventional reaction might lead to new syntheses for valuable products such as pharmaceuticals.

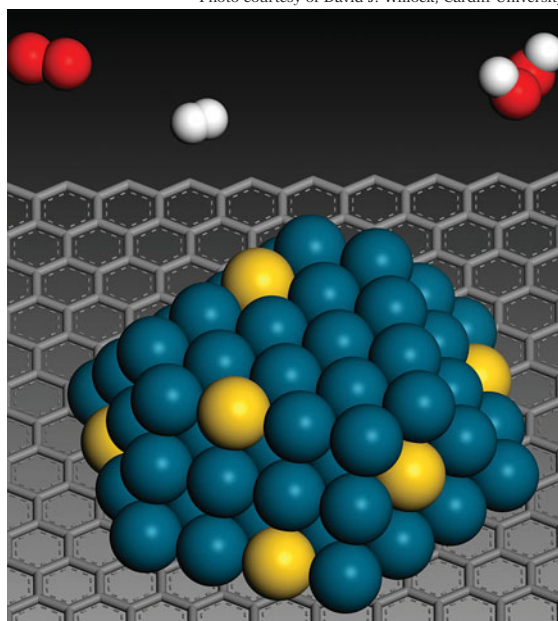
Biochemistry. The study of proteins inside their native cellular environment could provide key insights into the biological mechanisms of diseases. An analytic technique known as in-cell nuclear magnetic resonance (NMR) spectroscopy held promise for carrying out detailed intracellular studies of proteins, but the method's application had been limited mainly to probing in-cell protein conformations, dynamic motions, and binding interactions. Working independently, two teams of researchers in Japan showed that the reach of the NMR technique extended well beyond the range demonstrated previously. Yutaka Ito at Tokyo Metropolitan University and colleagues succeeded for the first time in ascertaining a three-dimensional protein structure

Photo courtesy of David J. Willock, Cardiff University

exclusively from NMR spectroscopy data from living cells. The group reported subtle differences between the structure of the metal-binding protein TTHA1718 found in bacterial cells and the structure of the protein *in vitro*. The other team, formed by researchers at Kyoto University, demonstrated for the first time that the in-cell NMR technique could be used successfully to analyze proteins in living mammalian somatic (eukaryotic) cells. The method had previously been limited to the study of prokaryotic cells that had been customized to express isotope-labeled proteins at elevated levels for NMR analysis.

Physical Chemistry. Researchers boosted the time resolution of electron energy loss spectroscopy (EELS) by a factor of 10 billion and also pushed the spatial resolution of the technique to the single-atom limit. EELS, often used in conjunction with transmission electron microscopy (TEM), could be used to reveal the chemical identity of a specimen by measuring element-specific decreases in beam energy caused by interactions between an electron beam and atoms in the sample. Ahmed H. Zewail and co-workers at the California Institute of Technology developed a laser-driven TEM method that enabled EELS signals, which were typically recorded on the millisecond scale, to be measured with femtosecond (10^{-15} -sec) resolution—the time scale on which chemical reactions occur. To more fully demonstrate the methodology, the group mapped changes in real time in the chemical bonding and electron distribution of a graphite crystal as it was momentarily compressed by a laser pulse into the structure of a diamond crystal. In another study a team headed by Kazu Suenaga of Japan's National Institute of Advanced Industrial Science and Technology showed that by finely focusing a TEM beam with devices known as aberration correctors, they were able to pinpoint the location and chemical identity (including oxidation state) of single impurity atoms of calcium and cerium inside carbon nanotubes.

Applied Chemistry. Converting the chemical building blocks of plant matter into fuels and other useful substances could help alleviate the problems of a dwindling supply of available petroleum resources and of the envi-



Nanoparticles of an alloy of gold (yellow) and palladium (blue) on an acid-treated carbon support directly catalyze hydrogen-peroxide formation from hydrogen (white) and oxygen (red) and block hydrogen-peroxide decomposition.

ronmental consequences that resulted from their use. Such chemical transformations presented a challenge, however, because plant-derived biomass is a physically tough and chemically complex mixture consisting largely of lignocellulose (cellulose, hemicellulose, and lignin). Major research efforts into this area of green chemistry had largely focused on producing ethanol and other liquid transportation fuels. Some researchers, however, were working on techniques for converting cellulosic biomass into versatile intermediate chemical compounds such as 5-hydroxymethylfurfural (HMF). Referred to as a platform chemical, HMF could readily be transformed into various products typically made from petroleum, including solvents, fuels, and monomers for polymer production. Although methods for converting raw lignocellulose to HMF or other finished chemical products had not yet been demonstrated, research in the biomass field was moving in that direction. In the early part of the year, Z. Conrad Zhang and co-workers at Pacific Northwest National Laboratory (PNNL), Richland, Wash., reported devising a single-step method of making HMF directly from cellulose. The conversion was driven by a combination of copper chloride and chromium chloride dissolved in an imidazolium ionic liquid. The catalytic mixture op-

erated under mild conditions and rapidly depolymerized cellulose—the main bottleneck in the development of a commercial process for the conversion of cellulosic biomass.

Industrial Chemistry. The production of millions of tons of hydrogen peroxide (an oxidizer used as a disinfectant and bleach) each year depended on an indirect chemical process that was based on the sequential hydrogenation and oxidation of organic compounds called anthraquinones. The direct synthesis of hydrogen peroxide from hydrogen and oxygen would be simpler and potentially less expensive, but it was not employed for the production of bulk quantities of the oxidizer because the catalysts known to drive such a reaction also catalyzed the decomposition of hydrogen peroxide. Graham J. Hutchings of Cardiff (Wales) University and colleagues, however, devised a way to sidestep that problem.

The group showed that a gold-palladium alloy catalyst supported on a carbon film pretreated with acid avoided the unwanted decomposition. The team explained that their preparation method formed catalyst particles that were very small (less than 10 nanometres in diameter) and well dispersed. As a result, the particles guided hydrogen peroxide synthesis selectively and shut down the decomposition pathway. (MITCH JACOBY)

PHYSICS

Condensed Matter Physics. Recognizing that a new generation of logic circuits would be needed for the next generation of computer systems, physicists focused much work in 2009 on “quantum dots,” tiny collections of atoms that function together as a single atom. For example, the spin of a single electron trapped inside a quantum dot can act as a binary digit to store information. The information is unfortunately degraded by interactions with the nuclear spins of the atoms that make up the surrounding lattice. Xiaodong Xu and co-workers at the University of Michigan at Ann Arbor reported a means of suppressing nuclear spin fluctuations that enables the information to be preserved much longer.

A team led by Robert Wolkow at the National Institute for Nanotechnology,

Edmonton, Alta., created single atom quantum dots using single silicon atoms—the smallest quantum dots ever created. These assemblies can work at room temperature and use very little energy.

If electronic systems are going to be built that are nanometres (10^{-9} m) in size, the pieces of those systems will be the size of molecules. Switching was reported with atoms being used as the contacts. Junctions that use a single molecule are more flexible in that the states in which the molecular switch conducts electricity can be “tuned.” Previously, switching in single-molecule junctions was produced by changing the shape or the charge of the molecule. Su Ying Quek and co-workers at Lawrence Berkeley National Laboratory, Berkeley, Calif., demonstrated switching in a single-molecule junction by merely stretching and compressing the molecule.

The way in which electrons are transported in semiconductors is determined by the gap between the valence and the conduction energy bands. If this bandgap could be tuned, particularly with an external electric field, the design of devices with semiconductors would be much easier. Using infrared microspectroscopy, Yuanbo Zhang and colleagues at the University of California, Berkeley, demonstrated a continuously tunable bandgap in bilayer graphene, a material consisting of two one-atom-thick layers of carbon atoms.

Photonics. Microchips that use light instead of electrons could outperform their electronic counterparts. To develop an optical microchip, the light flow must be controlled. Photonic crystals are periodically arranged structures designed to confine light on sub-wavelength scales; they could also provide a way to guide light through an optical microchip without losing any of the light's energy. The introduction of the optical microchip came closer when Kenji Ishizaki and Susumu Noda at Kyoto (Japan) University controlled light at the surface of a gallium-arsenide-based photonic crystal.

At even smaller dimensions, J. Hwang and co-workers at the Institute of Technology, Zürich, used a single dye molecule as an optical transistor. An optical transistor of this size could also be used to manipulate individual photons.

In traditional photoconductors, impinging light causes conductivity to increase. Hideyuki Nakanishi and co-workers of Northwestern University, Evanston, Ill., described a class of

nanostructured materials in which conductivity decreases, providing new insights into electron transport in such photoconductors.

The interaction between light and matter would be at the heart of any light-based device. G. Günter and co-workers at the University of Konstanz, Ger., showed that this interaction can happen in an extremely short time; the light waves did not even have time to go through one oscillation. This demonstrated that several unusual light-matter phenomena could now be tested experimentally.

Terahertz Radiation. Devices that control light with frequencies between 0.5 and 5 THz (terahertz; 1 THz = 10^{12} Hz) could be useful in many areas, such as medical imaging, astronomy, and security. Y. Chassagneux and colleagues at the Université de Paris-Sud and Centre National de la Recherche Scientifique, Orsay, France, significantly advanced the field of THz devices by building electrically pumped lasers that operate between 2.55 and 2.88 THz. The laser beam does not spread out much, unlike previous THz lasers.

Nevertheless, devices that can effectively manipulate THz radiation require substantial development. A promising step was made when Hou-Tong Chen and colleagues at Los Alamos (N.M.) National Laboratory demonstrated a two-dimensional device that controlled the phase of THz radiation over a narrow frequency band. Alternatively, the device could also modulate THz radiation over a broad frequency band.

Molecular Imaging. For the first time, the detailed chemical structure of a single molecule, pentacene, was imaged. This was accomplished by Leo Gross and colleagues at IBM Research, Zürich, using an atomic force micro-

scope, which acts like a tiny tuning fork, with one of the fork's prongs passing incredibly close to the sample. When the fork is set vibrating, the prong nearest the sample experiences a minuscule shift in frequency that depends on the molecule's structure. Understanding structure on the molecular scale could help in the design of drugs and electronics.

Molecules in gases and liquids are always moving, thanks to their thermal energy. By using a short laser pulse, a molecule can be “frozen” for a few picoseconds (10^{-12} second). Albert Stolow of the Steacie Institute for Molecular Sciences, Ottawa, and his colleagues did this to a carbon disulphide molecule, observing its dynamics in a photochemical reaction.

A. Ravasio and co-workers at the Centre d'Études de Saclay, France, reported a different method for obtaining images of objects nanometres in size. A 20-femtosecond (10^{-15} -second) pulse of X-rays generated a diffraction pattern when shone on such an object. The diffraction pattern was decoded to produce an image of the object.

Entanglement. The concept of entanglement, where two spatially separated systems may have instantaneous correlations, could someday form the basis of quantum information networks. These networks would require buffers to control how data moves through such a network. Such buffers not only would need to store single “quantum bits” (qubits) but would also need to store “quantum images”—that is, pairs of images that are entangled. To be able to control the flow of the quantum image through such a system would mean that one of the images would be slowed down with respect to the other. A.M. Marino and co-workers at the

The structure of a pentacene molecule is clearly resolved by an atomic force microscope.

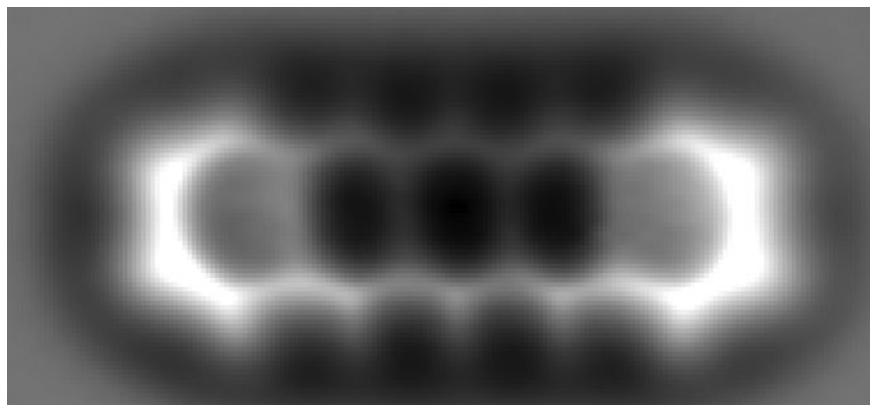


Image reproduced by permission of IBM Research—Zürich

University of Maryland at Gaithersburg produced such a delay for a quantum image by postponing one image of the pair by 32 nanoseconds while still keeping it entangled with the other.

In an important step toward the development of computers that rely on the properties of entangled quantum states, L. DiCarlo and colleagues at Yale University demonstrated the first two-qubit quantum-information processor by devising a system that incorporated two qubits on either side of an extended resonant microwave cavity. The interaction between the two qubits allowed highly entangled states between them to be created. Despite this success, much work remained on increasing the power and performance of quantum processors.

J.D. Jost's group at the National Institute of Standards and Technology, Boulder, Colo., took a different approach to entangled states. They took two magnesium-beryllium ion pairs held in different locations and entangled their mechanical vibrational states. They also were able to entangle the internal states of the beryllium ion with the oscillations of the other ion pair. This work pointed the way for possible future experiments in which the effects of quantum mechanics might be observable in systems larger than the microscopic.

Pascal Böhi and co-workers of the Max Planck Institute of Quantum Optics, Munich, took rubidium atoms and cooled them to near absolute zero to form a Bose-Einstein condensation, a state of matter in which they coalesced into a single quantum mechanical entity. They were able to entangle the internal atomic states of the atoms, as well as the states relating to their motion. This work could lead to future quantum computer systems in which many atoms are entangled.

Fundamental Physics. The Casimir-Lifshitz (C-L) force exists between two uncharged perfectly conducting plates because of quantum fluctuations, random tiny amounts of energy, that exist even in a vacuum electromagnetic field. For all systems studied experimentally prior to 2009, the C-L force was attractive. J.N. Munday and co-workers of Harvard University reported the first experimental measurement of a repulsive C-L force on a tiny gold sphere.

Physicists placed fresh limits on the mass of the Higgs boson—the hypothetical carrier particle of the Higgs field that was thought to confer mass on other matter. Researchers at the

Tevatron particle accelerator at the Fermi National Accelerator Laboratory, Batavia, Ill., announced that energies (or equivalent masses) of between 160 and 170 GeV (gigaelectronvolts) could be excluded and that if the particle existed, it had to have an energy between 114 and 160 GeV. (DAVID G.C. JONES)

ASTRONOMY

To mark the 400th anniversary of Galileo's first use of the telescope for astronomical observations, 2009 was designated the International Year of Astronomy by the astronomical community's professional societies, including the International Astronomical Union. The Hubble Space Telescope was repaired in May and then took some of the sharpest images to date of a wide variety of astronomical objects. The year also witnessed both the launch of and the first observations with a variety of other space-based astronomical instruments, such as NASA's Kepler satellite to search for habitable planets orbiting other stars and the European Space Agency's Herschel space telescope and Planck satellite, designed to study far-infrared and submillimetre radiation from astronomical objects and microwave background radiation left over from the big bang, respectively.

Solar System. New searches for water on the Moon were conducted in 2009, in part because of proposals to have future astronauts spend long periods of time there. This interest also spurred astronomers to look through older space-mission data for evidence of lunar water. In September it was announced that three different space probes had detected small amounts of water on widespread areas of the surface. One such probe was India's Chandrayaan-1 spacecraft, which carried NASA's Moon Mineralogy Mapper and operated in 2008–09. Scientists analyzing new data from NASA's Deep Impact/EPOXI probe and 10-year-old data from NASA's Cassini spacecraft also reported evidence of small amounts of water on the Moon's surface. Each of the three probes looked for the chemical signature of either water or the hydroxyl (OH) radical, which comes from splitting water into hydrogen and OH. The most likely place on the Moon to find extensive quantities of water was thought to be in craters on the far side. Water might exist there in the form of ice, since it would be protected from direct exposure to the intense solar radi-

ation. In October NASA's Lunar Crater Observation and Sensing Satellite (LCROSS) sent the upper stage of its launch rocket to crash into a crater called Cabeus, which lies near the Moon's south pole. Nine different instruments aboard LCROSS recorded a great deal of data about the impact itself—which produced a small crater some 28 m (92 ft) across—and about the gas and dust kicked up by the collision. Near the year's end, scientists reported that they had found strong evidence for the presence of significant amounts of water in the material

Earth Perihelion and Aphelion, 2010

Jan. 3	Perihelion, approx. 00:00 ¹
July 6	Aphelion, approx. 11:00 ¹

Equinoxes and Solstices, 2010

March 20	Vernal equinox, 17:32 ¹
June 21	Summer solstice, 11:28 ¹
Sept. 23	Autumnal equinox, 03:09 ¹
Dec. 21	Winter solstice, 23:38 ¹

Eclipses, 2010

Jan. 15	Sun, annular (begins 04:05 ¹), visible along a path beginning in central Africa; extending across eastern Africa, the Indian Ocean, southernmost India, and Myanmar; and ending in eastern China; with a partial phase visible in Africa (except the western and southern parts), southeastern Europe, most of Asia, most of the Indian Ocean, and the western Pacific Ocean.
June 26	Moon, partial (begins 08:56 ¹), the beginning visible in most of North and South America, the Pacific Ocean (except the western part), Australia (except the western part), and Antarctica; the end visible in the Pacific Ocean (except the eastern part), Australia, Antarctica, Asia (except the western part), and the Indian Ocean (except the western part).
July 11	Sun, total (begins 17:10 ¹), visible along a path beginning in the southern Pacific Ocean and extending to southernmost Chile and Argentina; with a partial phase visible in the southern Pacific Ocean and southern South America.
Dec. 21	Moon, total (begins 05:28 ¹), the beginning visible in Europe (except the northernmost part), western Africa, most of the Atlantic Ocean, North and South America, and the eastern Pacific Ocean; the end visible in the northwestern Atlantic Ocean, North America, northwestern South America, the Pacific Ocean (except the southeastern part), Australia (except the western part), East Asia, and most of Southeast Asia.

¹ Universal time.

Source: *The Astronomical Almanac for the Year 2010* (2009).

ISRO/NASA/JPL-Caltech/Brown University/USGS

excavated from the permanently shadowed lunar impact crater.

Another interesting impact within the solar system occurred at the giant gas planet Jupiter. A temporary new atmospheric feature, a debris plume that was the result of an astronomical object's having collided with the planet, was found in Jupiter's south polar region. Australian amateur astronomer Anthony Wesley reported first seeing it on July 19. Then four days later the revamped Hubble Space Telescope snapped the highest-resolution image yet taken of such an evolving Jovian debris plume. The event could have been caused by either an asteroid or a comet of perhaps several hundred metres across. By way of comparison, 15 years earlier Jupiter had sustained a more massive series of hits by debris from the breakup of Comet Shoemaker-Levy 9, which produced many temporary features in the dense Jovian atmosphere. Together, these two sightings suggested that such solar system impacts are more common than had been previously thought.

Stars. One of the most exciting discoveries in 20th-century astronomy was the detection in 1995 of a planet circling another star—an exoplanet (extrasolar planet). By the end of 2009, the number of known exoplanets had exceeded 400. Since these planets are so dim compared with the stars they orbit, they were very difficult to detect directly. Astronomers had found nearly all the known exoplanets by using a variety of indirect means, the most effective of which was to look for tiny changes in the motion of a star along its line of sight, indicating the presence of one or more orbiting planets. This method was used by a group of European astronomers led by Michel Mayor of the Geneva Observatory to detect 32 new exoplanets. The discoveries, which were announced in October, had been made with an instrument called the High Accuracy Radial Velocity Planet Searcher (HARPS), a spectrograph attached to the 3.6-m (142-in) telescope of the European Southern Observatory at La Silla, Chile. It was capable of detecting stellar motions as small as 3.5 km/hr (2.2 mph), about the speed of a person walking. Including the 32 new discoveries, some 75 exoplanets in 30 different planetary systems had been identified

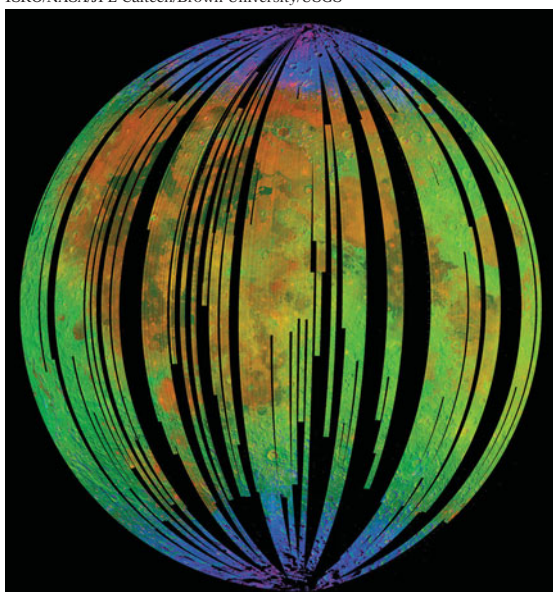


Image of the Moon from NASA's Moon Mineralogy Mapper on the Indian Space Research Organisation's Chandrayaan-1 mission. It shows near-infrared radiation reflected from the Sun. The blue shows the presence of water and hydroxyl molecules.

with HARPS. Earlier in the year Mayor's group had reported the detection of an exoplanet that orbits the star Gliese 581 and has a mass as small as 1.9 Earth masses. This indicated that astronomers were not far from being able to detect planets of about the same mass as Earth. Probably the most intriguing exoplanet discovery in 2009 was of the object designated CoRoT-7b. It was the most likely of the known exoplanets to be a solid, rocky body like Earth. It has a mass of about five Earth masses and a radius of about 1.7 Earth radii. Didier Queloz and colleagues from the Geneva Observatory reported that the planet probably has a silicate mantle and an iron core similar to Earth's. The home star of CoRoT-7b is much like the Sun in mass and temperature and lies about 500 light-years from Earth. The exoplanet's orbit is tilted about 77° with respect to the spin axis of its host star, however, which is much different from Earth's orbit around the Sun. Unfortunately for the search for life on exoplanets, this planet was found to orbit its star at a distance far less than that between Mercury and the Sun. This meant that liquid water could not exist on the surface of CoRoT-7b, so the possibility of its harbouring life as known on Earth was highly unlikely.

Throughout 2009, astronomers reported the detection of a wide range of

astronomical objects with the Fermi Gamma-ray Space Telescope. Perhaps most exciting was the discovery of 16 previously unknown pulsars solely on the basis of their gamma-ray emissions. Thirteen of them coincided with previously detected gamma-ray sources that had not been known to be pulsars. Of the 1,800 pulsars discovered to date, the vast majority had been identified first by radio telescopes, even though their gamma-ray luminosity often exceeds their radio power by orders of magnitude. Detection of these gamma-ray-emitting objects was also helping to solve a half-century-old mystery: the origin of very-high-energy cosmic-ray protons, those with energies of up to a trillion electron volts (TeV). It began to seem likely that most of the TeV cosmic rays detected from Earth are accelerated in rapidly rotating, highly magnetized neutron stars, acting either as ordinary pulsars or as accreting pulsars in binary star systems (X-ray pulsars that accrete matter from their companion stars).

Galaxies and Cosmology. For 40 years, gamma-ray bursts (GRBs)—flashes of gamma rays that last from fractions of a second to minutes—had been detected coming from directions all over the celestial sphere. They were thought to accompany the deaths of massive stars in giant supernova explosions. Because the gamma rays emitted in GRBs are beamed into small solid angles, they can be detected at great distances. On April 23 NASA's Swift satellite identified such a burst of gamma rays, now called GRB 090423 for the date of the event. It lasted for about 10 seconds and originated in the direction of the constellation Leo. Ground-based telescopes in Hawaii and Chile determined that this GRB had come from a supernova in a galaxy with a redshift of 8.2, which indicated that it was very distant. In fact, it was the farthest astronomical object seen to date. The source was so far away that given the time it took light to travel from the host galaxy to Earth, the event had to have occurred a mere 630 million years after the big bang (which, according to the latest cosmological estimates, happened some 13.7 billion years ago). Detection of this GRB provided direct evidence that stars had already formed not very long after the big bang. Com-

plementing this gamma-ray discovery, infrared observations of 21 very distant galaxies were made with the Hubble Space Telescope's new Wide Field Camera 3. They implied that galaxies probably did not form at very much earlier times than suggested by GRB 090423. The colours of the 21 galaxies indicated that they lie between 12.9 billion and 13.01 billion light-years from Earth. Taken together, all these observations suggested that galaxy formation was just beginning—but was happening quite rapidly—very early in the history of the universe. (KENNETH BRECHER)

SPACE EXPLORATION

Manned Spaceflight. The major issue in manned spaceflight in 2009 was the outcome of hearings on the future of the American space program. The Review of U.S. Human Spaceflight Plans Committee—better known as the Augustine Commission, after its chairman, Norman Augustine—was appointed by Pres. Barack Obama in May 2009. It was chartered to review the future of the U.S. in space, including former president George W. Bush's plans to return to the Moon and continue to Mars. The commission concluded that NASA's human spaceflight program was "at a tipping point, primarily due to a mismatch of goals and resources. Either additional funds need to be made available or a far more modest program involving little or no exploration needs to be adopted." While it recommended several options, including a "Flexible Path" using space-shuttle-derived launchers for missions to asteroids, the commission concluded that none would be possible without a significant increase in funding plus increased managerial flexibility within NASA.

Manned missions in 2009 brought the International Space Station (ISS) closer to completion. The ISS could house a crew of six following the addition at the end of 2008 of a bathroom and a urine-distillation processor for recycling water. STS-126 returned with the first samples of recycled water from the urine processor, as well as frozen specimens taken from the crew over several months to help measure the long-term effects of low gravity. In March 2009, STS-119 placed the S6 truss segment, the last of the four large U.S.-built solar arrays, on the starboard side of the ISS. The completed power plant delivered up to 120 kW of electricity and allowed the operation of a large range of experiment facilities.

STS-127 completed the assembly of Japan's Kibo experiment module by installing the exposed platform component. In addition, the shuttle also carried a test model of the DragonEye docking target system that would be used by the commercial SpaceX Dragon spacecraft. The STS-128 mission took up the Leonardo Multi-Purpose Logistics Module, containing 6,894 kg (15,200 lb) of supplies and scientific equipment. The astronauts replaced an ammonia cooling tank and retrieved specimens that had been exposed to space from the exterior of the European Columbus laboratory. The last shuttle mission of the year,

STS-129, took up an assortment of parts, including gyroscopes and nitrogen tanks, in two EXPRESS Logistics Carriers.

A new supply route to the ISS opened when Japan successfully launched the first H-II Transfer Vehicle with the H-II rocket on September 11. It docked with the ISS on September 18, taking up 4,500 kg (9,920 lb) of food, computer equipment, and other supplies. On November 12 Russia's Poisk ("Explore") Mini-Research Module-2 was automatically docked to the ISS. It added an airlock and docking port.

The STS-125 mission performed the fifth and last human servicing call on

Human Spaceflight Launches and Returns, 2009

Country	Flight	Crew ¹	Dates ²	Mission/payload
U.S.	STS-119	Lee Archambault Dominic A. (Tony) Antonelli Joseph M. Acaba Steven R. Swanson Richard R. Arnold John L. Phillips Koichi Wakata, JAXA (u) Sandra H. Magnus (d)	March 15–28	transporting of S6 solar arrays, completing Integrated Truss Structure
Russia	TMA-14 (up)	Gennady Padalka Michael Barratt, NASA Charles Simonyi ³	March 26	crew exchange
Russia	TMA-13 (down)	Yury Lonchakov Michael Fincke Charles Simonyi ³	April 8	crew exchange
U.S.	STS-125	Scott Altman Gregory C. Johnson Michael T. Good K. Megan McArthur John M. Grunsfeld Michael J. Massimino Andrew J. Feustel	May 11–24	servicing of Hubble Space Telescope
Russia	TMA-15 (up)	Roman Romanenko Frank De Winne, ESA Robert Thirsk, CSA	May 27	crew exchange
U.S.	STS-127	Mark L. Polansky Douglas G. Hurley Christopher J. Cassidy Julie Payette, CSA Thomas H. Marshburn David Wolf Timothy Kopra (u) Koichi Wakata, JAXA (d)	July 15–31	delivery of Kibo Japanese Experiment Logistics Module-Exposed Section
U.S.	STS-128	Frederick W. Sturckow Kevin A. Ford Patrick G. Forrester José M. Hernández Christer Fuglesang, ESA John D. Olivas Nicole Stott (u) Timothy Kopra (d)	August 28–September 11	Multi-Purpose Logistics Module with physics and chemistry microgravity experiments, including a Materials Science Research Rack
Russia	TMA-16 (up)	Maksim Surayev Jeffrey Williams Guy Laliberté ³	September 30	crew exchange
Russia	TMA-14 (down)	Gennady Padalka Michael Barratt, NASA Guy Laliberté ³	October 11	crew exchange
U.S.	STS-129	Charles O. Hobaugh Barry E. Wilmore Leland D. Melvin Randolph Bresnik Michael Foreman Robert Satcher Nicole Stott (d)	November 16–27	delivery of EXPRESS Logistics Carriers 1 and 2, with assorted spare parts
Russia	TMA-17 (up)	Oleg Kotov Timothy Creamer Soichi Noguchi	December 21	crew exchange

¹ For shuttle flights, mission commander and pilot are listed first; for Soyuz flights, ISS commander is listed first.

² Flight dates for shuttle; Soyuz launch or return dates for ISS missions.

³ Flew as a paying passenger.

u = ISS crew member transported to station.

d = ISS crew member returned to Earth

the Hubble Space Telescope. In five spacewalks the crews replaced two science instruments, gyroscopes, star sensors, a computer, batteries, and thermal blankets and repaired two science instruments. The mission had been delayed by several months from 2008 when Hubble's primary computer failed. It operated well on the backup, but NASA chose to replace it. This required extra time to pull the spare from storage and requalify it for flight. The astronauts also opened the Advanced Camera for Surveys instrument and replaced parts at the computer board level, something that was never envisioned when Hubble was designed. After STS-129, only five shuttle missions remained before the system was to be retired in 2010.

Space Probes. The only interplanetary launch of the year was NASA's Lunar Reconnaissance Orbiter (LRO) and Lunar Crater Observation and Sensing Satellite (LCROSS) on June 18. LRO was designed to map potential resources on the lunar surface. Most LRO instruments surveyed the lunar surface, searching for, among other things, evidence of water in permanently shadowed craters. A laser altimeter also mapped the lunar surface. It was overshadowed by the LCROSS mission, which used the launch vehicle's Centaur upper stage to strike the Moon. The LCROSS spacecraft, which was devised from the Centaur/spacecraft adapter and used commercial parts, carried cameras and spectrometers to detect materials in the impact plume from the Centaur upper stage. The LCROSS "shepherd" spacecraft separated from the stage on October 8. The two plowed into a crater near the lunar south pole on October 9, with the Centaur preceding LCROSS by about four minutes. The plume revealed "significant" quantities of water, which would be valuable as a resource for life support and propulsion at a lunar base.

India's Chandrayaan-1 lunar satellite, which was launched on Oct. 22, 2008, failed on August 28 as a result of key guidance components' overheating. While this loss cut short the planned two-year mission, officials at the Indian Space Research Organisation judged the mission, India's first interplanetary endeavour, as a success because it discovered water molecules in the lunar surface.

Unmanned Satellites. The major astronomy missions of the year were Russia's Koronas-Foton on January 30, NASA's Kepler on March 6, and Europe's Her-

schel/Planck spacecraft on May 14. Koronas-Foton was part of the International Living with a Star (ILWS) program. It carried instruments to observe the most violent solar activity in the extreme ultraviolet through gamma-ray range of the spectrum. Space physics instruments monitored the response of Earth's magnetosphere to solar storms.

Kepler carried a 95-cm (37.4-in) telescope designed to stare at the same 105-square-degree patch of sky for at least four years. The telescope was slightly out of focus to help it meet its goal of recording when Earth-size planets transit—cross in front of—their host stars. As such it produced not images or maps but light curves of some 100,000 stars. The sensitivity was great enough that early in the mission NASA announced that it could observe a Jupiter-size exoplanet by its reflected light, as well as by transit.

Herschel and Planck were launched on the same Ariane 5 rocket to orbit separately the L2 gravitational balance point between Earth and the Sun. L2 is about 1.5 million km (900,000 mi) from Earth on the opposite side of the Sun. It provides an easy place to "park" telescopes to observe deep space with virtually no radiation input from Earth. Herschel became the largest space telescope, with a 3.5-m (11.5-ft) primary mirror, compared with the Hubble Space Telescope's 2.5 m (8.2 ft), but it operated in the far-infrared spectrum to image stars, galaxies, and star-forming regions. Its three instruments were sensitive to light from 55 to 625 μ m (microns) wavelength. By comparison, the deepest red that the human eye can perceive is 0.77 μ m. Planck carries two millimetre-wave instruments to map unevenness in the intensity and polarization of the cosmic microwave background radiation left over from the big bang.

Launch Vehicles. North Korea failed in a second alleged attempt to orbit a satellite with the Taepodong-2 launch on April 5. While North Korea claimed that it was a satellite launch, Western observers believed it was a three-stage ballistic missile that lofted its payload some 3,800 km (2,360 mi) downrange. On August 25 South Korea also failed to launch a satellite in its first outing with the Naro 1 launch vehicle, which had a Russian-built first stage and a Korean second stage.

The demonstration version of NASA's new Ares 1-X vehicle—possibly the only one in light of the Augustine report—was launched on October 28. The sub-orbital flight tested only the booster,

NASA



The Constellation Program's Ares I-X test rocket lifts off Launch Complex 39B at NASA's Kennedy Space Center in Florida, on October 28.

which had succeeded in all static ground firing tests, and a structural model of the second stage and the Constellation spacecraft. The flight was a success, although NASA was studying to determine why the second stage and booster slowly jackknifed toward each other after separation. The recovered booster suffered a major dent in its lower section when two of its three parachutes failed after opening.

SpaceX, a private launch company, scored its second success out of five attempts with the Falcon 1 vehicle, which flew from Kwajalein Atoll in the Marshall Islands and carried Malaysia's RazakSAT communications satellite. SpaceX had developed and soon will test a larger Falcon 9 vehicle to carry supplies and crews to the ISS in the Dragon capsule.

Advanced testing of the Variable Specific Impulse Magnetoplasma Rocket (VASIMR), developed by former astronaut Franklin Chang-Díaz, showed great promise for providing a stage capable of taking humans to Mars in less than six weeks. VASIMR uses radio waves to heat ionized argon gas, thus accelerating it to high speeds. While the thrust was low, it could be continuous, as opposed to chemical rockets that provide high thrust for a few minutes at most. (DAVE DOOLING)

Religion

INTERFAITH CONTROVERSIES over statements **DENYING** that the Nazis killed six million Jews in the 1940s, disputes in Anglican and Lutheran denominations over the **ORDINATION OF NONCELIBATE GAY MEN AND LESBIANS** to the ministry, and relations between **ISLAMIC MOVEMENTS** and the **GOVERNMENTS** of several countries occupied the world of religion in 2009.

Holocaust Denial. In an attempt to heal a 20-year-old schism in Roman Catholicism, Pope Benedict XVI rescinded in January the excommunications of four members of the traditionalist Society of St. Pius X who had been ordained in 1988 without Vatican permission. One of the four, Richard Williamson, had made statements denying the Nazis' use of gas chambers to exterminate Jews and asserting that only up to 300,000 Jews had died in Nazi concentration camps instead of the generally accepted figure of six million. The pope's rehabilitation of the bishop was denounced by Jewish leaders around the world and led Israel's chief rabbinate to sever ties with the Vatican. Benedict subsequently reiterated his condemnation of anti-Semitism, saying that he had not known about the bishop's views when he lifted the excommunication and that the Vatican needed to make greater use of the Internet to prevent such controversies. In late March a new outcry arose when Brazilian Archbishop Dadeus Grings was quoted in his country's *Press & Advertising* magazine as saying, "More Catholics than Jews died in the Holocaust, but this isn't known because the Jews control the world's media."

In August, Younis al-Astal, a spiritual leader of Hamas, denounced the UN Relief and Works Agency's reported plans to introduce lessons about the Holocaust in its schools for Palestinian children in the Gaza Strip. He declared that adding the subject to the curriculum would amount to "marketing a lie and spreading it." Dutch prosecutors announced in September that they planned to charge the Dutch arm of the Arab European League with having violated hate-speech laws; the group had

published a cartoon on its Web site that suggested that the Holocaust was a fabrication or an exaggeration.

Homosexuality. Delegates representing an estimated 69,000 Anglicans from about 650 parishes adopted a constitution and canons for the new Anglican Church in North America (ACNA) at a meeting in Bedford, Texas, in June. The church was organized as an alternative for Anglicans who disagreed with the theology of the U.S. Episcopal Church and the Anglican Church of Canada on several issues, including the sanctioning of same-sex unions. Former Pittsburgh Episcopal bishop Robert Duncan was installed for a five-year term as the

ACNA's first archbishop. A month later the triennial Episcopal General Convention met in Anaheim, Calif., and adopted a resolution affirming that gay men and lesbians were eligible for "any ordained ministry" in the 2.1-million-member church. Traditionalists who opposed such liberal trends in the Anglican Communion were given a new option in October when the Vatican announced the pope's approval for the establishment of structures known as personal ordinariates, which would enable Anglicans to form their own communities within the Roman Catholic Church. William Cardinal Levada, the Vatican's chief doctrinal official, said that Anglicans would be able to maintain their liturgical traditions and be allowed to have married clergy, although unmarried priests in the new structure would need to remain celibate. In December the Episcopal diocese of Los Angeles elected an openly gay woman, the Rev. Mary D. Glasspool of Maryland, as an assistant bishop. Archbishop Rowan Williams of Canterbury, spiritual leader of the 77-million-member Anglican Communion, said that the election raised "very serious questions" for the Anglican family.

Delegates to the Evangelical Lutheran Church in America's biennial Churchwide Assembly, held in Minneapolis, Minn., in August, pause for a moment of prayer before voting to adopt a resolution that opened the ministry to gay men and lesbians living in "committed relationships."



Dawn Vilella/AP

Jeff J. Mitchell—Getty Images



Scott Rennie, the Church of Scotland's first openly gay minister, rehearses a sermon in Brechin (Scot.) Cathedral in May.

A division similar to the one in the Anglican Communion appeared to have begun in the 4.6-million-member Evangelical Lutheran Church in America (ELCA). Delegates to its biennial Churchwide Assembly, which met in August in Minneapolis, Minn., adopted a resolution that opened the ministry to gay men and lesbians living in "committed relationships." The move was criticized by leaders of the 2.4-million-member Lutheran Church–Missouri Synod and the 390,000-member Wisconsin Evangelical Lutheran Synod. A group called the Lutheran CORE (Coalition for Renewal), which had more than 80 member churches, announced in November that it was making plans for a new Lutheran synod for congregations that opposed the Churchwide Assembly's action.

A majority of regional bodies of the Presbyterian Church (U.S.A.)—88 of the 173 presbyteries—voted against changing the church's rule barring non-celibate gays and lesbians from the ordained ministry. In May the General Assembly of the (Presbyterian) Church of Scotland voted in Edinburgh to defer action on this issue for two years and to bar church courts, committees, and ministers from commenting about it publicly. The assembly took these positions two days after it had voted to uphold the appointment of Scott Rennie, an openly gay man, as minister of a church in Aberdeen, despite an online petition against this action that was said to have been signed by more than 400 ministers and almost 5,000 laypeople. In July more than 1,600 members of the Religious Society of Friends in Britain, popularly known as the Quakers, voted at their annual gathering in York, Eng., to approve marriages for same-sex couples and to ask the government to change the law to recognize such marriages.

Islamic Issues. The Pew Forum on Religion and Public Life reported in October that the world's Muslim population was 1.57 billion, of whom Sunnis represented 87–90%, Shi'ites 10–13%. The report found that Indonesia's Muslim population—203 million, or some 13% of the world's total—was the largest of any country. Among the contrasts turned up by the report were that Germany had more Muslims than Lebanon and that Russia was home to more Muslims than Jordan and Libya combined.

U.S. Pres. Barack Obama attempted to improve his country's relations with the Islamic world in two major speeches. In

April in an address to the Turkish parliament in Istanbul, he said, "The United States is not, and will never be, at war with Islam." In June at Cairo University, he quoted from Islamic, Christian, and Jewish holy books and stated, "America and Islam are not exclusive and need not be in competition." Shortly before Obama's speech in Cairo, a group of Sunni Muslim clerics associated with Egypt's al-Azhar University had announced the creation of a satellite TV channel named Azhari to "promote the idea that Islam is a religion of moderation free from extremism," in the words of Sheikh Khaled el-Guindy, one of the leaders of the project.

Russian Pres. Dmitry Medvedev met in July with 12 Muslim leaders in the Congregational Mosque in Moscow to ask them to speak out against Islamic extremism. A month later, at a meeting in Sochi, Russia, leaders from the North Caucasus told him that an Islamist insurgency had permeated all aspects of society in the region. In response, Medvedev said, "Without consolidating the authority of the Islamic leaders we will be unable to deal with the problems that exist."

In July a pregnant Muslim woman, Marwa al-Sherbini, was fatally stabbed in a courtroom in Dresden, Ger., by

Russian-born Alexander Wiens, who was in court to appeal a fine for having called her a "terrorist" and "Islamist." The perceived lack of media attention given to the killing in the West touched off anti-German protests in Egypt and Iran. Wiens was found guilty of the murder in the same courtroom in November.

French Pres. Nicolas Sarkozy endorsed an initiative by about 60 legislators to have a parliamentary commission study whether to ban the wearing of burkas in public in France. In June in an address to Parliament, he declared, "The burka is not a religious sign. It is a sign of the subjugation, of the submission, of women." In October the Muslim Canadian Congress called for such a ban. Farzana Hassan, a spokesperson for the group, asserted that the garment had "absolutely no place in Canada" because it marginalized women.

Christian Issues. The University of Notre Dame, one of the largest Roman Catholic universities in the United States, invited Obama to deliver its commencement address and receive an honorary degree in May. His visit was controversial because of his support for abortion rights and government funding for embryonic stem-cell research. In his address the U.S. president called for more discussions of such issues and said that "the ultimate irony of faith is that it necessarily admits doubt." Despite the controversy, a Gallup Poll released in March found that 4 in 10 American Catholics believed that abortion was "morally acceptable" and 63% backed embryonic stem-cell research. Two Vatican investigations of American nuns led to protests and expressions of concern by several women's religious orders, which feared that the church might try to rein in nuns with more liberal beliefs or ways of life.

In May, Ireland's Commission to Inquire into Child Abuse released a 2,575-page report documenting what it called a "climate of fear" from the 1930s to the 1990s in schools run by the Irish Roman Catholic Church. The report found that thousands of students had been systematically beaten and sexually abused by priests, nuns, and other staff members. In a subsequent report issued in November, the commission stated that four archbishops of Dublin had failed to disclose confidential files on more than 100 parish priests who had sexually abused children since 1940. The sitting archbishop of Dublin, Diarmuid Martin, said his predecessors

Joe Raymond/AP



Antiabortion protesters march on the campus of the University of Notre Dame, South Bend, Ind., in May; the protesters opposed the selection of U.S. Pres. Barack Obama, who supported abortion rights, as the Roman Catholic university's commencement speaker.

"were wrong, and children were left to suffer."

Metropolitan Kirill (*see* BIOGRAPHIES), who had headed the external relations department of the Russian Orthodox Church for nearly 20 years, was elected in January in Moscow to succeed the late patriarch Aleksey II as head of the church. In July, Kirill rejected an appeal from Ukrainian Pres. Viktor Yushchenko to recognize the Ukrainian Orthodox Church–Kiev Patriarchate, which had broken away from the Moscow patriarchate in the 1990s.

In a letter to Obama in June praising his speech in Cairo, a group of American Christian leaders warned that the Christian population in the Holy Land was "dwindling rapidly" and might cease to exist as a viable community unless there was an Israeli-Palestinian peace agreement. The Evangelical Lutheran Church in America voted at its biennial assembly to share full communion with the United Methodist Church, which had previously approved the agreement. The accord, which had taken 30 years to reach fruition, meant that the two churches recognized the validity of each other's ministers, baptisms, and eucharistic services.

Religious Violence. In May the murder in Vienna of Guru Sant Rama Nand, who was the leader of a Sikh offshoot movement called Dera Sach Khand, led to rioting in several northern Indian cities. Indian Prime Minister Manmo-

han Singh, himself a Sikh, said that he was "deeply distressed" by both the killing and the subsequent violence and stressed that "Sikhism preaches tolerance and harmony."

In Nigeria, Mohammed Yusuf, leader of an Islamic group called Boko Haram, died in July while he was in police custody. The group had staged uprisings in northern Nigeria in an attempt to impose strict Islamic law throughout the country. Some 800 people were killed in the group's attacks on police stations and other public buildings and in the response by security forces. In the aftermath of this violence, the governors of 19 northern states set up a

committee to regulate the activities of Muslim and Christian clergy.

Archbishop Williams spoke out in August against the persecution of Christians in Pakistan after eight Christians were burned alive as homes were set on fire in clashes with Muslims. The violence had been touched off by reports that a Christian had desecrated the

Metropolitan Kirill, who was elected in January to succeed the late patriarch Aleksey II as head of the Russian Orthodox Church, conducts a religious service in Moscow's Christ the Saviour Cathedral.



Misha Japaridze/AP

Qur'an. The Anglican leader stated that Pakistan's Christians were "disproportionately affected by the draconian laws against blasphemy," which he said had been abused to settle personal grievances. Several weeks later the Central Committee of the World Council of Churches charged that the Pakistani laws had become "a major source of victimization and persecution" of religious minorities.

Interfaith Relations. During a five-day pilgrimage to the Holy Land in May, Pope Benedict was criticized by several Israeli newspapers for not referring to his native Germany during a speech at the Yad Vashem Holocaust memorial. Later, at a stop at Bethlehem in the West Bank, he expressed "solidarity" with Palestinians, who, he said, "long to be able to return to their birthplace or live permanently in a homeland of their own." In late August the Rev. Samuel Kobia, outgoing general secretary of the World Council of Churches, told its Central Committee meeting in Geneva that Israel's occupation of Palestinian territories was "a sin against God." Later, the committee called on Israel and Palestine to "distinguish between the legitimate interests of the state of Israel and its illegal settlements."

The Tony Blair Faith Foundation joined with the U.K.'s Department for International Development and the charities Islamic Relief, Oxfam, and World Vision to sponsor a series of seminars exploring the role of religion in development work. Blair, a former prime minister of Britain, told the first gathering in September that "people who hold deep convictions about life and its purpose necessarily can be prone to holding those views to excess or the point of prejudice."

Church-State Relations. In April the Vatican denounced the arrests in China of several Roman Catholic leaders, including Bishop Giulio Jia Zhiguo of Zhengding, and said that such actions created obstacles to dialogue. In May Afghan government leaders dumped more than 1,000 books from Iran into a river because their contents were allegedly offensive to the country's Sunni Muslim majority. In September Vietnamese authorities removed followers of Thich Nhat Hanh, a Vietnamese monk who had helped popularize Buddhism in the West, from the Bat Nha monastery in Lam Dong province. The ousted monks and nuns charged that they were removed because Nhat Hanh had called for an end to government

control of religion. Government officials, however, characterized the conflict as a dispute between two Buddhist factions, contending that the action was taken because the abbot of the monastery wanted the Nhat Hanh group to leave.

The French branch of the Church of Scientology was convicted of fraud and fined the equivalent of nearly \$900,000 by a Paris court in October. Six members of the group, which claimed to have 45,000 adherents in France, were also convicted of fraud, but the judges said that no jail sentences were imposed because the church had taken steps to change some practices. Earlier that month the European Court of Human Rights had ruled that Russia's ban on the Church of Scientology was illegal. The court touched off a larger controversy in November when it ruled that crucifixes should be removed from classrooms in Italy because their display could be disturbing for non-Christian pupils and was a breach of the European Convention on Human Rights. In a November referendum Swiss voters approved a constitutional ban on the construction of new minarets. The Swiss People's Party, which sponsored the vote, had warned that Muslim political power could transform the country into an Islamic nation, although Muslims composed only about 4% of the country's population. In December the Pew Forum on Religion and Public Life reported that nearly 70% of the world's people lived in countries with severe restrictions on religion. It ranked Saudi Arabia as the most restrictive

country and the Middle East and North Africa as the most restrictive regions.

Social Trends. A report issued in October by the National Opinion Research Center at the University of Chicago said, "Religious change around the world is a complex phenomenon. No simple description such as secularization, religious revival, or believing without belonging captures the complexity of the process." The report, which analyzed several surveys of religious trends over 40 years in the United States and Europe, determined that religious change in the United States had gone in a secular direction but that the pattern was "complex and nuanced." In March the American Religious Identification Survey of Trinity College, Hartford, Conn., found that between 1990 and 2008 the percentage of Americans who identified themselves as Christian had dropped from 86% to 76%, while the percentage of atheists, agnostics, and other secularists had almost doubled, from 8.2% to 15%. A survey issued in April by the Pew Forum on Religion and Public Life found that about half of American adults had switched their religious affiliation at least once in their lives.

Atheist groups sponsored the placement of ads with the slogan "There's probably no God" on buses in Britain and Spain. The U.K.'s National Secular Society reported in March that more than 100,000 Britons had downloaded "certificates of debaptism" from the Internet to renounce the Christian faith.

People in the News. French physicist and philosopher of science Bernard d'Espagnat (see BIOGRAPHIES) received

the Templeton Prize, which honours individuals who have made "an exceptional contribution to affirming life's spiritual dimension." The Rev. Olav Fykse Tveit, general secretary of the (Lutheran) Church of Norway's ecumenical and international council, was elected general secretary of the World Council of Churches, which had 349 member denominations representing more than 560 million Christians. In May the Rev. Eva Brunne, dean of the Stockholm diocese of the Church of Sweden, was elected Lutheran bishop of Stockholm; she was believed to be the first openly lesbian bishop in the world. Lutheran Bishop Margot Kässmann of Hanover, Ger., was elected in October as chairman of the Evangelical Church in Germany (EKD), an umbrella group of 22 Lutheran, Reformed, and United churches. She became the first woman to head the organization. Archbishop Vincent Nichols of Birmingham, Eng., succeeded the retiring Cormac Cardinal Murphy-O'Connor in May as leader of the Roman Catholic Church in England and Wales.

Prominent religious figures who died in 2009 included evangelist Oral Roberts, who pioneered religious broadcasting in the 1950s and founded the eponymous university in Tulsa, Okla.; the Rev. Frederick J. Eikerenkoetter II, a television minister known as Reverend Ike; Millard Fuller, founder of the Christian charity Habitat for Humanity International; Reform Rabbi Alfred Gottschalk, former president of Hebrew Union College-Jewish Institute of Religion, who had ordained the first women rabbis in the United States and Israel; the Rev. Richard John Neuhaus, a Lutheran convert to Roman Catholicism who had founded the journal *First Things* and cofounded the movement Evangelicals and Catholics Together; Stephen Cardinal Kim Sou-hwan, the first Roman Catholic cardinal of South Korea; the Rev. Gérard Jean-Juste, a Roman Catholic priest and advocate for Haitian rights in the U.S.; the Rev. John Bowen Coburn, a former leader of the U.S. Episcopal Church; Patriarch Pavle, leader of the Serbian Orthodox Church; and Cahal Cardinal Daly, a former leader of the Roman Catholic Church in Ireland. (See OBITUARIES.) Other losses were Elizabeth Clare Prophet, leader of the Church Universal and Triumphant, and Lutheran Bishop Albrecht Schönherr, who had headed the church of Berlin-Brandenburg in the former German Democratic Republic.

(DARRELL J. TURNER)

Comedy writer Ariane Sherine, who helped spearhead an atheist advertising campaign that involved the placement of ads with the slogan "There's probably no God" on buses in Britain and Spain, poses in front of one of the buses in London in January.



Leon Neal—AFP/Getty Images

ANALYZING THE MEGACENSUS OF RELIGIONS, 1900–2009

Each year since 1750, churches and religions around the world have generated increasing volumes of new statistical data. Much of this information is uncovered in decennial governmental censuses; half the countries of the

world have long asked their populations to state their religions if any, and they still do today. The other major source of data each year consists of the decentralized censuses undertaken by many religious headquarters. Each

year almost all Christian denominations ask and answer statistical questions on major religious subjects. A third annual source is the total of 27,000 new books on the religious situation each in a single country, as well

Worldwide Adherents of All Religions by Six Continental Areas, Mid-2009

	Africa	Asia	Europe	Latin America	Northern America	Oceania	World	%	Change Rate (%)	Number of Countries
Christians	483,376,000	345,188,000	585,357,000	542,293,000	280,659,000	27,619,000	2,264,492,000	33.2	1.26	239
Affiliated	459,515,000	340,984,000	560,519,000	536,509,000	225,155,000	23,288,000	2,145,970,000	31.4	1.29	239
Roman Catholics	164,242,000	136,507,000	275,506,000	473,684,000	83,845,000	8,820,000	1,142,604,000	16.7	1.12	236
Protestants	133,740,000	85,944,000	67,754,000	56,039,000	61,315,000	8,177,000	412,969,000	6.0	1.50	233
Independents	96,500,000	138,905,000	10,534,000	41,282,000	72,820,000	1,238,000	361,279,000	5.3	2.16	222
Orthodox	47,284,000	15,737,000	201,276,000	1,040,000	7,101,000	917,000	273,355,000	4.0	0.38	137
Anglicans	49,466,000	853,000	26,260,000	883,000	2,866,000	5,032,000	85,360,000	1.3	1.61	164
Marginal Christians	3,520,000	3,108,000	4,165,000	11,083,000	11,708,000	659,000	34,243,000	0.5	1.90	217
Doubly affiliated	-35,237,000	-40,070,000	-24,976,000	-47,502,000	-14,500,000	-1,555,000	-163,840,000	-2.4	1.29	173
Unaffiliated	23,861,000	4,204,000	24,838,000	5,784,000	55,504,000	4,331,000	118,522,000	1.7	0.82	232
Muslims	408,001,150	1,066,329,000	40,836,000	1,836,000	5,647,000	563,000	1,523,212,150	22.3	1.79	213
Hindus	2,848,000	928,531,000	996,000	777,000	1,788,000	520,000	935,460,000	13.7	1.39	127
Nonreligious (agnostics)	6,041,000	491,203,000	81,450,000	16,900,810	39,867,600	4,444,700	639,907,110	9.4	-0.13	238
Buddhists	287,000	456,709,000	1,820,000	783,000	3,614,000	608,000	463,821,000	6.8	1.05	141
Chinese folk-religionists	68,800	453,052,000	409,000	188,000	755,000	107,000	454,579,800	6.7	0.82	96
Ethnoreligionists	105,478,000	146,271,000	1,150,000	3,685,000	1,572,000	345,000	258,501,000	3.8	1.12	145
Atheists	611,000	117,487,000	15,503,200	2,867,000	1,878,000	431,000	138,777,200	2.0	-0.07	221
New religionists	129,000	60,126,000	374,000	1,794,000	1,655,000	103,000	64,181,000	0.9	0.40	117
Sikhs	69,500	22,932,000	502,000	6,500	663,000	49,700	24,222,700	0.4	1.52	53
Jews	130,000	5,865,000	1,847,000	930,000	5,668,000	109,000	14,549,000	0.2	0.60	138
Spiritists	3,600	0	144,000	13,477,000	178,000	7,400	13,810,000	0.2	1.20	56
Daoists (Taoists)	0	8,833,000	0	0	12,300	4,400	8,849,700	0.1	1.88	6
Baha'is	2,124,000	3,492,000	142,000	923,000	518,000	106,000	7,305,000	0.1	1.92	222
Confucianists	19,800	6,359,000	18,400	490	0	49,200	6,446,890	0.1	0.22	15
Jains	90,300	5,458,000	18,700	1,300	97,500	3,200	5,669,000	0.1	-0.04	19
Shintoists	0	2,713,000	0	7,900	61,900	0	2,782,800	0.0	1.42	8
Zoroastrians	850	152,000	5,700	0	20,700	2,400	181,650	0.0	-0.33	25
Other religionists	85,000	225,000	275,000	120,000	690,000	12,000	1,407,000	0.0	1.31	79
Total population	1,009,363,000	4,120,925,000	730,848,000	586,590,000	345,345,000	35,084,000	6,828,155,000	100.0	1.17	239

Continents. These follow current UN demographic terminology, which now divides the world into the six major areas shown above. See United Nations, *World Population Prospects: The 2006 Revision* (New York: UN, 2007), with populations of all continents, regions, and countries covering the period 1950–2050, with 100 variables for every country each year. Note that “Asia” includes the former Soviet Central Asian states, and “Europe” includes all of Russia eastward to the Pacific.

Change Rate. This column documents the annual change in 2009 (calculated as an average annual change from 2005 to 2010) in worldwide religious and nonreligious adherents. Note that in 2009 the annual growth of world population was 1.17%, or a net increase of 78,362,400 adherents.

Countries. The last column enumerates sovereign and nonsovereign countries in which each religion or religious grouping has a numerically significant and organized following.

Adherents. As defined in the 1948 Universal Declaration of Human Rights, a person's religion is what he or she professes, confesses, or states that it is. Totals are enumerated for each of the world's 239 countries following the methodology of the *World Christian Encyclopedia*, 2nd ed. (2001), and *World Christian Trends* (2001), using recent censuses, polls, surveys, yearbooks, reports, Web sites, literature, and other data. See the *World Christian Database* (www.worldchristiandatabase.org, Brill) and *World Religion Database* (www.worldreligiondatabase.org, Brill) for more detail. Religions (including nonreligious and atheists) are ranked in order of worldwide size in mid-2009.

Atheists. Persons professing atheism, skepticism, disbelief, or irreligion, including the militantly antireligious (opposed to all religion). A flurry of recent books have outlined the Western philosophical and scientific basis for atheism. Ironically, the vast majority of atheists today are found in Asia (primarily Chinese communists).

Buddhists. 56% Mahayana, 38% Theravada (Hinayana), 6% Tantrayana (Lamaism).

Chinese folk-religionists. Followers of a unique complex of beliefs and practices that may include: universism (yin/yang cosmology with dualities earth/heaven, evil/good, darkness/light), ancestor cult, Confucian ethics, divination, festivals, folk religion, goddess worship, household gods, local deities, mediums, metaphysics, monasteries, neo-Confucianism, popular religion, sacrifices, shamans, spirit-writing, and Daoist (Taoist) and Buddhist elements.

Christians. Followers of Jesus Christ, enumerated here under **Affiliated**, those affiliated with churches (church members, with names written on church rolls, usually total number of baptized persons including children baptized, dedicated, or undedicated): total in 2009 being 2,145,970,000, shown above divided among the six standardized ecclesiastical megablocs and with (negative and italicized) figures for those **Doubly affiliated** persons (all who are baptized members of two denominations) and **Unaffiliated**, who are persons professing or confessing in censuses or polls to be Christians though not so affiliated. **Independents.** This term here denotes members of Christian churches and networks that regard themselves as postdenominationalist and neopostolic and thus independent of historical, mainstream, organized, institutionalized, confessional, denominationalist Christianity. **Marginal Christians.** Members of denominations who define themselves as Christians but on the margins of organized mainstream Christianity (e.g., Unitarians, Mormons, Jehovah's Witnesses, Christian Science, and Religious Science).

Confucianists. Non-Chinese followers of Confucius and Confucianism, mostly Koreans in Korea.

Ethnoreligionists. Followers of local, tribal, animistic, or shamanistic religions, with members restricted to one ethnic group.

Hindus. 68% Vaishnavites, 27% Shaivites, 2% neo-Hindus and reform Hindus.

Jews. Adherents of Judaism. For detailed data on “core” Jewish population, see the annual “World Jewish Populations” article in the *American Jewish Committee's American Jewish Year Book*.

Muslims. 84% Sunnites, 14% Shi'ites, 2% other schools.

New religionists. Followers of Asian 20th-century neoreligions, neoreligious movements, radical new crisis religions, and non-Christian syncretistic mass religions.

Nonreligious (agnostics). Persons professing no religion, nonbelievers, agnostics, freethinkers, uninterested, or dereligionized secularists indifferent to all religion but not militantly so.

Other religionists. Including a handful of religions, quasi-religions, pseudoreligions, parareligions, religious or mystic systems, and religious and semireligious brotherhoods of numerous varieties.

Total population. UN medium variant figures for mid-2009, as given in *World Population Prospects: The 2006 Revision*.

as some 9,000 printed annual year-books or official handbooks. Together, these three major sources of data constitute a massive annual megacensus, although decentralized and uncoordinated. The two tables below combine all these data on religious affiliation.

The first table summarizes worldwide adherents by religion. The second goes into more detail for the United States of America. This year there are two new publications both supporting and mapping the data below. First, the *Atlas of Global Christianity* (Edinburgh

University Press) puts Christian data in the context of 1910-2010. Second, the *World Religion Database* (Brill), offers sources and analysis of global religious dynamics.

(DAVID B. BARRETT, TODD M. JOHNSON, PETER F. CROSSING)

Religious Adherents in the United States of America, 1900–2005

	1900	%	mid-1970	%	mid-1990	%	mid-2000	%	mid-2005	%	Annual Change, 2000–2005			
											Natural	Conversion	Total	Rate (%)
Christians	73,260,000	96.4	190,520,000	90.7	218,720,600	85.4	235,965,500	82.8	246,202,200	82.1	2,483,300	-436,000	2,047,300	0.85
Affiliated	54,425,000	71.6	152,754,000	72.7	176,030,000	68.7	190,404,000	66.8	198,617,000	66.2	2,003,800	-361,200	1,642,600	0.85
Independents	5,850,000	7.7	34,702,000	16.5	66,900,000	26.1	65,153,000	22.9	68,286,000	22.8	685,700	-59,100	626,600	0.94
Roman Catholics	10,775,000	14.2	48,305,000	23.0	56,500,000	22.1	62,970,000	22.1	67,902,000	22.6	662,700	323,700	986,400	1.52
Protestants	35,000,000	46.1	58,568,000	27.9	60,216,000	23.5	57,544,000	20.2	57,105,000	19.0	605,600	-693,400	-87,800	-0.15
Marginal Christians	800,000	1.1	6,114,000	2.9	8,940,000	3.5	10,085,000	3.5	10,677,000	3.6	106,100	12,300	118,400	1.15
Orthodox	400,000	0.5	4,395,000	2.1	5,150,000	2.0	5,516,000	1.9	5,868,000	2.0	58,000	12,400	70,400	1.24
Anglicans	1,600,000	2.1	3,196,000	1.5	2,450,000	1.0	2,300,000	0.8	2,248,000	0.7	24,200	-34,600	-10,400	-0.46
Doubly affiliated	0	0.0	-2,526,000	-1.2	-24,126,000	-9.4	-13,164,000	-4.6	-13,469,000	-4.5	-138,500	77,500	-61,000	0.46
Evangelicals	32,068,000	42.2	35,117,000	16.7	38,400,000	15.0	39,780,000	14.0	40,463,000	13.5	418,600	-282,000	136,600	0.34
evangelicals	11,000,000	14.5	45,500,000	21.7	90,656,000	35.4	95,900,000	33.7	100,669,000	33.6	1,009,200	-55,400	953,800	0.98
Unaffiliated	18,835,000	24.8	37,766,000	18.0	42,690,600	16.7	45,561,500	16.0	47,585,200	15.9	479,500	-74,800	404,700	0.87
Nonreligious (agnostics)	1,000,000	1.3	10,270,000	4.9	21,442,000	8.4	29,889,000	10.5	33,569,000	11.2	314,500	421,500	736,000	2.35
Jews	1,500,000	2.0	6,700,000	3.2	5,535,000	2.2	5,385,000	1.9	5,302,000	1.8	56,700	-73,300	-16,600	-0.31
Muslims	10,000	0.0	800,000	0.4	3,500,000	1.4	4,319,000	1.5	4,745,000	1.6	45,500	39,700	85,200	1.90
Black Muslims	0	0.0	200,000	0.1	1,250,000	0.5	1,650,000	0.6	1,850,000	0.6	17,400	22,600	40,000	2.31
Buddhists	30,000	0.0	200,000	0.1	1,880,000	0.7	2,527,000	0.9	2,824,000	0.9	26,600	32,800	59,400	2.25
New religionists	10,000	0.0	560,000	0.3	1,155,000	0.5	1,401,000	0.5	1,495,000	0.5	14,700	4,100	18,800	1.31
Ethnoreligionists	100,000	0.1	70,000	0.0	780,000	0.3	1,334,000	0.5	1,423,000	0.5	14,000	3,800	17,800	1.30
Hindus	1,000	0.0	100,000	0.0	750,000	0.3	1,238,000	0.4	1,338,000	0.4	13,000	7,000	20,000	1.57
Atheists	1,000	0.0	200,000	0.1	770,000	0.3	1,157,000	0.4	1,175,000	0.4	12,200	-8,600	3,600	0.31
Baha'is	2,800	0.0	138,000	0.1	600,000	0.2	403,000	0.1	457,000	0.2	4,200	6,600	10,800	2.55
Sikhs	0	0.0	10,000	0.0	160,000	0.1	239,000	0.1	270,000	0.1	2,500	3,700	6,200	2.47
Spiritists	0	0.0	0	0.0	120,000	0.0	180,000	0.1	190,000	0.1	1,900	100	2,000	1.09
Chinese folk-religionists	70,000	0.1	90,000	0.0	76,000	0.0	80,300	0.0	86,700	0.0	800	500	1,300	1.55
Shintoists	0	0.0	3,000	0.0	5,000	0.0	74,100	0.0	79,500	0.0	800	300	1,100	1.42
Zoroastrians	0	0.0	0	0.0	50,000	0.0	57,500	0.0	60,600	0.0	600	0	600	1.06
Daoists (Taoists)	0	0.0	0	0.0	14,400	0.0	16,200	0.0	17,000	0.0	200	0	200	0.97
Jains	0	0.0	0	0.0	10,000	0.0	11,400	0.0	12,000	0.0	100	0	100	1.03
Other religionists	10,200	0.0	450,000	0.2	530,000	0.2	580,000	0.2	600,000	0.2	6,100	-2,100	4,000	0.68
U.S. population	75,995,000	100.0	210,111,000	100.0	256,098,000	100.0	284,857,000	100.0	299,846,000	100.0	2,998,000	0	2,998,000	1.03

Methodology. This table extracts and analyzes a microcosm of the world religion table. It depicts the United States, the country with the largest number of adherents to Christianity, the world's largest religion. Statistics at five points in time from 1900 to 2005 are presented. Each religion's **Annual Change** for 2000–2005 is also analyzed by **Natural** increase (births minus deaths, plus immigrants minus emigrants) per year and **Conversion** increase (new converts minus new defectors) per year, which together constitute the **Total** increase per year. **Rate** increase is then computed as percentage per year.

Structure. Vertically the table lists 30 major religious categories. The major categories (including nonreligious) in the U.S. are listed with largest (Christians) first. Indented names of groups in the "Adherents" column are subcategories of the groups above them and are also counted in these unindented totals, so they should not be added twice into the column total. Figures in italics draw adherents from all categories of Christians above and so cannot be added together with them. Figures for Christians are built upon detailed head counts by churches, often to the last digit. Totals are then rounded to the nearest 1,000. Because of rounding, the corresponding percentage figures may sometimes not total exactly to 100%. Religions are ranked in order of size in 2005.

Christians. All persons who profess publicly to follow Jesus Christ as God and Savior. This category is subdivided into **Affiliated** (church members) and **Unaffiliated** (nominal) Christians (professing Christians not affiliated with any church). See also the note on Christians to the world religion table. The first six lines under "Affiliated Christians" are ranked by size in 2005 of each of the six megablocs (Anglican, Independent, Marginal Christian, Orthodox, Protestant, Roman Catholic). **Evangelicals/evangelicals.** These two designations-italicized and enumerated separately here-cut across all of the six Christian traditions or ecclesiastical blocs listed above and should be considered separately from them. The **Evangelicals** (capitalized "E") are mainly Protestant churches, agencies, and individuals who call themselves by this term (for example, members of the National Association of Evangelicals); they usually emphasize 5 or more of 7, 9, or 21 fundamental doctrines (salvation by faith, personal acceptance, verbal inspiration of Scripture, depravity of man, Virgin Birth, miracles of Christ, atonement, evangelism, Second Advent, et al.). The **evangelicals** (lowercase "e") are Christians of evangelical conviction from all traditions who are committed to the evangel (gospel) and involved in personal witness and mission in the world.

Jews. Core Jewish population relating to Judaism, excluding Jewish persons professing a different religion.

Other categories. Definitions are as given under the world religion table.

Sports and Games

Two traditional **POWERHOUSE** teams dominated their sports again in 2009 as the New York Yankees won their **27TH WORLD SERIES** and the Los Angeles Lakers took their **15TH NBA** title. Swimmers in high-tech swimsuits set an astonishing **147 WORLD RECORDS** during the year. In October the IOC announced that **RIO DE JANEIRO** would become the first South American city to host the **OLYMPIC GAMES**, in 2016.

AUTOMOBILE RACING

Grand Prix Racing. In 2009 the Fédération Internationale de l'Automobile (FIA) Formula One (F1) world drivers' championship was won by Jenson Button of the U.K. His victory was one of the most surprising results in F1 history, considering that the 29-year-old Button was without a team following the 2008 season after Honda Motor Co. announced that it was pulling out of the sport because of the global economic downturn. Fortunately for Button, Brawn GP took over the Honda team a few weeks before the season-opening Australian Grand Prix on March 29. Button started that race from the pole and came away with the win, just his second since joining F1 in 2000. Button, who finished the 2008 season in 18th place, went on to win the pole and the race at the Malaysian Grand Prix one week after his victory in Australia. Following a third-place finish in the next event in China, Button posted wins in the next four races to become the first British driver to register four straight victories in one season since Nigel Mansell accomplished the feat en route to the 1992 drivers' title. (Button also joined Mansell, Damon Hill, Jim Clark, Jackie Stewart, and James Hunt as the only British drivers to have won six races in a season.) Button's amazing start in 2009 gave him an almost insurmountable 26-point lead over Brawn GP teammate Rubens Barrichello of Brazil with 10 races remaining. Button did not

win another race all season, but he did not need to after his dominant start. He wrapped up the title on October 18 with a fifth-place finish in the penultimate event, the Brazilian Grand Prix, and went on to finish third in the season finale in Abu Dhabi, U.A.E., on November 1, to end the season with 95 points. German driver Sebastian Vettel (Red Bull Racing) finished second in the season standings with 84 points, and Barrichello was third with 77. But-

Spectators watch as British Formula One (F1) driver Jenson Button speeds through the streets of Monte Carlo during the Monaco Grand Prix on May 24. Button won the race and the F1 drivers' championship for the season.



Clive Mason/Getty Images

ton and Barrichello helped Brawn GP become the first team to win the constructors' championship in its debut season and the first British team to take the title since McLaren in 1998. Button also gave Britain consecutive F1 titles for the first time since Graham Hill won in 1968 and Stewart in 1969. Lewis Hamilton of McLaren took the trophy in 2008—the first English driver to do so since Damon Hill in 1996—and won two races in 2009, finishing fifth in the year-end standings with 49 points.

Ferrari's Felipe Massa of Brazil, who won a season-high six races in 2008 on his way to finishing one point behind Hamilton, was involved in a near-fatal crash in July while attempting to qualify for the Hungarian Grand Prix. Massa crashed into a safety barrier and suffered multiple skull fractures after a loose car part flew into him and knocked him unconscious. He had surgery around his left eye and later had to have a metal plate inserted. Seven-time world champion Michael Schumacher of Germany, who had retired at the end of the 2006 season, offered to fill in for Massa, but the 40-year-old Schumacher ended his comeback bid because of lingering neck injuries from a motorcycle crash. Massa planned to return to action with Ferrari in 2010.

In October, Frenchman Jean Todt, a former Ferrari team principal, was elected to replace the outgoing Max Mosley of the U.K., who had been FIA president since 1994. Mosley had refused to resign in 2008 after a British tabloid newspaper revealed his involvement in a sado-masochistic sex orgy, and he had won a vote of confidence to remain president through October 2009. Todt, who was backed by Mosley and British F1 boss Bernie Ecclestone, beat out Finnish candidate Ari Vatanen.

The sport was hit by another scandal in 2009 as former Renault team principal Flavio Briatore of Italy was given a lifetime ban by the World Motor Sport Council for having asked Brazilian driver Nelson Piquet, Jr., to deliberately crash at the 2008 Singapore Grand Prix in order to help teammate Fernando Alonso

of Spain win the race. Piquet was cleared of any wrongdoing, but Renault chief engineer Pat Symonds was suspended for five years, and two-time world champion Alonso left the team to join Ferrari in 2010.

The global economic crisis continued to have an effect on F1 in 2009. The FIA announced budget caps and a ban on in-season testing, while the sport lost major sponsors such as ING, the Royal Bank of Scotland, and Credit Suisse. The Canadian Grand Prix, run in Montreal since 1978, was dropped from the calendar, as was the French Grand Prix. Toyota-owned Fuji International Speedway said in July that it would not host the Japanese Grand Prix beginning in 2010, and in November, Toyota followed fellow Japanese automaker Honda in withdrawing from the sport owing to financial considerations. With Honda and Toyota gone, 2010 would mark the first time in eight years that there would be no Japanese F1 team. BMW, which had won only one race since it acquired the Sauber team in 2006, announced that it would not return in 2010. Japanese company Bridgestone Corp., F1 racing's only tire supplier since 2007, reported that it would not supply tires for F1 after its contract expired in 2010. (PAUL DIGIACOMO)

U.S. Auto Racing. American stock car race driver Jimmie Johnson of Hendrick Motorsports won his fourth consecutive Sprint Cup championship in 2009. The 34-year-old Johnson thus achieved a feat never before accomplished in the 61-year existence of the National Association for Stock Car Auto Racing (NASCAR), by most measures the world's most lucrative racing series, with 45 drivers each earning more than \$1 million. Johnson won 7 of the 36 races in the series, beating 50-year-old teammate Mark Martin, who won 5. Jeff Gordon, a four-time former titlist, won once and finished third in the overall ranking. It was team owner Rick Hendrick's ninth title as Chevrolet fought off a determined bid from Toyota for manufacturer honours.

In a year in which all major American auto racing series were constricted because of difficult economic conditions, Johnson, who drove only in the Sprint Cup Series, earned \$7,333,309 before sponsor and other ancillary awards. Toyota's top money-winning driver, 24-year-old Kyle Busch, did not qualify for the Chase for the Sprint Cup (comprising the final 10 races of the Sprint season), but he won 20 times, including the drivers' crown in NASCAR's

subsidiary Nationwide Series, four Sprint Cup races, and seven races in the Camping World Truck Series. Busch earned just over \$8,332,000 total before awards for the team of car owner J.D. Gibbs. Specialist Ron Hornaday won the Camping World truck championship.

Rain plagued the NASCAR schedule. The almost \$19 million Daytona 500 was halted after 152 laps. Matt Kenseth of Ford was awarded the \$1,536,388 first-place money. Bad weather also delayed the longest race on the schedule, the Coca-Cola 600, by one day. David Reutimann of Toyota earned the \$403,748 victory.

Indianapolis Motor Speedway, the second oldest race venue in the U.S. and the jewel of the single-seater Indy Racing League (IRL), staged the 93rd Indy 500, with a total purse of \$14,315,315. The winner, Brazil's Helio Castroneves (*see* BIOGRAPHIES), took home \$3,048,055 of that. Driving for the Roger Penske team, Castroneves won the pole with a speed of 224.864 mph and then bested Dan Wheldon by nearly two seconds at an average speed of 150.318 mph in the IRL's all Dallara-Honda competition. It was the Brazilian's third Indy 500 victory. In third place was Danica Patrick of Andretti Green, her best finish at Indy. Patrick signed with Earnhardt Ganassi Racing to finally attempt American stock cars for a limited schedule.

The speedway's other preeminent race was the Allstate 400, a NASCAR event viewed by approximately 250,000 fans on site and more on TV. Colombian Juan Pablo Montoya led most of the race until NASCAR penalized him for driving too fast in the pit lane. He faded to 11th, and Johnson won the \$448,001 first prize over Martin.

Scotsman Dario Franchitti of the Target Chip Ganassi team, who had tried NASCAR unsuccessfully in 2008, returned to the IRL and won the season drivers' championship. He captured five events to edge on total points Scott Dixon, the defending champion and his teammate, who also won five. Penske's Ryan Briscoe (with three IRL victories) and Castroneves (with two) finished third and fourth for the season, respectively. Though the title standings lead changed 15 times, two formerly successful teams, Andretti and Newman/Haas/Lanigan, had no victories in the 17-race series.

(ROBERT J. FENDELL)

Rallies and Other Races. It was an up-and-down world rally championship

(WRC) season for five-time champion driver Sébastien Loeb (Citroën) of France (*see* BIOGRAPHIES) and his co-driver, Daniel Elena of Monaco. After skipping the Monte Carlo race (which was not part of the WRC in 2009), Loeb took the first five WRC events—in Ireland, Norway, Cyprus, Portugal, and Argentina. A flat tire and a two-minute technical penalty dropped Loeb into fourth place in the Rally of Italy (Sardinia), which was won by Jari-Matti Latvala (Ford) of Finland. The next three rallies—Greece (Acropolis), Poland, and Finland—were captured by Finnish driver Mikko Hirvonen (Ford). In the Rally of Australia in September, Hirvonen was awarded the victory after Loeb, the original winner, and other Citroën drivers were penalized for a technical infringement. Loeb's triumph in Spain (Catalunya) put him only one point behind Hirvonen and set up a classic battle in the season-ending Wales Rally of Great Britain. A mishap with his car hood in the penultimate stage cost Hirvonen more than a minute, and Loeb held on for the win, giving him his 54th career victory and a record sixth consecutive WRC drivers' title—just one point ahead of his Finnish rival. Citroën finished with a comfortable lead over Ford in the manufacturers' rankings.

In sports car competition, the two classic American endurance races again attracted drivers and manufacturers from around the world, but it was the closeness of the finishes that was notable. The Rolex 24 at Daytona, run on Daytona International Speedway's 5.73-km (3.56-mi) road circuit (including three-quarters of the NASCAR racing oval) in Daytona Beach, Fla., was won by Brumos Porsche's David Donohue, Antonio Garcia of Spain, Darren Law, and former Indy 500 winner Buddy Rice. After 735 laps of racing, they beat the Chip Ganassi Lexus team of Montoya, Scott Pruett, and Memo Rojas of Mexico by 0.167 sec (approximately 15 m [50 ft]). It was the closest finish in any major 24-hour race.

In the 57th running of the 12 Hours of Sebring (Fla.), four carmakers were represented in the most powerful LMP classes. Team Joest's Audi R15 TDI—driven by Tom Kristensen of Denmark, Rinaldo Capello of Italy, and Scotsman Allan McNish—scored Audi's 9th victory in 11 tries but just managed to beat the Peugeot 908 entry of three Frenchmen: Franck Montagny, Stéphane Sarrazin, and Sébastien Bourdais. The margin of victory between the two diesel vehicles was 22 seconds after

2,280 km (1,417 mi), and the average speed was 117.986 mph, the fastest ever for the event.

Peugeot upset Audi in the 24-hour Le Mans (France) Grand Prix d'Endurance, with Australian David Brabham, Marc Gené of Spain, and Austria's Alexander Wurz in a Peugeot 908 taking the checkered flag ahead of teammates Montagny, Sarrazin, and Bourdais. The defending champion team of Kristensen, Capello, and McNish, driving an Audi R15, struggled with mechanical problems and finished third overall. Audi had emerged victorious in eight of the previous nine races.

(ROBERT J. FENDELL;
MELINDA C. SHEPHERD)

BASEBALL

North America. *Major League Baseball.* The New York Yankees earned their 27th World Series title to conclude the 2009 Major League Baseball (MLB) season, which was relatively stable despite a troubled economy. (Total attendance for the regular season was 73.4 million, the fifth highest in the sport's history but a decline of 6.5% from 2008.) The Yankees won the Series by defeating the defending champion Philadelphia Phillies 7–3 in game six on November 4 in New York's new Yankee Stadium to win the best-of-seven series by four games to two. New York's Hideki Matsui tied a World Series record by batting in six runs in a single game and was named the Most Valuable Player (MVP). It was pitcher Andy Pettitte's third victory in as many clinching games during the 2009 postseason.

In game one at Yankee Stadium on October 28, Cliff Lee pitched a complete game and Chase Utley hit two home runs to propel the Phillies to a 6–1 victory. Lee struck out 10 and yielded six hits. C.C. Sabathia was the losing pitcher. The Yankees rebounded the next night with a 3–1 triumph behind A.J. Burnett, who pitched seven innings, and Mariano Rivera, who finished with two scoreless innings of relief. Mark Teixeira and Matsui hit home runs off loser Pedro Martinez. When the Series moved to Philadelphia for game three on October 31, the Phillies jumped to a 3–0 lead off Pettitte, but they were overtaken and defeated 8–5 as three Yankees hit home runs—Alex Rodriguez, Nick Swisher, and Matsui. Cole Hamels, MVP of the 2008 World Series, was the losing pitcher. In game four the Yankees scored three runs in the ninth inning to break a tie and force a 7–4 victory. Ro-



In game six of the World Series on November 4, Hideki Matsui of the New York Yankees slams the ball for a two-run homer in the second inning. Matsui scored a record six runs batted in during the Yankees' series-clinching victory.

driguez drove in the winning run with a two-out double off loser Brad Lidge, and Jorge Posada followed with a two-run single. Rivera pitched a scoreless ninth. The Phillies averted elimination by defeating the Yankees 8–6 in game five as Utley hit two more home runs in support of Lee, the winning pitcher. With five home runs for the Series, Utley tied a record shared by former Yankees star Reggie Jackson.

Play-offs. The Phillies won the National League (NL) pennant by defeating the Los Angeles Dodgers 10–4 on October 21 in Philadelphia to capture the National League Championship Series (NLCS) four games to one and become the first team to reach consecutive World Series since the 2000 Yankees. Ryan Howard was named MVP for the NLCS. The Phillies advanced to the NLCS by defeating the Colorado Rockies three games to one in a best-of-five series. The Dodgers swept their series against the St. Louis Cardinals three games to none.

The Yankees clinched their 40th American League (AL) pennant by defeating the Los Angeles Angels 5–2 on October 25 in New York to win the American League Championship Series (ALCS) four games to two. Pettitte was the winning pitcher, and Rivera recorded the save. Sabathia was the MVP for the ALCS. In the AL Division Series, the Yankees swept the Minnesota Twins and the Angels swept the Boston Red Sox, both by three games to none in those best-of-five series.

Regular Season. Minnesota won the AL Central by defeating the Detroit

Tigers 6–5 in a one-game play-off held in Minneapolis on October 6. The Tigers had occupied first place since May 10 and were 5½ games ahead of Minnesota with only 20 games remaining on the 162-game regular-season schedule, but the Twins won 16 of their last 21 games, and they fell into a tie, thus necessitating a 163rd game, which was decided on an RBI single in the 12th inning by Alexi Casilla. The Yankees won the AL East by eight games over the Red Sox, who qualified for the play-off wild-card berth with the best second-place record. The Angels won the AL West by 10 games. The Phillies captured first place in the NL East by six games; the Cardinals topped the NL Central by 7½ games; and the Dodgers won the NL West by three games over the NL wild card, Colorado.

Individual Accomplishments. Joe Mauer of Minnesota batted .365 (the highest ever for a catcher) to claim his second consecutive—and his third in four years—AL batting title and the season MVP honors. Hanley Ramirez of the Florida Marlins won the NL batting crown with .342. Albert Pujols of the Cardinals hit 47 home runs and earned his third NL MVP award; Teixeira and Carlos Pena of the Tampa Bay Rays had 39 homers each to top the AL. Teixeira also led the AL in runs batted in (RBIs) with 122. The NL RBI leaders were Prince Fielder of the Milwaukee Brewers and Howard, both with 141. No pitchers won 20 games, but four collected 19: Sabathia, Justin Verlander of Detroit, Felix Hernandez of the Seattle Mariners, and Adam Wain-

wright of St. Louis. Verlander led the AL with 269 strikeouts; Tim Lincecum of the San Francisco Giants led the NL with 261 and captured his second straight Cy Young Award. Zack Greinke of the Kansas City Royals scored an MLB-best 2.16 earned run average (ERA) and secured his first AL Cy Young Award. Brian Fuentes of the Angels had 48 saves to lead the AL; the NL leader was Heath Bell of the San Diego Padres, with 42.

On July 23 in Chicago's U.S. Cellular Field, Mark Buehrle of the AL White Sox pitched a perfect game, beating Tampa Bay 5–0. The perfect game—all 27 opposition batters retired—was the 18th in major league history, and the 30-year-old left-hander became the sixth pitcher to record both a no-hitter (against the Texas Rangers in 2007) and a perfect game. Buehrle struck out six and was helped by a spectacular catch from centre fielder Dewayne Wise, who climbed the fence to deprive Gabe Kapler of a potential home run for the first out of the ninth inning. Wise briefly lost control of the ball but then grabbed it as he fell to the ground.

San Francisco's Randy Johnson—who pitched the last perfect game for the Arizona Diamondbacks against the Atlanta Braves in 2004—recorded his 300th victory in June. (See BIOGRAPHIES.) Jonathan Sanchez, a 26-year-old left-hander, pitched a no-hitter for San Francisco on July 10, defeating the Padres 8–0. Rivera, the Yankees' veteran relief pitcher, registered his 500th save. Jason Giambi of the Oakland As hit his 400th home run, and Ichiro Suzuki of the Seattle Mariners smacked his 2,000th hit.

All-Star Game. The AL defeated the NL 4–3 to win the annual All-Star Game in St. Louis's Busch Stadium on July 14. The AL continued its dominance in the midsummer event, extending its unbeaten string to 13 and thus securing home-field advantage in the World Series. Curtis Granderson of the Tigers tripled in the eighth inning and scored on a sacrifice fly by Adam Jones of the Baltimore Orioles to break a 3–3 tie. The Rays' Carl Crawford was voted MVP of a game in which the NL scored all of its runs in the second inning. Jonathan Papelbon of the Red Sox was credited with the victory, and Rivera claimed the save by pitching a scoreless ninth inning.

Little League World Series. Chula Vista, Calif., defeated Taoyuan, Taiwan, 6–3 to win the Little League World Series (LLWS) on August 30 in South

Williamsport, Pa. Bulla Graft singled in the go-ahead run in the fourth inning, and Kiko Garcia pitched three-plus innings of scoreless relief for the victors, who secured a fifth consecutive LLWS title by U.S. representatives. With Wen Hau Sung and Chin Ou hitting back-to-back home runs in the third inning, Taiwan seized a 3–0 lead, but California replied with a run in the third before rallying in the fourth when Seth Godfrey drove in a run with a sacrifice fly and Nick Conlin scored on a wild pitch. California advanced to the championship game by routing San Antonio, Texas, 12–2 with a nine-run outburst in the first inning that featured three home runs, including a grand slam by Andy Rios. The game was halted after 3½ innings because of the 10-run rule. (ROBERT WILLIAM VERDI)

Latin America. The 2009 Caribbean Series was held in Mexicali, Mex., February 2–7. The Aragua Tigers (Tigres), representing Venezuela, won the championship with a 5–1 record. Mexico's Mazatlán Deer (Venados) finished second with a 3–3 record. Puerto Rico's champion, the Ponce Lions (Leones), and the Licey Tigers (Tigres) from the Dominican Republic tied for third.

Venezuela lost to South Korea by a score of 10–2 in the semifinals of the World Baseball Classic, held in Los Angeles in March. Cuba, the Dominican Republic, Mexico, Panama, and Puerto Rico failed to reach the semifinal round of the 16-team tournament, which was won by Japan.

In Cuba, Havana Province defeated Villa Clara four games to one to win the 48th Serie Nacional (National Series). It was the first championship for Havana, which had defeated Isla de la Juventud four games to one in the quarterfinals and Pinar del Río by four games to two in the semifinals to advance. Isla de la Juventud infielder Michel Enríquez won the batting title with a .401 average. Alfredo Despaigne from Granma set a new Cuban league home run record with 32. Pinar del Río pitcher Yuniesky Maya went 13–4 to lead the league in wins, while Yadier Pedroso from Havana posted a league-leading 1.91 earned run average.

The Saltillo Sarape Makers (Saraperos) in August defeated the Quintana Roo Tigers (Tigres) four games to two to win its first Mexican League title after nearly 40 years in the league. The Tigers, a team formerly based in Mexico City (1955–2001) and Puebla (2002–06), had won nine previous championships. (MILTON JAMAIL)

Japan. The Yomiuri Giants beat the Nippon-Ham Fighters 2–0 in game six at the Sapporo Dome, the Fighters' home stadium, on Nov. 7, 2009, to win the best-of-seven Japan Series by four games to two. The Giants claimed their first Japan Series title in seven years and 21st overall. Giants catcher Shinnosuke Abe was named the series Most Valuable Player (MVP) after hitting .304 with two home runs and five runs batted in (RBIs), including an RBI double in game six. In the Central League (CL) Climax Series play-offs, the Giants downed the Chunichi Dragons four games to one in the decisive second stage after the Dragons eliminated the Yakult Swallows two games to one in the first stage. In the Pacific League (PL) Climax Series, the Fighters beat the Rakuten Eagles four games to one in the second stage after the Eagles swept the Softbank Hawks in two games in the first stage.

In the regular season, Dragons first baseman Tony Blanco led the CL with 39 homers and 110 RBIs, and Giants outfielder Alex Ramirez hit .322 to win his first batting title. Pitchers Kazuki Yoshimi of the Dragons and Shohei Tateyama of the Swallows tied for the CL lead with 16 wins. Dragons left-hander Chen Wei-yin had a league-best 1.54 earned run average (ERA). Seibu Lions third baseman and designated hitter Takeya Nakamura led the PL with 48 home runs and 122 RBIs, and Eagles outfielder Teppei Tsuchiya captured his first batting title after hitting .327. The Lions' Hideaki Wakui won a PL-leading 16 games. The Fighters' Yu Darvish topped the PL with a 1.73 ERA.

In the second World Baseball Classic, Japan defended its 2006 title, defeating South Korea 5–3 in the final game in Los Angeles on March 23. Daisuke Matsuzaka, a pitcher with Major League Baseball's Boston Red Sox, was voted the tournament MVP.

(HIROKI NODA)

BASKETBALL

Professional. On June 14, 2009, the Los Angeles Lakers won their 15th National Basketball Association (NBA) championship (and their 10th since moving to Los Angeles) with a 99–86 victory over the Orlando Magic in Orlando, Fla., to close out the best-of-seven series in five games. The Lakers' Kobe Bryant, who earned his fourth NBA title—his first since 2001–02—was named the Most Valuable Player (MVP) of the Finals after having averaged 32.4 points per game. In the decisive fifth game,

Bryant scored 30 points to go along with 6 rebounds, 5 assists, 4 blocked shots, and 2 steals.

One year after losing the championship to the Boston Celtics in six games, including a 39-point defeat in the final game, the Lakers became the first NBA team since the 1989 Detroit Pistons to win a championship the season after losing in the Finals. Entering the playoffs, the Lakers ousted the Utah Jazz in the first round and then eked past the Houston Rockets in a hard-fought seven-game series before dispatching the Denver Nuggets in six games in the Western Conference Finals. The 2009 championship gave Lakers coach Phil Jackson his 209th post-season victory and a landmark 10th title, passing legendary Celtics coach Red Auerbach, who had captured nine titles. Lakers guard Derek Fisher also picked up his fourth championship ring. Meanwhile, it was the first title for important role players such as forward Lamar Odom (10th season in the

Kobe Bryant of the Los Angeles Lakers takes a jump shot past Courtney Lee of the Orlando Magic in the decisive fifth game of the 2009 NBA Finals. Bryant scored 30 points in the game, which clinched the Lakers' 15th NBA title.



Ronald Martinez/Getty Images

league) and forward Pau Gasol, who had been acquired from the Memphis Grizzlies 16 months earlier. In the all-important fifth game, Gasol had a double-double consisting of 14 points and 15 rebounds, Odom added 17 points and 10 rebounds, while Trevor Ariza had 15 points and Fisher 13. The Lakers were especially effective from three-point territory, hitting 8 of 16 (50%).

The Magic, playing in the second championship round in the franchise's history and the first since 1995, connected on only 8 of 27 of their three-pointers in the final game, although five players scored in double figures. Rashard Lewis led the team with 18 points and 10 rebounds. Orlando defeated the Philadelphia 76ers in the first round, upset the Celtics in a tough seven-game semifinal series, and reached the showdown with Los Angeles with a four-games-to-two victory over the Cleveland Cavaliers, led by regular-season MVP LeBron James (see BIOGRAPHIES), in the Eastern Conference Finals.

On October 9 the Phoenix Mercury succeeded in capturing the franchise's second Women's National Basketball Association (WNBA) championship in three years with a 94–86 victory over the Indiana Fever in the decisive fifth game in Phoenix. (The team earned the title in 2007 in a five-game series against the Detroit Shock.) The Mercury won the first matchup of the five-game 2009 Finals and then lost two straight before coming back to defeat Indiana in games four and five. The Mercury's Diana Taurasi, the Finals MVP, scored 26 points, 6 rebounds, and 4 assists in the fifth game. Taurasi, who led the University of Connecticut to three consecutive National Collegiate Athletic Association titles before being the top WNBA draft pick in 2004, was also the regular-season MVP. (ANDY JASNER)

College. Going into the 2008–09 season, North Carolina was predicted to be the best team in college basketball, but when the Tar Heels lost their first two Atlantic Coast Conference (ACC) games, the crowning looked to be premature. By the time the teams arrived in Detroit for the National Collegiate Athletic Association (NCAA) Final Four in April 2009, however, Carolina was the big favourite again, and the team did not disappoint. Playing on April 6 in front of a Final Four record crowd of 72,922 at Detroit's Ford Field, North Carolina overwhelmed Michigan State 89–72 to win the school's fifth national championship and second under coach

Mark Humphrey/AP



In the NCAA women's final between the Universities of Connecticut and Louisville on April 7, UConn star Maya Moore charges past two Louisville players. Moore, who was named the Naismith College Player of the Year, contributed 18 points to UConn's 76–54 victory.

Roy Williams in his six years as head coach at his alma mater.

After being embarrassed in the 2008 semifinal game by Kansas, the Tar Heels played throughout the 2009 tournament like a team that could accept nothing short of winning the last game. Carolina stars Tyler Hansbrough, Ty Lawson, and Wayne Ellington all passed on the 2008 National Basketball Association (NBA) draft to make another run at a national championship. North Carolina (34–4) won its six NCAA tournament games by a combined 121 points, with each of the games decided by double digits.

Hansbrough ended his college career with more points (2,872) than any previous player in ACC history. Lawson had 21 points, 8 steals, 6 assists, and just 1 turnover in the championship game against Michigan State, while Ellington was named Most Outstanding Player of the Final Four. Hansbrough, Lawson, and Ellington all were picked in the first round of the 2009 NBA draft.

Big Ten champion Michigan State (31–7) played brilliantly to get to the championship game, upsetting Big East powers Louisville (in the regional final)

and Connecticut (in the Final Four semifinal). Another Big East power, Villanova, also made the Final Four but had the bad fortune of drawing North Carolina in the semifinal.

In the women's NCAA tournament, Connecticut (39–0) did not just win its sixth national women's championship; UConn dominated from start to finish, winning every game in the 2008–09 season by double figures. The Huskies beat Big East rival Louisville (34–5) 76–54 in the championship game, held on April 7 at the Scottrade Center in St. Louis, Mo. Tina Charles, who scored 25 points and had 19 rebounds against Louisville, was named the Most Outstanding Player of the Final Four.

In Coach Geno Auriemma's 24 seasons at UConn, his teams had an incredible 696–122 record, and three of his six national champions were undefeated. The 2008–09 team was clearly one of his best, with stars at every position. No star was bigger than sophomore Maya Moore, one of the most versatile talents in the history of her sport, who won the Player of the Year award. Meanwhile, every key UConn player except senior point guard Renee Montgomery would be back for the 2009–10 season. (DICK JERARDI)

International. Spain won its first EuroBasket title, with an 85–63 victory over Serbia on Sept. 20, 2009, in the final in Katowice, Pol. The victory added credibility to Spain's dream of defending its 2006 Fédération Internationale de Basketball (FIBA) men's world championship in Turkey in 2010. The team traveling to Turkey was expected to include Pau Gasol, Spain's 2.13-m (7-ft)-tall centre, who led his team against Serbia with 18 points, 11 rebounds, and 3 blocks—all game highs. Gasol was determined to make up for having missed Spain's triumph in the 2006 FIBA world championship when a broken foot that he suffered in the semifinal forced him to watch as his teammates overwhelmed Greece 70–47 in the final to win the country's first world title.

In addition to Spain and Serbia, the teams from Europe that qualified for the 2010 world championship included EuroBasket bronze-medalist Greece and fourth-place finisher Slovenia. France and Croatia won classification games to join the other European qualifiers and host country Turkey. With the U.S. having qualified for Turkey on the basis of its gold medal at the 2008 Olympics in Beijing, four slots were available from the Americas championship. Brazil narrowly bested host Puerto Rico 61–60,

while Argentina, which included seven players who played professionally in Spain, defeated Canada 88–73 to take the bronze. Canada rebounded from a string of defeats against Uruguay, Puerto Rico, Argentina, and Brazil by beating Panama and upsetting the favoured Dominican Republic to reach the semifinals and qualify.

Angola, Côte d'Ivoire, and Tunisia qualified from the African championship, played in August in Tripoli, Libya. Côte d'Ivoire provided the tournament's surprise and sealed its place by scoring the final eight points in its semifinal game to beat Cameroon 68–61. Iran impressively retained its Asian championship title by thrashing host China 70–52. Jordan took the third Asian qualifying slot. In December FIBA added four "wild cards" to reach the requisite 24 teams: three from Europe—Germany, Lithuania, and Russia—plus Lebanon.

The Czech Republic (the host country) and the U.S. (the 2008 Olympic champion) were the first names in the ring for the 2010 FIBA women's world championship. France upset defending champion Russia in the women's EuroBasket final in June in Riga, Latvia, as they both qualified, along with Spain, Belarus, and Greece. Brazil, Argentina, and Canada qualified from the Americas, and Oceania's Australia joined Asian qualifiers China, South Korea, and Japan. From Africa, Senegal and Mali went through to round out the 16-team tournament. (RICHARD TAYLOR)

BOBSLEIGH, SKELETON, AND LUGE

Bobsleigh. During the 2008–09 bobsleigh season, Russian pilot Aleksandr Zubkov finished atop the overall four-man and combined World Cup standings, having collected nine World Cup medals, three at Park City, Utah, and one at each other venue on the circuit. At the 2009 world championships, held in February in Lake Placid, N.Y., however, he finished fourth in both disciplines. Beat Hefti of Switzerland, with seven medals throughout the season, took the two-man title in overall World Cup standings and was second in combined standings, but, like Zubkov, he could not get on the podium at the world championships.

The four-man win at the world championships went to American pilot Steven Holcomb. André Lange of Germany took silver, and Latvian Janis Minins secured the bronze. In the two-man event, Switzerland's Ivo Rüegg and Germany's Thomas Florschütz finished first and second, respectively, with Holcomb in third place.

On the women's circuit, Sandra Kiriasis of Germany won her seventh straight overall World Cup title, having collected seven medals in eight World Cup races. Her only nonpodium finish was at the Olympic test event in Whistler, B.C. She also contributed to Germany's world championship team title but fell to a disappointing seventh place in the two-woman event in Lake Placid. Fellow German Cathleen Martini finished second in the overall World

German bobsleigh pilot Sandra Kiriasis (right) and her brakewoman, Berit Wiacker, push off in the World Cup event in St. Moritz, Switz., in January. The duo won the race en route to Kiriasis's seventh consecutive overall World Cup title.



Arno Balzarini—Keystone/AP

Cup standings, followed by American Shauna Rohbock. The world championship gold medal went to British pilot Nicola Minichiello. Rohbock captured the silver, and Martini took the bronze.

Skeleton. Aleksandr Tretiakov of Russia showed consistency throughout the 2008–09 skeleton season and won the overall World Cup title. He earned five podium finishes during the World Cup season and finished third at the 2009 world championships in Lake Placid. Switzerland's Gregor Stähli won the world championship gold medal. British slider Adam Pengilly took second place at the event, his only medal of the year.

In women's action, Marion Trott of Germany finished atop the World Cup rankings, Shelley Rudman of Great Britain took second, and American Katie Uhlaender was third overall. Trott also earned the gold medal at the world championships, ahead of silver medalist Amy Williams of Great Britain and fellow German Kerstin Szymkowiak, who took the bronze. (JULIE PARRY)

Luge. At the luge world championships in Lake Placid, N.Y., in February 2009, American Erin Hamlin slid to gold, the first time since 1993 that a non-German slider had won the world crown. The silver and bronze medals went to Germany's Natalie Geisenberger and Ukrainian Natalia Yakushenko, respectively. German slider Tatjana Hüfner again dominated the World Cup season, finishing in the top two in all nine races and first in the overall standings, ahead of Geisenberger and Anke Wischnewski of Germany. Hamlin, with six top-10 finishes, was sixth in the standings.

Italian Armin Zöggeler continued his men's singles dominance, finishing in the top three spots in eight out of nine races and earning his eighth (and fourth straight) overall World Cup title. Zöggeler, however, was defeated for the world championship gold by German slider Felix Loch, who did not compete in the first three races of the 2008–09 season but came on strong at the end.

Germany, Italy, and Austria dominated the podium throughout the men's doubles season, with Italy's Christian Oberstolz and Patrick Gruber earning the overall World Cup title. At the world championships, Italians Gerhard Plankensteiner and Oswald Haselrieder upset André Florschütz and Torsten Wustlich of Germany for the gold. Americans Mark Grimmette and Brian Martin finished with the bronze.

(JANELE M. MAREK)

BOXING

The exploding popularity in 2009 of Filipino boxing sensation Manny Pacquiao (see BIOGRAPHIES) and the return of undefeated Floyd Mayweather, Jr. (U.S.), created demand for a bout between the pair that could possibly result in the largest-grossing boxing match in history. In December it appeared likely that the much-anticipated fight could take place in 2010.

Pacquiao continued to move from one weight division to another with spectacular results. On May 2 he won *The Ring* magazine junior welterweight championship with a stunning second-round knockout of Ricky Hatton (U.K.) at the MGM Grand in Las Vegas. The 16,262 fans in attendance and a pay-per-view audience of approximately 800,000 saw Pacquiao knock out Hatton with a left hand that crashed into the side of the Englishman's jaw with such a paralyzing impact that the recipient was unconscious before he hit the floor.

Mayweather, who had not fought since Dec. 8, 2007, returned to action on September 19 and won a unanimous 12-round decision over *Ring* and World Boxing Association (WBA) lightweight champion Juan Manuel Márquez (Mexico) at the MGM Grand. Márquez's titles were not at stake because the bout was fought in the welterweight division. When Mayweather failed to make the contracted weight of 144 lb, \$600,000 of his purse was forfeited and given to Márquez. Although Mayweather knocked down Márquez in the second round, it was a rather uneventful fight, with Mayweather's speed

and size advantages carrying him to an easy points verdict. The crowd of 13,116 was several thousand fewer than capacity, but the 1.05 million pay-per-view buys were significantly better than expected.

Pacquiao reinforced his position as the best boxer in the world by moving up in weight again and stopping highly regarded welterweight Miguel Cotto (Puerto Rico) in the 12th round on November 14 in Las Vegas. After taking some early punishment from his hard-hitting adversary, Pacquiao knocked down Cotto in the third and fourth rounds to take control of the fight. The grotesquely battered Cotto was rescued by the referee in the final round. The Cotto bout underscored Pacquiao's status as boxing's biggest attraction. Approximately 1.25 million pay-per-view packages were sold, and a crowd of more than 16,200 packed the MGM Grand for the event. For the second year in a row, Pacquiao was selected as *The Ring* magazine's Fighter of the Year.

The heavyweight division continued to be dominated by Ukrainian brothers Wladimir and Vitali Klitschko. Vitali thrice defended the World Boxing Council (WBC) title, stopping both Juan Carlos Gómez (Cuba) in the ninth round of a bout held on March 21 in Stuttgart, Ger., and Chris Arreola (U.S.) in the 10th round on September 26 in Los Angeles. In his final bout of the year, Vitali tallied a 12-round unanimous decision over Kevin Johnson (U.S.) on December 12 in Berne, Switz. It was Wladimir, however, who attracted the largest crowd of the year

Ukrainian boxer Vitali Klitschko (right) pounds his American challenger, Kevin Johnson, during their WBC heavyweight title bout on December 12. The fight was Klitschko's third successful title defense of the year.



Peter Schneider—Keystone/AP

when more than 60,000 fans filled the Veltins Arena in Gelsenkirchen, Ger., to see him stop previously undefeated Ruslan Chagaev (Uzbekistan) in the ninth round. The one-sided match was Wladimir's seventh successful defense of the International Boxing Federation (IBF) title, and the victory also earned him the vacant *Ring* magazine heavyweight championship.

The former undisputed cruiserweight champion David Haye (U.K.) entered the heavyweight sweepstakes by winning the WBA belt via a 12-round decision over Nikolay Valuyev (Russia) on November 7 in Nürnberg, Ger. The flamboyant Haye was expected to add some much-needed colour to the drab heavyweight picture.

Tomasz Adamek (Poland), the reigning IBF and *Ring* magazine cruiserweight champion, made two successful defenses in 2009. He knocked out Johnathon Banks (U.S.) in the eighth round on February 27 and battered Bobby Gunn (U.S.) on July 11 until the referee ended the fight in the fourth round. Both bouts were contested in Newark, N.J., where a large Polish American population supported Adamek. The Polish fighter returned to his homeland for his third bout of the year, stopping former heavyweight contender Andrew Golota (Poland) in the fifth round on October 24 in Lodz. Despite the fact that Golota was well past his prime, the so-called Polish Fight of the Century bout was a financial success. It attracted a capacity crowd of 14,000 and was viewed by more than 10 million people on Polsat, Poland's largest television network.

Following a ninth-round knockout of Marco Antonio Rubio (Mexico) on February 21 in Youngstown, Ohio, *Ring* and WBC middleweight champion Kelly Pavlik (U.S.) was sidelined for much of the year with a staphylococcus infection. He returned to action on December 19, scoring a fifth-round technical knockout of Miguel Ángel Espino (Mexico) in Youngstown.

Subscription cable TV network Showtime launched a round-robin tournament featuring six of the world's top super middleweights. In the first series of bouts, WBC titleholder Carl Froch (U.K.) won a close 12-round decision over Andre Dirrell (U.S.), on October 17 in Nottingham, Eng. On the same night in Berlin, Arthur Abraham (Armenia) knocked out former world middleweight champion Jermain Taylor (U.S.) in the 12th round. On November 21 Andre Ward (U.S.) beat Mikkel

Kessler (Denmark) via an 11th-round technical decision in Oakland, Calif. The tournament would continue in 2010.

The boxing world was rocked by the violent deaths of three famous fighters in less than a month, beginning with the alleged suicide of Alexis Argüello (Nicaragua) on July 1 in Managua, Nic. Then former IBF super featherweight and WBC junior welterweight titleholder Arturo Gatti (Canada) was found dead on July 11 in Porto de Galinhas, Braz., where he was vacationing with his Brazilian wife. Finally, on July 25 reigning WBC junior middleweight titleholder Vernon Forrest (U.S.) was shot and killed during a robbery at a gas station in Atlanta. (See OBITUARIES.) (NIGEL COLLINS)

CRICKET

On March 3, 2009, the Sri Lankan cricket team bus was attacked on its way to the Gaddafi Stadium in Lahore, Pak., for the Second Test against Pakistan. Six policemen were killed in the gun battle, and Pakistan umpire Ahsan Raza suffered bullet wounds in the chest. Although the majority of the Sri Lankan players were unhurt, Thilan Samaraweera was hit in the left leg by a bullet and had to stay behind in the hospital as his teammates were immediately flown home. It was the first time that the sport had been the target of a terrorist attack, and the cricket world reacted with shock.

Just three months earlier, in late November 2008, a terrorist attack on the Taj Mahal Palace hotel in Mumbai (Bombay) had resulted in the cancellation of the last two one-day internationals between England and India. The England players, who had stayed at the hotel a fortnight before, flew home, and it was widely presumed that the Test series in December would be canceled. The England players, however, under the captaincy of Kevin Pietersen, unanimously agreed to return to India to play the two Tests, and in the end their 1-0 defeat was less important than their gesture in defying the terrorists. Pakistan became a "no-go" area for international cricket, and the second season of the Indian Premier League (IPL) had to be moved to South Africa at short notice after security officials in India said that they could not police both the IPL and the pending Indian general election.

It took a thrilling double-header series between Australia and South Africa

in December and early January 2009 to lift the gloom. For the first time in more than a decade, Australia lost its position as the number one team in the world after South Africa had claimed a 2-1 victory in Australia to move to the top of the rankings. Inspired by its captain, Graeme Smith, South Africa won a series in Australia for the first time, while the former champions, depleted by the recent retirements of Shane Warne, Glenn McGrath, and Adam Gilchrist, lost to India and, most painfully, to England. Australia did gain a measure of revenge, beating South Africa, also by 2-1, in the return Test series in South Africa.

England's season began in controversy. Pietersen was dismissed from the captaincy after just three Test matches in charge because of a personality clash with coach Peter Moores. Pietersen wanted Moores to go, but the selectors dismissed both, and a new captain-coach combination of Andrew Strauss and Andy Flower, respectively, was appointed for the series in the Caribbean. West Indies, desperate to win back the Wisden Trophy from England for the first time since 1997, took the opening Test after a devastating spell of five wickets for 11 runs by fast bowler Jerome Taylor and, helped by lifeless pitches, largely played for draws thereafter. The second Test in Antigua had to be abandoned after only a few balls because the outfield was deemed unfit for play. The match was rescheduled for the Recreation Ground, the island's former Test ground. England was unable to press home its advantage in the remaining Tests and lost the series 1-0.

Defeated in the return series in England, the West Indies team went on strike after a pay dispute with the West Indies Cricket Board. When a scratch team of second-string players lost 2-0 to Bangladesh, which had a previous Test record of 59-1, it ranked as an all-time low for the game in the Caribbean.

The long-awaited Ashes series in England did not quite live up to the 2005 series, though the result—2-1 to the home team—was the same. England held on for a thrilling draw in the opening Test in Cardiff, Wales, and then took the lead in the series at Lord's, where an inspired spell of fast bowling by Andrew Flintoff conjured up memories of the 2005 Ashes. England was comprehensively outplayed by Australia in the fourth Test, but Stuart Broad's 5 for 37 helped England to a first innings lead in the final Test at the Oval and, despite Michael Hussey's

rearguard century, on to victory. Strauss was named Man of the Series for his 474 runs and his leadership as England's captain. Flintoff, a charismatic but injury-prone all-rounder, retired from Test cricket to concentrate on playing one-day and 20/20 cricket. During the Third Test, Captain Ricky Ponting became the leading run scorer in Australian cricket, surpassing Allan Border's career total of 11,174, but he was unable to avoid the ignominy of having lost two Ashes series.

Sachin Tendulkar of India became the leading run scorer in Test history when he passed former West Indian star Brian Lara's record of 11,953 runs in the Second Test against Australia at Mohali, India. Pakistan won the second 20/20 World Cup, and the Deccan Chargers were crowned champions of the IPL. In women's cricket, England's players, led by Charlotte Edwards, swept all before them, winning both the 50-over World Cup and the 20/20 World Cup and retaining the Ashes against Australia. (ANDREW LONGMORE)

CURLING

China won its first women's world curling championship on March 29, 2009, when Wang Bingyu defeated Sweden's Anette Norberg 8-6 in the final in Kangnung, S.Kor. Denmark's Angelina Jensen edged defending champion Jennifer Jones of Canada 7-6 for the bronze. The remaining countries in order were: Switzerland, Germany, Russia, Scotland, the U.S., South Korea, Norway, and Italy.

On April 12, Scotland's David Murdoch took the men's world championship in Moncton, N.B., by stealing two points in the final end of an 8-6 victory over defending champion Kevin Martin of Canada. Norway's Thomas Ulsrud won his third bronze with a 6-4 victory over Ralph Stöckli of Switzerland. The order of finish for the rest of the men's field was the U.S., Germany, Denmark, France, China, Japan, the Czech Republic, and Finland.

The world junior championship in March was a test event of the Olympic venue for the 2010 Vancouver Winter Games. Denmark's Rasmus Stjerne gained the men's title with a 9-6 win over Canada's Brett Gallant in the final, while Scotland's Eve Muirhead won her third straight gold medal and second as a skip in an 8-6 victory over Canada's Kaitlyn Lawes. American Chris Plys took the men's junior bronze, with Switzerland's Martina Baumann earning the women's.

At the world mixed doubles championship in Cortina d'Ampezzo, Italy, in April, Switzerland's Toni Müller and Irene Schori earned their second straight title with a 7-4 victory over Hungary's György Nagy and Ildiko Szekeres. A week later Canada swept the world senior curling championships in Dunedin, N.Z. Pat Sanders downed Switzerland's Renate Nedkoff 10-1 to win the women's title; Ingrid Meldahl of Sweden took the bronze. Eugene Hritzuk held off Paul Pustovar of the U.S. in a 4-3 victory for the men's senior championship, with Scotland's Kevin Prentice placing third. (DONNA SPENCER)

CYCLING

The return to competition of American cyclist Lance Armstrong after an absence of more than three years and his rivalry with Spanish teammate Alberto Contador (see BIOGRAPHIES) in the sport's premier road event, the Tour de France, dominated the cycling headlines in 2009. Armstrong, who retired in 2005 after having won the three-week Tour for a record seventh time, fractured his collarbone during a preparation race in March but was able to contest the Giro d'Italia (Tour of Italy); he finished 12th overall behind the winner, Denis Menchov of Russia.

In the Tour de France, Armstrong failed by less than a second to take the yellow jersey (worn by the overall leader) from Switzerland's Fabian Cancellara after the fourth stage; three days later the American fell behind Contador on the first mountain stage. Contador, who had captured the 2007 Tour, went on to take the overall lead after winning stage 15 in the Alps and held it to the finish on July 26 in Paris after a 21-stage race totaling 3,459.5 km (about 2,150 mi). Contador won with a margin of 4 min 11 sec over Andy Schleck of Luxembourg. Armstrong finished third to become, at 37, the second oldest rider to have stood on the podium.

The subject of doping reemerged during the final week of the Tour when the sport's governing body, the Union Cycliste Internationale (UCI), announced that Italian rider Danilo Di Luca had failed two tests for continuous erythropoietin (EPO) receptor activator (CERA) during the Giro d'Italia, in which he had finished second overall. Tour de France stage winner Mikel Asparloza of Spain was later declared positive for EPO from an out-of-competition test taken on June 26.



Spanish cyclist Alberto Contador rides triumphantly through the streets of Paris on July 26 after winning the 2009 Tour de France.

Bas Czerwinski/AP

Switzerland hosted the UCI world road championships and celebrated a home victory in the men's individual time trial for Cancellara, who dominated the 49.8-km (31-mi) test to take the title for the third time. American Kristin Armstrong regained the women's time trial title, which she had won in 2006. Cadel Evans gave Australia its first men's road race title, attacking in the closing stages to finish 27 seconds clear of his nearest rivals after almost seven hours of racing. Just days earlier Evans had finished third behind the overall winner, Alejandro Valverde of Spain, in the Vuelta a España (Tour of Spain).

Simona Krupeckaite of Lithuania broke the world record for the women's 500-m time trial at the UCI world track championships, held in Pruszkow, Pol. She recorded a time of 33.296 sec to take the title ahead of Australia's Anna Meares, who had set the previous record of 33.588 sec in 2007. Taylor Phinney of the U.S. won the men's elite 4,000-m individual pursuit at the age of only 18, becoming the first American man to take a senior world track title since Marty Nothstein in 1996.

(JOHN R. WILKINSON)

EQUESTRIAN SPORTS

Thoroughbred Racing. *United States.* Two supremely talented female horses, Zenyatta and Rachel Alexandra, thundered their way through flawless campaigns to dominate the American Thoroughbred racing landscape in 2009. Their respective history-making seasons set the stage for a battle between the two for Horse of the Year honours.

Zenyatta, a five-year-old mare, kept her career record unblemished in 14 starts with a stunning triumph over 11 males in the Breeders' Cup Classic at Santa Anita Park in Arcadia, Calif., on November 7 to become the first female in the 26-year history of the 1¼-mi event to emerge victorious. The win vaulted her career earnings to \$5,474,580, surpassing Azeri (\$4,079,820) as the leading money-winning North American-based female horse of all time.

Rachel Alexandra notched her eighth win of a perfect season by defeating older horses in the \$750,000 Woodward Stakes at Saratoga Race Course in Saratoga Springs, N.Y., on September 5, becoming the first female in 56 editions of the race to do so. In her previous start, the three-year-old filly defeated colts in the \$1.25 million Haskell Invitational at Monmouth Park in Oceanport, N.J. Earlier in the year she won the Preakness Stakes, the second jewel of American racing's Triple Crown.

The spring classic season began in stunning fashion when Mine That Bird, an unheralded three-year-old, won the 135th running of the Kentucky Derby. Sent off at odds of more than 50-1, the bay gelding stormed from last in the field of 19 with about half a mile left to prevail by 6¾ lengths over Pioneerof the Nile and return \$103.20 to win, second only to the \$184.90 that bettors collected for Donerail's 1913 triumph in the race. It was the second Kentucky Derby triumph in three years for Mine That Bird's colourful 42-year-old jockey, Calvin Borel, who won in 2007 with Street Sense.

In a somewhat controversial decision, Borel gave up the mount on Mine That Bird to ride Rachel Alexandra in the Preakness two weeks later. It proved the right move, however, as Rachel Alexandra held off the late charge of Mine That Bird, ridden by Mike Smith, to win by one length and become the first filly in 85 years to master the 1³/₁₆-mi test.

When Rachel Alexandra was not entered to race in the third jewel, the Belmont Stakes, Borel was back up on Mine That Bird in his attempt to be-

come the first jockey in history to win all three of the year's Triple Crown races aboard different horses. The 1½-mi classic went to the stretch as Summer Bird, ridden by Kent Desormeaux, charged past Mine That Bird, which faded to third in the field of 10 after having gained the lead in the stretch. Both Summer Bird and Mine That Bird were sired by Birdstone.

The year began on an ominous note when it was announced in January that wagering on racing in the U.S. in 2008 reported a more than \$1 billion decline, or 7.2%, from the previous year. Dwindling coverage of racing in the country's daily newspapers was hit even further by the December 2008 layoffs of longtime turf writers Neil Milbert of the *Chicago Tribune* and John Scheinman of the *Washington Post*, as well as by the death on January 9 of Joe Hirsch, the "dean of American turf writers," at the age of 80. Hirsch joined the staff of the *Daily Racing Form* in 1954 and remained there until his retirement in 2003.

Among notable milestones during the year was jockey Stewart Elliott's 4,000th career victory at Philadelphia Park on January 18. Robby Albarado and Jose Flores reached the 4,000-win plateau on the same day, May 30. Retired Hall of Fame jockey Ismael ("Milo") Valenzuela died on September 2. (See OBITUARIES.) Hall of Fame inductees in 2009 included trainer Bob Baffert, jockey Eddie Maple, and horses Silverbulletday and Tiznow.

Historic Churchill Downs in Louisville, Ky., experimented with night racing for the first time by presenting three summer racing programs in June and July under portable lights. After the three night-racing cards attracted average attendance of 29,705, Churchill officials began accepting bids for the installation of permanent lighting for the track's 2010 season. An August 4 storm produced a record 15-cm (6-in) rainfall in a little over an hour in Louisville, flooding the areas surrounding the track and creating an estimated \$4 million in damage to the Kentucky Derby Museum, which was closed for the remainder of the year.

Magna Entertainment Corp. filed for bankruptcy in March and announced plans to auction off its racing properties. Remington Park in Oklahoma City was sold for \$80.25 million to a subsidiary of the Chickasaw Nation, while Thistledown in North Randall, Ohio, went to Harrah's Entertainment, Inc., for \$89.5 million. Controversy continued to swirl around synthetic racing surfaces when 12 horses died from injuries suffered on the Polytrack surface at Del Mar during the southern California track's 37-day racing meet, an increase from 6 in 2008 and 8 in 2007.

(JOHN G. BROKOPP)

International. Thoroughbred horse racing prize money in Britain and Ireland fell in 2009. It had also dropped over recent years in Germany and Italy. Only in France did it remain strong, thanks to progressive reductions in the pari-mutuel takeout since 1999. The

Thoroughbred filly Rachel Alexandra (right) charges to the finish line of the Preakness Stakes on May 16 as jockey Calvin Borel glances back at the trailing pack.



Nick Wass/AP

number of horses in training for flat racing in England fell, but the number of races increased.

Irish horses continued to produce impressive performances. Sea The Stars, ridden by Mick Kinane, was unbeaten in all six of his Group 1 races, including the 2,000 Guineas, the Derby, the Irish Champion Stakes, and the Prix de l'Arc de Triomphe in France. He was retired to Giltown Stud in Ireland. Kinane, aged 50, announced his own retirement in December. With Sea The Stars skipping the St. Leger to race in the Arc, Mastery, winner of the Italian Derby in May, took the third jewel in the British Triple Crown series. Yeats won the Ascot Gold Cup for the fourth consecutive year.

Royal Ascot attracted runners from farther afield than was usual. Scenic Blast became the fourth Australian winner of the Group 1 King's Stand Stakes since 2003. Wesley Ward, who brought six horses from Kentucky, won with two juveniles and was beaten by a neck with Cannonball in the Golden Jubilee Stakes. Vision d'Etat from France won the Prince of Wales's Stakes.

In Canada, Eye of the Leopard won the Plate Trial and was the victorious favourite in the Queen's Plate. He lost his way thereafter, finishing third to Gallant in the Prince of Wales Stakes. Perfect Shower completed the Canadian Triple Crown with a triumph in the Breeders' Stakes. Seven-year-old Viewed, which in 2008 secured veteran trainer Bart Cummings's 12th Melbourne Cup victory, captured Australia's Caulfield Cup in October but fell to seventh behind 9-1 upset winner Shocking in the Melbourne Cup. Another Cummings horse, three-year-old So You Think, won the Cox Plate, giving Cummings his 256th Group 1 career victory.

Kieren Fallon returned to the saddle on September 4 after having served an 18-month ban for taking cocaine. The six-time British champion jockey was banned by the French authorities a month after his trial on race-fixing charges was dismissed in December 2007. The British Horseracing Authority in July banned the other three professionals involved in that trial. Karl Burke, who had trained his first Group 1 winner (Lord Shanakill) the previous month, was banned for a year. Fergal Lynch, who was fined £50,000 (about \$82,000), moved to ride in the U.S., where Philadelphia Park handed him a similar ban. Darren Williams was suspended for three months and then was refused a license to ride again.

Sir Michael Stoute won his 10th training championship in Britain, and his retained jockey Ryan Moore was champion for the third time. Stoute also trained the first three finishers in the King George VI and Queen Elizabeth Stakes in July: Conduit, Tartan Bearer, and Ask.

Jean-Claude Rouget was French champion trainer for the first time. Most of his horses were ridden by Ioritz Mendizabal, who was named champion jockey for the third time, or by Christophe Lemaire, whose replacement of Christophe Soumillon as the Aga Khan's retained jockey was announced in August. Aidan O'Brien was champion trainer for the 12th time in Ireland, while his jockey Johnny Murtagh won his fourth title. Vincent O'Brien, the greatest trainer produced by Ireland and one of the most influential anywhere in the second half of the 20th century, died on June 1. (See OBITUARIES.)

Great Leighs racecourse, which opened in April 2008, ceased to operate after its meeting on January 15. While England lost a course, however, Wales gained one. Ffos Las, with flat and jumping turf tracks constructed on what was once the largest opencast mine in Europe, opened on June 18. France added a new all-weather track at Lyon, where La Soie was built on the site of the former turf course at Villeurbanne.

Nad al Sheba racecourse in Dubai (U.A.E.), where the U.S.-trained Well Armed won the Dubai World Cup by 14 lengths on March 28, was demolished immediately thereafter. Meydan racecourse was built on the same site, with a Tapeta all-weather surface replacing the dirt track. Qatar joined the countries promoting international racing as Age of Reason, trained in Dubai, won the first Qatar International Cup on February 26. (ROBERT W. CARTER)

Harness Racing. The three-year-old trotter Muscle Hill dominated the North American harness racing news in 2009 by going undefeated in a dozen starts and earning \$2,456,041. His victories included the Hambletonian, the Kentucky Futurity, the World Trotting Derby, and the Breeders Crown. Muscle Hill was touted by many veteran horsemen as the greatest trotter ever, certainly the best in recent decades. He never seemed to be working hard to win his races but always seemed to be well within himself even as his rivals were struggling across the finish line far behind him. His victory in the Hambletonian was timed in 1:50 ¹/₅ for the mile, the fastest clocking ever in the U.S.'s

greatest trotting classic, which was begun in 1926. In two seasons on the track, Muscle Hill won 20 of 21 starts and a total of \$3,273,342. His only loss occurred in the first race of his life, when he was beaten by only a neck.

The top three-year-old pacer of 2009 was Well Said, a quicksilver colt with an amazing burst of speed. He used that speed to win \$1,982,654 and 10 of 14 starts, including the Little Brown Jug, the Meadowlands Pace, and the North America Cup, a sweep that had last been accomplished in 1991. Well Said did not just defeat his rivals, however; he humiliated them by winning the Meadowlands Pace by 6 lengths and the North America Cup by 3 ¹/₄ lengths. His victory in the Little Brown Jug was closer, but he was clearly in control of that race.

Without question, the best turn-around horse of the year was the four-year-old Lucky Jim. He won 17 of his 18 starts during the season and earned \$1,063,618 after having been winless in nine starts in 2008. He had shown ability in his races as a two- and three-year-old in 2007 and 2008, respectively, but had won only twice in 20 starts over those two seasons. Lucky Jim was moved to trainer Julie Miller in 2009 and was castrated, which allowed him to focus more on racing. His only loss came in the Maple Leaf Trot, when he was caught behind a horse that slowed unexpectedly, causing Lucky Jim to lose ground. He finished fast but was still three-quarters of a length short at the finish line.

In late January, French fans saluted Pierre Levesque for having trained three consecutive winners of the Prix d'Amerique, the greatest trotting race in France. The 2009 race was taken by Meaulnes du Corta, trained by Levesque but driven by Franck Nivard. Although Meaulnes du Corta was known to be a fast horse, he was also high-strung. In the 2009 Prix d'Amerique, however, he was flawless as Nivard put him in front early in the 2,700-m race, and they won easily. Levesque also finished fifth with Offshore Dream, a horse he had trained and driven to victory in the Prix d'Amerique in 2007 and 2008.

Sweden's most prestigious race, the Elitlopp, was taken in late May by Torvald Palema, a trotter trained and driven by Ake Svanstedt. The eight-year-old stallion sprinted down the long homestretch at the Solvalla track to win over Jaded of Sweden, Offshore Dream, and another French horse, Nimrod Borealis.

Mr. Feelgood won the Inter Dominion Pacing Final in Australia in late March, becoming the first horse ever to win the Little Brown Jug in the U.S. (in 2006) and then the biggest race in Australasia. A group of New Zealanders had paid \$600,000 for Mr. Feelgood in late 2008 and shipped him to their homeland. The American import raced brilliantly, winning the Inter Dominion by a neck over three-time champion Blacks A Fake. (DEAN A. HOFFMAN)

Steeplechasing. A.P. ("Tony") McCoy on Feb. 9, 2009, became the first man to ride 3,000 winners over jumps when he charged to victory on Restless d'Artaix at Plumpton. McCoy went on to secure his 14th consecutive British jockey championship, while Paul Nicholls was champion trainer for the fourth time. Nicholls won the Cheltenham Gold Cup with Kauto Star (also the 2007 winner), the Queen Mother Champion Chase with Master Minded, and the Hennessy Cognac Gold Cup with Neptune Colonges. All three horses had been purchased in France. Mon Mome, another French-bred horse, became the fifth 100-1 winner of the Grand National and made Venetia Williams the second woman to have trained a Grand National winner.

Swiss-owned Remember Rose won the two most important chases in France: the Gras Savoye Grand Steeple-Chase de Paris and the Prix La Haye Jousselein. Spring Ghent triumphed in the Nakayama Grand Jump in Japan. The 2008 Australian Grand National winner, Ginolad, finished sixth and was later sent to be trained by Williams.

(ROBERT W. CARTER)

FOOTBALL

Association Football (Soccer). *Europe.* In 2009 European national association football (soccer) teams focused their attention on the qualifying matches for the 2010 Fédération Internationale de Football Association (FIFA) World Cup. Meanwhile, the world's richest football clubs seemed to have escaped the global economic downturn.

Florentino Pérez returned as president of Spain's Real Madrid after a three-year absence, during which time the club dispensed with three coaches and five presidents. His return prompted serious attempts to redress Real Madrid's balance with rival Barcelona, which in 2009 won the Union des Associations Européennes de Football (UEFA) Champions League and achieved a La Liga and Copa del

Michael Sohn/AP



In the last UEFA Cup final, on May 20, Brazilian international Jadson (right) kicks in the winning goal for the Ukrainian club Shakhtar Donetsk, which defeated Germany's Werder Bremen 2-1 in overtime.

Rey domestic double. Real Madrid's €411 million (€1 = about \$1.40) annual income was derived from television rights, ticket sales, and marketing, and in the summer of 2009 some €282 million was spent on eight additional players in trades, plus a new coach, Manuel Pellegrini. Real Madrid twice broke the world transfer-fee record in the space of a few days in June, paying €76 million for Brazilian international Kaká from AC Milan and then topping this by paying €94 million to Manchester United for FIFA's World Player of the Year Cristiano Ronaldo. (See BIOGRAPHIES.)

Major Spanish clubs already had a substantial quota of foreigners, with half of Barcelona's squad hailing from abroad, as well as 15 of 25 players on Real's first-team roster. Athletic Club Bilbao, on the other hand, had none, having recruited mainly from the Basque region. The UEFA, the European governing body, and its president, Michel Platini, expressed concern over the English Premier League clubs' continued reliance on foreigners, questioning the teams' ability or will to manage within their means. While Manchester United was largely quiet in the 2009 marketplace, neighbouring Manchester City continued to spend freely on new players, paying out some £200 million (\$330 million) during the year. At the start of the 2009-10 season, English Premier League clubs had players from 68 different countries, with foreign im-

ports representing nearly 60% of the 20 club rosters. FIFA fined Chelsea and banned the club from signing players until January 2011; the London-based club had allegedly induced Gael Kakuta to sign with it in 2007 while he was under contract to the French club Lens, a breach of FIFA's Status and Transfer of Players regulation.

After winning its third successive Premier League championship, Manchester United failed in its bid to retain the UEFA Champions League title. In the final against Barcelona, held on May 27 in Rome, United started as the more confident team, moving the ball around with precision. The first potential scoring opportunity came from a free kick by Ronaldo, but it was not one of his best attempts. It did cause Spanish goalkeeper Víctor Valdés to spill the ball, only for South Korean Park Ji-Sung's follow-up to be blocked for a corner kick. Barcelona took the lead in the 10th minute when the ball was moved to Cameroonian forward Samuel Eto'o on the right wing. He cut inside Serbia's Nemanja Vidic and, with just a glimpse of the goal, fired the ball in off Dutch goalkeeper Edwin Van der Sar's hand inside his near post. Eto'o's goal had an uplifting effect on the Catalans, who settled down to dominate the match with close, accurate passing. United switched to a 4-4-2 formation in the second half, but Barcelona remained the more dangerous side. A free

kick from Xavi Hernández shaved the outside of the post, and it was not until the 70th minute that Barcelona was able to add another goal. Xavi, orchestrating the strategy and pace of the game from midfield, found the United defense in some disarray. His lofted pinpoint diagonal ball was perfectly timed by the Argentine international Lionel Messi (see BIOGRAPHIES), who twisted in the air and scored with a looping header for the 2–0 win.

A week earlier, on May 20, Shakhtar Donetsk of Ukraine and Germany's Werder Bremen had faced off in the final of the last UEFA Cup. The match took place in the Sukru Saracoglu Stadium in Istanbul, the first time that a UEFA final had been held in Asia. Shakhtar adopted an attacking formation but with an isolated striker and took the lead in the 25th minute through a goal by Luiz Adriano. A pass from Romanian international Razvan Rat had been aimed at Ilsinho, who collided with the referee. Adriano then chipped the ball delicately over the advancing Tim Wiese into the German goal. Werder tied the score 10 minutes later when Naldo's strongly struck free-kick went straight at Ukrainian goalkeeper Andriy Pyatov, who fumbled the ball into his own net. The score remained even at the end of regulation, but seven minutes into overtime Jadson scored from Croatian Dario Srna's low cross to give Shakhtar a 2–1 win and Ukraine its first European trophy. All three goals had been scored by Brazilian players. In 2009–10 the UEFA Cup was to be replaced by the UEFA Europa League. With 159 teams entered, the Europa League was organized on similar but expanded lines to the Champions League.

For the first time since the English Premier League was formed in 1992, average attendance figures for the season were topped by those in the German Bundesliga, which averaged 42,565 spectators per game. One of the major factors in the boom in crowds was the comparatively low average ticket price at just over €20 (about \$30). The game in Germany also reported success at intermediate international levels, with the teams at the Under-17, Under-19, and Under-21 levels winning European championship titles. At the domestic level in Europe, teams witnessed the continuing spread of rotating the player squad system. In Germany the 18 Bundesliga clubs called upon the services of 479 players, but only 11 appeared in all 34 regular-season games. In the English Premier

League, fewer than 2% of players were always present.

In the 2009 FA Cup final on May 30, Louis Saha scored the event's fastest-ever goal in 25 seconds for Everton against Chelsea, but goals by Didier Drogba and Frank Lampard pushed Chelsea to a 2–1 victory. Wolfsburg won its first German Bundesliga title, whereas Lyon failed to secure an eighth consecutive French League championship. Standard Liege won its play-off against Anderlecht after a tie at the top of the Belgian League.

Marc Janko of Red Bulls Salzburg scored 39 goals in 34 Austrian League matches. Martin Kamburov of Lokomotiv Sofia was signed halfway through the season but finished top scorer in Bulgaria with 17 goals. David Beckham became the most-capped England outfield player in March when he passed Bobby Moore's record of 108 appearances and took his total number of appearances to 112 while on loan to AC Milan from the Los Angeles Galaxy. Daniel Jarque, the 26-year-old captain of RCD Espanyol, suffered a massive heart attack and died on August 8 during a preseason tour in Italy. Paolo Maldini, the AC Milan and Italian international defender retired at the end of the 2008–09 season, just before his 41st birthday, having completed 902 first team matches for Milan, his only club in a 25-year career; he played 126 times for Italy and was captain for eight years. (JACK ROLLIN)

The Americas. World Cup qualifying dominated association football (soccer) in 2009. Brazil comfortably won the South American qualifying tournament to retain its record of having participated in all World Cup finals. Paraguay and Chile, both under Argentine coaches (Gerardo Martino and Marcelo Bielsa, respectively), also had no problems. Argentina, however, coached by the controversial former World Cup star Diego Maradona, gained the fourth automatic qualifying place only on the last day, with below-par performances. Meanwhile, Argentine star Lionel Messi, who played professionally for Barcelona, was named *Fédération Internationale de Football Association* Player of the Year. (See BIOGRAPHIES.)

The U.S. qualified for the World Cup finals for the 6th straight time by winning the North, Central America and Caribbean zone, followed by Mexico (in its 14th finals appearance) and Honduras. In the play-off for an extra place, Uruguay narrowly beat Costa Rica. The U.S. also showed that it was becoming a power in soccer by reaching the Con-

federations Cup final, losing 3–2 to defending champion Brazil.

Argentina's Estudiantes de La Plata won the South American club championship, the Libertadores de América Cup, for the fourth time by beating Brazil's Cruzeiro 0–0, 2–1. The CONCACAF (Confederation of North, Central American and Caribbean Association Football) club championship had an all-Mexican final for the third time in four years, with Atlante beating Cruz Azul 2–0, 0–0. In the first women's Libertadores Cup, host Santos of Brazil, led by star player Marta Vieira da Silva, overwhelmed Paraguay's Universidad Autónoma de Asunción 9–0 in the final.

In the 2009 South American Recopa, Liga Deportiva Universitaria (LDU) of Quito, Ecuador, the 2008 Libertadores Cup winner, defeated Brazil's Internacional, the 2008 South American Cup winner. LDU also secured the South American Cup in a rematch against 2008 Libertadores finalist Fluminense, which just avoided relegation from the Brazilian championship won by popular Rio de Janeiro rival Flamengo.

Real Salt Lake, which was founded only in 2004, won the U.S. Major League Soccer (MLS) title for the first time. Salt Lake barely qualified for the play-offs but defeated the Columbus Crew and the Chicago Fire before beating the Los Angeles Galaxy on penalty kicks in the MLS Cup final that was held on November 22. (ERIC WEIL)

Africa and Asia. In the inaugural African Nations Championship, a competition designed for players regularly appearing in African association football (soccer) leagues, the Democratic Republic of the Congo (DRC) made a remarkable recovery to win the trophy, beating Ghana 2–0 in the final on March 8, 2009, in Abidjan, Côte d'Ivoire. Only eight days previously the DRC had been beaten 3–0 in a group match by the same Ghana team. Kaluyituka Dioko and Mbenza Bedi settled the final for the DRC, scoring goals one minute into the second period and in the 74th minute, respectively. The DRC's Tresor Mputu was named the best player of the tournament.

In the Gulf Cup final in Oman, the host country defeated Saudi Arabia 6–5 in a penalty shoot-out after a scoreless draw. During the tournament neither team had conceded a goal in 90 minutes of regular play. (JACK ROLLIN)

U.S. Football. *College.* Alabama—and Heisman Trophy-winning running back Mark Ingram—defeated Texas 37–21 in the 2009–10 Bowl Championship Series

(BCS) championship game on Jan. 7, 2010, in Pasadena, Calif. Ingram was the game's offensive Most Outstanding Player, with 116 yd rushing and two touchdowns for the Southeastern Conference (SEC) champion Crimson Tide. Alabama (14–0) knocked Texas (13–1) star quarterback Colt McCoy out of the game early with an injured throwing shoulder, and the All-American did not return in his final game for the Big 12 champion Longhorns.

The Sugar Bowl saw Florida quarterback Tim Tebow end a record-setting four-year tenure at the university by leading the Gators (13–1) to a 51–24 win over Big East champion Cincinnati, which entered the game with a 12–0 record. Tebow passed for a career-high 482 yd and three touchdowns and ran for 51 yd and another touchdown. His 533 total yards were a BCS record, and he helped Florida become the first school in the Football Bowl Subdivision (FBS) to win 13 games in consecutive seasons. Ohio State (11–2), the Big Ten winner for the fifth straight season, ended a three-game BCS losing streak with a 26–17 victory over Pacific-10 champion Oregon (10–3) in the Rose Bowl. The Fiesta Bowl pitted Western Athletic Conference winner Boise State against Mountain West champion Texas Christian University (TCU) in the first BCS bowl other than the national championship game to feature two unbeaten teams. Boise State improved to 14–0 with a 17–10 victory over TCU (12–1). In the Orange Bowl, Iowa (11–2) earned its first BCS victory by winning 24–14 over Atlantic Coast Conference champion Georgia Tech (11–3). The Hawkeyes allowed 143 yd rushing to the Yellow Jackets, who entered the game second in the nation with 307.2 yd rushing per contest.

Ingram became the first player in Alabama history to win the Heisman Trophy, beating out Stanford running back Toby Gerhart by 28 points in the closest vote in the award's 75-year history. The sophomore rushed for a school-record 1,542 yd, gaining 6.2 yd per carry and scoring 15 touchdowns in the regular season. Ingram ran for 113 yd and scored three times as then number two Alabama defeated the top-ranked Florida Gators 32–13 in the SEC championship game, putting the Crimson Tide in the BCS title game and helping end the Gators' 22-game win streak.

News involving coaches dominated college football after the regular season. Notre Dame fired Charlie Weis after the Fighting Irish lost their last four games

and replaced him with Brian Kelly, who then left Cincinnati before the Bearcats' loss to Florida in the Sugar Bowl. Florida coach Urban Meyer was on the sideline during that game, just days after he said that he was taking a leave of absence to concentrate on his health. After beating Cincinnati, however, Meyer said that he planned on returning to Florida for the 2010–11 season. Longtime Florida State coach Bobby Bowden went out a winner in the final game of his storied 57-year career, beating West Virginia 33–21 in the Gator Bowl. Bowden finished with a 389–129–4 record, the second most wins of all time in major college football, behind Joe Paterno of Penn State (394). Texas Tech fired coach Mike Leach three days before beating Michigan State 41–31 in the Alamo Bowl. Leach was let go amid allegations that he had mistreated sophomore wide receiver Adam James after that player suffered a concussion.

McCoy won the Maxwell Award for most outstanding player, the Walter Camp Player of the Year award, the Davey O'Brien National Quarterback Award, and the Johnny Unitas Golden Arm Award as top senior quarterback. Houston's Case Keenum led the FBS with 44 touchdown throws and 5,671 yd passing, more than 1,400 yd better than second-place Levi Brown of Troy. Gerhart won the Doak Walker Award as the

top running back, having finished first in the FBS with 1,871 yd rushing and tied for first with 27 touchdowns on the ground. Notre Dame's Golden Tate won the Fred Biletnikoff Award as outstanding wide receiver, with 93 catches for 1,496 yd and 15 touchdowns. Freddie Barnes of Bowling Green set the National Collegiate Athletic Association (NCAA) single-season record for receptions with 155 catches and led the FBS with 19 touchdown receptions, while Missouri's Danario Alexander topped the country with 1,781 yd receiving—11 more than Barnes. Nebraska defensive tackle Ndamukong Suh was a Heisman Trophy finalist and won the Chuck Bednarik Award and the Bronco Nagurski Trophy as defensive player of the year. He also earned the Outland Trophy as outstanding interior lineman and the Rotary Lombardi Award as outstanding lineman.

Professional. The Pittsburgh Steelers of the American Football Conference (AFC) defeated the Arizona Cardinals of the National Football Conference (NFC) 27–23 in Super Bowl XLIII in Tampa, Fla., on Feb. 1, 2009, winning the NFL's 2008–09 championship and securing a record sixth Super Bowl title. Wide receiver Santonio Holmes won the Super Bowl Most Valuable Player (MVP) award after making a spectacular 6-yd catch deep in the right

New Orleans Saints quarterback Drew Brees (9, with the ball) scrambles to evade Dallas Cowboys defensive end Jason Hatcher (97) in a National Football League game on December 19. Brees led the Saints to a franchise-record 13–3 and a spot in the NFL play-offs.



Bill Feig/AP

Football Changes the Rules

At the National Football League (NFL) annual meeting in March 2009, the league's competition committee adopted a number of new rules to be put into effect during the 2009–10 season. The most talked-about decision was not technically a new rule but rather a clarification of the existing "roughing the passer" regulation. The clarification would prohibit a defensive player who is on the ground from lunging at the lower legs of the opposing quarterback, though hand tackles from the position would still be allowed. (The prohibition did not apply to defenders who are blocked or fouled into the quarterback by another offensive player.) Violation of the revised rule would trigger a 15-yd unsportsmanlike-conduct penalty. The adjustment became known in the media as the "Brady Rule" after New England Patriots quarterback Tom Brady, who, in the first quarter of the first game of the 2008–09 season, famously suffered a torn anterior cruciate ligament and medial collateral ligament in his left knee when a defender dived forward from the ground to tackle him.

The loss of Brady—one of the biggest stars in the NFL—for the remainder of the season hurt both the Patriots and the league, and the NFL was determined to further protect its quarterbacks. There was, however, considerable backlash from both current and former players (primarily from the defensive side of the game), who felt that the emphasis on player safety was getting excessive and that the NFL was on its way toward becoming a "two-hand touch league." The critics noted that the clarification would make defend-

ers try to act against their natural instinct to pursue the ball, which would be difficult to keep in check during the fast and furious play of a typical NFL game. In addition to the Brady Rule, the league passed four more safety rules:

An offensive player may not use his helmet, forearm, or shoulder to deliver a blindside block (one that is delivered to someone who does not see it coming) to an opponent's head or neck.

Initial contact may not be made to the head of a defenseless receiver during a tackle.

On a kickoff, the receiving team may not use a blocking wedge (players standing shoulder-to-shoulder who run upfield in front of the kick returner) of more than two players.

During an onside kick, the kicking team cannot have more than five players on one side of the kicker pursuing the ball.

Another notable rule change, which had nothing to do with player safety, would allow replay officials to review whether a loose ball should be judged a fumble or an incomplete pass. This change also stemmed from a prominent event of the 2008–09 season, when an apparent fumble by Denver Broncos quarterback Jay Cutler that was recovered by the San Diego Chargers was instead ruled an incomplete pass. Denver scored a touchdown and the game-winning two-point conversion soon thereafter, and the loss nearly cost the Chargers a play-off spot.

(ADAM AUGUSTYN)

corner of the end zone with 35 seconds remaining in the game. Holmes finished with nine receptions for 131 yd and that touchdown.

The Steelers, however, did not enjoy much success in the 2009–10 season and could not recover from a five-game losing streak late in the campaign, becoming the 13th defending Super Bowl champion to miss the play-offs. It was the third consecutive time Pittsburgh (9–7) had failed to reach the play-offs the season after winning the Super Bowl (1980, 2006). Arizona went 10–6 for its first 10-win season since 1976 and clinched the NFC West title for the second consecutive season. The Cardinals had last made the play-offs in back-to-back seasons in 1974 and 1975.

The Indianapolis Colts and the New Orleans Saints flirted with undefeated seasons, winning their first 14 and 13 games, respectively. The Colts' start gave them an NFL-record 23-game regular-season winning streak dating to the previous season. Indianapolis finished with an AFC-best 14–2 and won the AFC South for the sixth time in seven seasons behind quarterback Peyton Manning, who won the league MVP award for a record fourth time. New Orleans had the best record in the NFC at 13–3,

setting a franchise record for victories. New Orleans quarterback Drew Brees broke the NFL record for completion percentage in a season with 70.60.

The Minnesota Vikings (12–4) finished with their best record since 1998 and won the NFC North in their first season with Brett Favre at quarterback. Minnesota signed Favre in the off-season, and the 40-year-old veteran had one of the best years of his career. Favre threw for more than 30 touchdowns for the ninth time in his 18-year career as a starter and for more than 4,000 yd for the sixth time, finishing with a career-low seven interceptions. Quarterback Tom Brady returned from a knee injury that kept him out for almost all of the 2008–09 season to lead the New England Patriots (10–6) back to the play-offs and earn Comeback Player of the Year honours. New England won the AFC East after having become the first team to finish 11–5 and still miss the play-offs in 2008–09. Patriots wide receiver Randy Moss (*see* BIOGRAPHIES) passed Buffalo Bills Terrell Owens for second all-time receiver with 148 touchdown catches, behind Jerry Rice (197).

The Dallas Cowboys (11–5) opened their new \$1.15 billion stadium and won their second NFC East title in three

seasons by defeating the Philadelphia Eagles (11–5) on the last day of the regular season. Philadelphia, which signed quarterback Michael Vick after he spent 18 months in a federal prison for his role in a dogfighting ring, and Green Bay (11–5) were the NFC wild cards.

The San Diego Chargers (13–3) won their final 11 games and clinched the AFC West title for the fourth straight season. Chargers running back LaDainian Tomlinson became the fastest player in NFL history to reach 150 touchdowns, doing so in his 137th game. The Cincinnati Bengals (10–6) captured the AFC North for the first time since 2005. The New York Jets (9–7) and the Baltimore Ravens (9–7) qualified as the AFC wild cards.

(PAUL DIGIACOMO)

Canadian Football. The Montreal Alouettes won the 2009 Canadian Football League (CFL) championship with an astounding 28–27 victory over the Saskatchewan Roughriders on November 29 in front of more than 46,000 fans in McMahon Stadium in Calgary, Alta. Down by 10 points going into the fourth quarter, Montreal quarterback Anthony Calvillo threw two touchdown passes (to running back Avon Cobourne and slotback Ben Cahoon) and took the Alouettes within two points at 27–25. A

failed 43-yd field goal attempt by Montreal kicker Damon Duval in the game's final moments triggered a premature celebration by the Saskatchewan players; however, an extra lineman on the field led officials to call a penalty against the Roughriders. With no time left on the clock, Duval was given a second try at 33 yd and scored to give Montreal the win. Calvillo passed for 314 yd with no interceptions. Cobourne and Cahoon were named the Most Valuable Player and the Most Valuable Canadian, respectively.

Montreal (15–3) topped the CFL's East Division and thrashed the British Columbia Lions (8–10) by a score of 56–18 in the Playoffs Finals to qualify for the Grey Cup. West Division champion Saskatchewan (10–7–1) reached the Grey Cup with a 27–17 win over the Calgary Stampeders (10–7–1) in the other Final.

Calvillo, who led the league with 26 touchdowns and a 72.0% completion rate, was named the regular-season Most Outstanding Player for the second straight year and the third time overall. Montreal also boasted the Most Outstanding Offensive Lineman, Scott Flory, and the Most Outstanding Special Teams Player, kick return specialist Larry Taylor. Defensive end Ricky Foley of the B.C. Lions was voted the Most Outstanding Canadian.

(MELINDA C. SHEPHERD)

Australian Football. Geelong won its second Australian Football League (AFL) premiership in three years with a hard-fought 12.8 (80)–9.14 (68) victory over St. Kilda in the Grand Final at the Melbourne Cricket Ground on Sept. 26, 2009. A crowd of 99,251 braved cold and wet conditions to see the favourites come from behind at three-quarter time to snatch victory in a thrilling last quarter. The stars of Geelong's victory were Paul Chapman, who was voted the Norm Smith medalist as best player in the Grand Final; Harry Taylor, who helped shut down St. Kilda's ace forward Nick Riewoldt; Gary Ablett; and Jimmy Bartel. Ablett won the Brownlow Medal, for the AFL's best and fairest player in the 22-round home-and-away season, and took home the Leigh Matthews Trophy, the AFL Players' Association most valuable player award, for a record third straight year.

Among the other home-and-away individual honours, the Coleman Medal for leading goal kicker went to Carlton's Brendan Fevola with 86 goals; he scored three more in the finals. Daniel

Rich of the Brisbane Lions received the Rising Star Award for best young player, and Riewoldt was named the All-Australian captain. (GREG HOBBS)

Rugby Football. In 2009 the New Zealand All Blacks reclaimed their crown as the world's best Rugby Union team, overtaking South Africa with a stunning finish to the year. South Africa, the 2007 World Cup champion, beat the British and Irish Lions 2–1 in an epic three-Test series and then lifted the Tri-Nations crown in September. The South Africans, however, failed to continue this form on their European tour in November, losing to both France and Ireland. These defeats allowed New Zealand to end the year as the world's number one-ranked side, ahead of South Africa and Australia. In many ways it was remarkable that the All Blacks managed to claim the top spot, as they had one of their worst years, losing four times in 12 months—three times to South Africa and once to France. They finished strong, however, going unbeaten in Europe with wins over England, Wales, Italy, and France.

Australia went some way to redeeming an awful year when it beat Wales 33–12 in the last game of the year. Before that match Australia had finished at the bottom of the Tri-Nations, failed to qualify a side in the Super 14 playoffs, and lost to Scotland for the first time in 27 years.

In Europe the game was all about Ireland, which finished the year ranked fourth. Under the captaincy of Brian O'Driscoll, Ireland won its first Six Nations Grand Slam in 61 years. O'Driscoll also led Leinster to that club's first Heineken Cup victory before another Irishman, Paul O'Connell, led the Lions' tour to South Africa. Ireland went unbeaten through its three Tests in November to become the first major Test side since the game turned professional in 1995 to compete an entire calendar year without losing. To cap an incredible career over the past few years, O'Driscoll was named *Rugby World* magazine's Player of the Decade.

Unfavourable headlines followed the English game throughout 2009. In January England prop Matt Stevens was banned for two years after having tested positive for cocaine, and then Justin Harrison was banned for eight months after he acknowledged having taken the drug. This was followed by bans for three other players who refused to take drug tests. One of English rugby's most famous clubs, Harlequins, was embroiled in a scandal of its own.

Dean Richards, the team's director of rugby, was banned, along with wing Tom Williams, after they admitted to having used fake blood to pull off a substitution in a Heineken Cup match.

On the domestic front, the Pretoria-based Blue Bulls lifted the Super 14 trophy after beating the Chiefs from New Zealand in the final. In Europe, Leicester was the English champion, and Munster picked up the Magners League.

Late in the year rugby made international headlines twice. First, rugby sevens was readmitted into the Olympic Games, beginning with the Rio de Janeiro Games in 2016. Then *Invictus*, a Hollywood blockbuster movie about South Africa's upset victory in the 1995 World Cup, had its premiere in Los Angeles in December. (PAUL MORGAN)

GOLF

One of the most dramatic golf stories to capture the public's imagination in 2009 was the attempt in July by 59-year-old Tom Watson of the U.S. to win a record-equaling sixth British Open championship and thus become the sport's oldest major winner by 11 years. Nine months after having had hip-replacement surgery, Watson was one putt away from accomplishing this feat on the same Turnberry course in Scotland where he had beaten American Jack Nicklaus in 1977 for the second of his five victories. On that occasion a closing birdie clinched the title for Watson, whereas this time a par four would have sufficed, but Watson's approach went just over the green; he putted 3 m (about 10 ft) past the hole. He missed his putt from there and fell into a tie with fellow American Stewart Cink at a two-under-par 278. The four-hole playoff proved to be a one-sided affair, though, as Watson appeared to run out of steam and Cink captured his first major by six strokes. On receiving the Claret Jug, the 36-year-old Cink paid tribute to a true legend of the game, whose own words summed up the occasion: "It would have been a hell of a story," said Watson. "It wasn't to be. And yes, it's a great disappointment."

In the Masters Tournament at the Augusta (Ga.) National Golf Club in April, 48-year-old American Kenny Perry almost rewrote the record books as well. Perry was two strokes in front with two holes to play, but he bogeyed both and finished regulation play alongside compatriot Chad Campbell and Argentina's Angel Cabrera with an aggregate score of 276, 12 under par. Campbell dropped

Adrian Dennis—AFP/Getty Images



In the British Open, 59-year-old golfer Tom Watson (right), who failed by one stroke to win in regulation play, ruefully watches as fellow American Stewart Cink putts for the victory on the final hole of a four-hole play-off on July 19.

out at the first hole of sudden death, and on the next hole Perry bogeyed again to hand the title to 2007 U.S. Open winner Cabrera, who thus became the first South American golfer to win two majors.

Former world number one David Duval had dropped to 882nd in the rankings by the start in June of the 2009 U.S. Open at Bethpage Black on New York's Long Island, but in a year destined to be remembered for surprises and upsets, he finished joint runner-up with two other Americans, Ricky Barnes (himself ranked 519th) and Phil Mickelson, for whom it was a record fifth second place in the event. The player to deny them all was another American, 29-year-old Lucas Glover, whose previous best performance in a major had been 20th place at the 2007 Masters. The unassuming Glover took the title by two strokes with a four-under-par total of 276.

After reconstructive surgery following his 2008 U.S. Open victory, world number one Eldrick ("Tiger") Woods had spent eight months recuperating and struggled in the first three majors of the season, finishing in a tie for sixth place in both the Masters and the U.S. Open and then in the British Open failing to make the cut for the first time since the 2006 U.S. Open. In March he won his third event of the season, however, and after four more victories in his next 10 starts, he finally looked set to add to his major haul in the Professional Golfers' Association (PGA) championship at Hazeltine National in Chaska, Minn. Woods was two strokes in front after 54

holes, and all of his previous 14 major successes had come when he was in the lead with a round to go. On this occasion, however, he was overtaken by 37-year-old South Korean Yang Yong-Eun, who scored one of the biggest upsets of the sporting year and became the first Asian male golfer to win a major. Only 478th in the world at the start of the season, Yang had already risen to 110th by the time of the PGA championship. A chip-in eagle at the 14th hole and a closing birdie—in which he hit a 190-m (about 620-ft) approach over trees and a greenside bunker to within 4 m (about 13 ft) of the flag—were the defining moments of Yang's historic three-stroke eight-under-par victory.

Woods had a small measure of revenge two months later when he and Yang met again in the Presidents Cup singles at Harding Park in San Francisco. A crushing 6 and 5 victory over Yang gave Woods a perfect five wins out of five matchups as the United States defeated the International side 19½–14½. There was also success for the U.S. teams in the women's professional Solheim Cup against Europe (16–12) and the men's amateur Walker Cup against Britain and Ireland (16½–9½). At the Mission Hills course in Shenzhen, China, in November, Italy captured its first World Cup as brothers Edoardo and Francesco Molinari rallied on the final day to beat Ireland and Sweden, tied for second place, by one point.

For the second time in three years, Woods captured the \$10 million bonus on offer in the PGA Tour's FedEx Cup

play-off series; he finished the year as leading money winner for the ninth time with \$10,508,163. His victories included the World Golf Championships–BridgeStone Invitational for a seventh time. The other three titles in the WGC series were captured by Australian Geoff Ogilvy (Accenture Match Play in Marana, Ariz.) and Mickelson (CA Championship in Doral, Fla.), and the HSBC Champions in Shanghai). On December 11, following revelations and his admission that he had engaged in marital infidelities, Woods announced that he would be taking an "indefinite break" from professional golf.

Lorena Ochoa of Mexico continued to hold the world number one position throughout 2009, but the year saw four new Ladies Professional Golf Association (LPGA) major champions. American Brittany Lincicome was successful at the Kraft Nabisco Championship in Rancho Mirage, Calif.; Swedish rookie Anna Nordqvist captured the McDonald's LPGA Championship in Havre de Grace, Md.; South Korean Ji Eun-Hee won the U.S. Women's Open at Saucon Valley in Bethlehem, Pa.; and the Ricoh Women's British Open trophy was lifted at Royal Lytham & St. Annes in Lancashire, Eng., by Scotland's Catriona Matthew just 11 weeks after she had given birth to her second child and only a week after she and her husband had had to flee an apartment fire in France. Rookie of the Year Shin Ji-Yai of South Korea led the LPGA money list with \$1,807,334 and nearly upset Ochoa for Player of the Year honours.

The U.S. and British men's amateur championships were notable for the fact that both produced their youngest-ever winners. In the British Amateur at Formby in England, Italian Matteo Manassero triumphed at age 16; a month later he finished 13th in the British Open. At the U.S. Amateur at Southern Hills in Tulsa, Okla., 17-year-old South Korean An Byeong-Hun, the son of two Olympic table tennis medalists, was victorious.

The European Tour had seen only one amateur winner prior to the 2009 season, but two more arrived in the space of four months. First, 18-year-old New Zealander Danny Lee—An's predecessor as U.S. Amateur champion—captured the Johnnie Walker Classic in Perth, Australia, to become the circuit's youngest-ever champion. Then Ireland's 22-year-old Shane Lowry won the Irish Open. Both turned professional soon afterward. The tour culminated in the inaugural Dubai World Champi-

onship for the leading 60 money winners, but economic pressures led to a 25% reduction (from \$10 million to \$7.5 million) in both the event prize fund and the season-ending bonus money. England's Lee Westwood won the event by six strokes and topped the final money list with a season total of €4,237,762 (about \$6,357,000).

A campaign to have golf included in the Olympic Games for the first time since 1904 was successful on the second attempt, with the International Olympic Committee voting in October to include the sport in the program for the Rio de Janeiro Games in 2016. The plan was for men's and women's 72-hole stroke play events involving the world's top 15 players and two representatives from different countries to make up 60-strong fields. Mickelson commented: "Everybody that I have talked to is excited. . . . It is the greatest thing to happen to our sport." (MARK GARROD)

GYMNASTICS

At the 2009 artistic gymnastics world championships, held in October in London, China earned the most medals with nine, including six gold. The U.S. secured five medals (two gold), while Romania took four (two gold).

American teammates Bridget Sloan and Rebecca Bross battled for the women's all-around title. Bross led after the first three rounds of competition, but after she suffered a fall during her floor routine in the last rotation, it was Sloan who won the title with a score of 57.825 to Bross's 57.775. Japan's Koko Tsurumi (57.175) took the bronze. In the apparatus finals another American, Kayla Williams, won the gold medal in the vault; Switzerland's Ariella Kaeslin secured the silver, and France's Youna Dufournet earned the bronze. He Kexin of China, the uneven bars champion at the 2008 Olympic Games, defended her title, followed by Tsurumi in second place; Bross and Romania's Ana Porgras tied for third place. China's Deng Linlin won the balance beam title, ahead of Lauren Mitchell of Australia and Ivana Hong of the U.S. in second and third place, respectively. The floor exercise title went to British gymnast Elizabeth Tweddle; Mitchell was second, and China's Sui Lu was third.

On the men's side, Kohei Uchimura of Japan won the all-around title, scoring 91.500 points. Britain's Daniel Keatings (88.925) took second, and Russia's Yuri Ryazanov (88.400) was third. Sadly,

Koji Sasahara/AP



Yevgeniya Kanayeva of Russia displays her flexibility in the ball event at the rhythmic gymnastics world championships in September.

Kanayeva dominated the competition, with six gold medals.

Ryazanov, age 22, was killed in a car accident just days after the world championships concluded.

Gymnasts from China triumphed in four of the six men's individual events. Zhang Hongtao won the pommel horse, followed by Hungary's Krisztian Berki and Australia's Prashanth Sellathurai. On rings Yan Mingyong edged out 36-year-old former champion Iordan Iovtchev of Bulgaria and Ukraine's Oleksandr Vorobiov. Wang Guanyin took the parallel bars, with his teammate Feng Zhe in second place and Japan's Kazuhito Tanaka in third. Finally, Zou Kai won horizontal bar, ahead of Dutch gymnast Epke Zonderland and Igor Cassina of Italy in second and third place, respectively. Marian Dragulescu of Romania earned both of the remaining gold medals: in the floor exercise, followed by Zou and Israel's Alexander Shatilov, and in the vault, with Romania's Flavius Koczi second and Russia's Anton Golotsutskov third.

At the rhythmic gymnastics world championships, held in Mie, Japan, during September 7–13, Russian Yevgeniya Kanayeva won all six events in which she competed. She took the gold medal in all four apparatus finals (rope, hoop,

ball, and ribbon) and in the individual all-around competition, as well as securing the highest personal score in Russia's team gold. (Kanayeva's achievement matched Belarusian gymnastics legend Vitaly Sherbo's record of six gold medals at one competition, which he earned at the 1992 Olympic Games in Barcelona.) Italy pulled ahead of Belarus and Russia to win the group all-around event. (LUAN PESZEK)

ICE HOCKEY

North America. In the National Hockey League (NHL), 21-year-old Sid ("the Kid") Crosby, as captain of the Pittsburgh Penguins, played like a savvy veteran as he led his team to the 2009 Stanley Cup championship, his first NHL title and the third in the history of the franchise. Capping a very entertaining postseason for the NHL, the Penguins met the Detroit Red Wings in a rematch of the 2008 final, which Detroit had won in six games. The Wings were favoured to repeat and quickly won the first two games in the 2009 best-of-seven final. Pittsburgh, however, led by Crosby and forward Evgeni Malkin, stormed back to win four of the next five games to capture the championship with a tense 2–1 victory in game seven. The thrilling final was instantly hailed as a classic, and it was sweet redemption for Pittsburgh's Canadian-born captain and his relatively young squad. Malkin became the first Russian to be presented with the Conn Smythe Trophy as the most valuable player in the play-offs. Malkin was also the first player to lead the NHL in scoring in both the regular season (113) and the play-offs (36) since former Pittsburgh star (now co-owner) Mario Lemieux did it in 1992.

While Malkin topped the league in points during the season with 35 goals and 70 assists, it was once again the Washington Capitals' left winger Alexander Ovechkin who dazzled with the most goals (56). It was the third time in four seasons that the flashy Russian had topped the 50-goal threshold. Ovechkin was the runaway winner of the Hart Trophy, presented to the most valuable player during the regular season. Ovechkin became the first repeat winner of that award since goaltender Dominik Hasek of the Buffalo Sabres won back-to-back Harts in 1997 and 1998. Colorado's Joe Sakic, one of the league's greatest players, retired at the end of the season, leaving the game as the eighth all-time leading scorer in

NHL history, with 1,641 points accumulated during his 20 seasons.

One of the more heartwarming stories of the regular season belonged to 35-year-old goaltender Tim Thomas, an American who had bounced around the minors and Europe for almost a decade before finding a home in the NHL with the Boston Bruins. Thomas had a remarkable season, leading the league in save percentage (.933) and goals-against average (2.10), and was presented with the Vezina Trophy as the NHL's top goaltender. Other individual trophy winners included Columbus goaltender Steve Mason, who was named Rookie of the Year; Boston's Zdeno Chara, top defenseman; and Boston's Claude Julien, Coach of the Year.

Another highlight from the season involved New Jersey Devils goaltender Martin Brodeur (see BIOGRAPHIES), who returned to the lineup after a long absence due to injury and promptly passed the legendary Patrick Roy for the most career victories by a netminder. Brodeur recorded his 552nd victory on March 17, 2009, with a 3–2 victory over the Chicago Blackhawks. The NHL staged another successful Winter Classic, a regular-season game played outdoors; this time the Blackhawks and Detroit played at Chicago's Wrigley Field, a historic baseball park.

The San Jose Sharks, with 117 points, were the league's best team during the regular season, but they bowed out of

Stanley Cup contention early, losing to Anaheim in the first round. The Columbus Blue Jackets played well enough to qualify for a play-off berth for the first time in the eight-year history of the franchise. On the downside, one of the most disappointing seasons belonged to the iconic Montreal Canadiens, a franchise that celebrated its centennial season but suffered through controversy on and off the ice. There were reports that two of Montreal's players were socializing with a gangster, and the owner had begun the process of selling the team. Coach Guy Carbonneau was fired mid-season and replaced by general manager Bob Gainey, but the team was swept out of the play-offs in four consecutive games by Boston in the first round.

At the end of the season, the Phoenix Coyotes filed for Chapter 11 bankruptcy protection, with owner Jerry Moyes saying that he had lost more than \$200 million since 2001. As a result, protracted legal proceedings ensued as the bankruptcy court had to decide who would take over the team and whether a new owner had the right to move the franchise.

July 1, the day that players without contracts became free agents, brought the usual frenetic roster changes. Among the biggest moves, Marian Hossa left Detroit to sign with Chicago, Marian Gaborik departed Minnesota for a contract with the New York

Rangers, Brian Gionta joined Montreal after playing for New Jersey, and Alex Kovalev moved from Montreal to Ottawa. Chris Pronger, one of the best defensemen in the league, was traded from Anaheim to Philadelphia.

International. Just as the Stanley Cup championship was a repeat of the previous year's NHL final, so too was the International Ice Hockey Federation (IIHF) men's world championship as Russia and Canada faced off in Bern, Switz., in May 2009. Once again the Russians captured the gold, with a 2–1 victory in a thrilling, well-played game that careened from one end of the ice to the other. Aleksandr Radulov scored the winning goal in the second period, finishing off a 2-on-1 break. Oleg Saprykin had tied the game after Jason Spezza put Canada into a short-lived 1–0 lead. Both goaltenders, Ilya Bryzgalov for Russia and Canada's Dwayne Roloson, were spectacular, and each made several tough saves to keep the game close. Though he did not score, Russian forward Ilya Kovalchuk was a dominant force as he was double-shifted throughout the final and spent more than half of the game on the ice. Kovalchuk was named Most Valuable Player (MVP) and top forward of the tournament. Andrei Mezin of Belarus was honoured as the top goaltender at the championship, and Canada's Shea Weber was named best defenseman. Martin St. Louis of Canada topped all scorers with 15 points in nine games.

In the bronze medal game, Sweden defeated the United States 4–2 as Carl Gunnarsson scored the winner in the third period. It was a measure of redemption for Sweden, which had lost in the bronze medal match at the two previous world championships. The Swedes won the medal with their backup goaltender, Stefan Liv, after the projected starter, Jonas Gustavsson, returned to Sweden to be with his ailing mother. Liv made 37 saves as the Americans outshot the Swedes 39–28.

At the women's IIHF world championship, which was played in Hämeenlinna, Fin., in April, international powerhouses Canada and the U.S. again faced off for the gold medal. For the second year in a row—and for the third time since the women's world championship was established—the Americans emerged victorious, pulling away in the third period en route to a 4–1 win. The game, closer and more exciting than the final score might indicate, was clinched by Caitlin Cahow's second goal of the game, which gave her squad

Pittsburgh Penguins forward Evgeni Malkin (right) maneuvers the puck away from Brian Rafalski of the Detroit Red Wings in game six of the NHL Stanley Cup finals on June 9. Malkin won the Conn Smythe Trophy as the most valuable player in the tournament.



Jim McIsaac/Getty Images

PCN Black/Alamy



Gold medalist Kim Yu-Na of South Korea displays her graceful style in the final free skate at the world figure skating championships in March.

a 3–1 lead midway through the final period. The two goals were Cahow's first of the tournament. The U.S. goaltender Jessie Vetter finished with a spectacular 39 saves. Her counterpart, Canada's Charline Labonte, was named the event's best goaltender by the tournament directors, but Vetter was given the nod as the all-star netminder by the journalists on hand. Finland's Jenni Hiirikoski was acknowledged by the directors as the top defender, while Canada's Hayley Wickenheiser was named top forward. In the bronze medal game, Finland defeated rival Sweden 4–1 as Michelle Karvinen scored twice for the Finns.

At the IIHF under-20 tournament, the hockey world was given a chance to watch up-and-coming Canadian star forward John Tavares, who was named the event's MVP and later became the first player selected in the NHL entry draft by the New York Islanders. Tavares finished the tournament with 15 points, second only to countryman Cody Hodgson's 16 points, as Canada won its fifth consecutive gold medal, thanks to a 5–1 victory over Sweden on January 5 in the final in Ottawa. Hodgson scored twice in the final game, which was played before a tournament record crowd of 20,380 spectators. Russia defeated Slovakia 5–2 to secure the bronze medal.

(PAUL HUNTER)

ICE SKATING

Figure Skating. With the 2010 Winter Olympics in Vancouver on the horizon, 2009 was an important year for figure skaters, and South Korea's Kim Yu-Na (see BIOGRAPHIES) established herself as the one to beat in Canada. At the International Skating Union world figure skating championships, held in Los Angeles in March, Kim had a record-setting performance to give her homeland its first senior-level world figure skating title. Kim took a big lead in the short program and went on to finish with a record 207.71 points (8.19 better than the previous mark, set in 2006 by her longtime rival Mao Asada of Japan). Kim was a stunning 16.4 points ahead of silver medalist Joannie Rochette of Canada and nearly 20 points ahead of Asada, the defending champion, who finished fourth behind the 2007 winner,

Miki Ando of Japan. Before her triumph in Los Angeles, Kim also posted victories at Skate America, the Cup of China, and the Four Continents event in February. She failed to win her third straight Grand Prix title, however, finishing second to Asada.

While Kim dominated at the world championships, the American women failed to medal for a third straight year. With Alissa Cizisny finishing in 11th place and Rachel Flatt in 5th, the combined placement of 16 meant that the U.S. would be sending only two women to the Olympics for just the second time since 1924.

On the men's side, Evan Lysacek, despite having a stress fracture in his left foot, became the first American man to win the world championship since Todd Eldredge in 1996. Patrick Chan of Canada took the silver after having captured the gold at the Four Continents in Vancouver. Former world champion Brian Joubert of France, who won the European figure skating championships in Helsinki in January, took the bronze in Los Angeles.

Ice dancers Oksana Domnina and Maksim Shabalin edged Tanith Belbin

and Benjamin Agosto of the U.S. to win the gold medal, Russia's first medal of any kind at the world championships since 2005. Canada's Tessa Virtue and Scott Muir took home the bronze. Russia also won a bronze medal in pairs, with Yuko Kawaguchi and Aleksandr Smirnov finishing behind silver medalists Zhang Dan and Zhang Hao of China and Germany's gold-winning duo of Aliona Savchenko and Robin Szolkowy. Savchenko and partner Szolkowy also won the gold at the European championships.

Speed Skating. American Shani Davis was again the star of the 2008–09 speed-skating season, defending his World Cup titles in the 1,000 m and 1,500 m while setting world records in both of those distances. At the World Cup speed-skating final near Salt Lake City, Utah, in March 2009, Davis became the first skater to go 1,500 m in less than 1 min 42 sec, finishing with a time of 1 min 41.80 sec. It was his fourth world record at that distance. That win also gave Davis his second straight World Cup season title in the 1,500 m, well ahead of fellow American Trevor Marsicano in second place.

One day after establishing the 1,500-m world record, Davis—along with Marsicano—skated in the 1,000 m. Marsicano set the world mark at 1 min 6.88 sec, but that record proved to be short-lived when Davis later finished in 1 min 6.42 sec. Davis won the season title in the 1,000 m for the second straight year and the third time in four seasons. China's Yu Fengtong took the men's 500-m title.

Davis also set a track record with a time of 1 min 8.66 sec to win the 1,000 m and earn the overall title at the world sprint speed-skating championships, held in Moscow in January. At the world single-distance championships in March, Davis and Marsicano won gold and silver medals, respectively, in the 1,500 m on the Richmond Olympic Oval, the speed-skating venue for the 2010 Vancouver Games. Marsicano also won the 1,000 m, while Davis finished third. Sven Kramer of The Netherlands again dominated the longer distances. He won both the 5,000- and 10,000-m races in Vancouver and at the world championships in Hamar, Nor., in February and secured his third straight all-around speed-skating title.

On the women's side, a pair of Canadians won World Cup season titles; Christine Nesbitt took the 1,000 m, and Kristina Groves won the 1,500-m crown for the second straight year. Germany's Jenny Wolf continued her dominance in the 500 m with her fourth consecutive season title. At the world championships in Hamar, Czech skater Martina Sablikova earned her first all-around title with victories in the 3,000- and 5,000-m races; Nesbitt and Groves won the 500 m and 1,500 m, respectively. In July five-time Olympic gold medalist Claudia Pechstein of Germany received a two-year ban because of blood doping. She would therefore miss the Vancouver Games.

At the ISU short-track world championships, held in Vienna in March, South Korea's Lee Ho-Suk won the 1,000-m and 1,500-m events and finished second in the 3,000 m to take the men's overall title. Wang Meng of China secured her second consecutive women's overall title with victories in the 500 m and 1,000 m.

(PAUL DIGIACOMO)

SAILING (YACHTING)

The America's Cup, sailing's most prestigious race, was in litigation throughout most of 2009. In the summer the New York Supreme Court ruled 6-0 in favour of the Golden Gate Yacht Club (GGYC), directing that the Deed of Gift challenge be scheduled for February 2010. As the official challenger, GGYC specified the boat: a massive multihull, with maximum dimensions of 27.5 m (90 ft) both on the waterline and on the beam. Société Nautique de Genève (SNG), the defender, selected the emirate of Ras al-Khaimah, in the U.A.E., as the venue, but the court later ruled that under the Deed of Gift the race had to take place either in the Southern Hemisphere or in Valencia, Spain. In November SNG issued the official notice that the Cup would take place in Valencia on Feb. 1-25, 2010.

At Key West Race Week in January 2009, entries were down 30%, but three racing circles provided the superb competition expected in this nearly ideal location for winter sailing. The *Melges 32 Star* was declared the boat of the week. In February a new winter venue was established by the Royal Ocean



On November 8 the trimaran l'Hydroptère, under the command of French skipper Alain Thébault, surges to a world-record sailing speed of 50.17 knots over one nautical mile.

Racing Club: the Caribbean 600, a distance race from Antigua that used other islands as turning marks and finished off the coast of English Harbour, where it started. A wide variety of boats participated, from the supermaxis to family-crewed Swans taking a break from recreational cruising. The 30.5-m (100-ft) supermaxi *ICAP Leopard* set a monohull offshore record (44 hr 5 min 14 sec) and finished second on corrected time behind the 15-m (50-ft) canting keel *Lee Overlay Partners*.

The 2008-09 Volvo Ocean Race was completed in June after eight months. Eight 21.3-m (70-ft) box-rule boats started and seven finished the 10-leg circumnavigation, but four boats were required to withdraw from one or more legs owing to damage. (Volvo 70s sail routinely in the 30-knot range and are vulnerable to underwater damage by unseen objects.) The boats raced inshore between legs, adding points to their score in round-the-buoy events. *Ericsson 4* and skipper Torben Grael of Sweden won decisively.

The Transpacific Race in July allowed the supermaxis to join the fleet, with their own prizes. Predictably, a new course record was established by the 30.5-m (100-ft) *Alfa Romeo* in 5 days 14 hr 36 min. *Samba Pa Ti*, a modified Transpac 52 (TP52), was the corrected-

time winner. In the Fastnet Race, held in August, the big boats dominated the results. *ICAP Leopard* was first to finish, and the new 22-m (72-ft) IRC-handicapped *RAN 2* won on IRC-corrected time.

Banque Populaire V, the world's largest trimaran at 40 m (131 ft), set a Transatlantic sailing record in 3 days 15 hr 25 min 48 sec, achieving an average speed of 32.9 knots. It also established a new 24-hour distance mark, logging 907.9 nautical miles at an average speed of 37.8 knots, with a top speed of 47 knots. The 18-m (59-ft) hydrofoil trimaran *l'Hydroptère* set world records at two distances in late 2009, with an average speed of 51.36 knots over 500 m on September 4 and an average speed of 50.17 knots over one nautical mile on November 8. Michel Desjoyeaux won his second Vendée Globe race (solo nonstop circumnavigation) in a water-ballasted monohull IMOCA 60 and set a new record of 84 days 3 hr 9 min.

Offshore, the 2009 Sydney Hobart race was held at the end of December. *Wild Oats XI*, which took its fourth consecutive first-to-finish-line honours in 2008, was second behind *Alfa Romeo*, a 30.5-m yacht from New Zealand. *Two True* was declared the overall winner after a collision protest was dismissed.

(JOHN B. BONDS)

SKIING

Alpine Skiing. The 2008-09 Alpine skiing season saw Norway's Aksel Lund Svindal (see BIOGRAPHIES) make a triumphant return to the top as the men's overall International Ski Federation (FIS) World Cup title winner. Svindal had won the men's overall crown in the 2006-07 series but missed most of the 2007-08 season owing to injuries. American Lindsey Vonn won the women's overall World Cup and showed for the second straight year why she was considered one of the best skiers in the world.

Svindal held off Austria's Benjamin Raich by only two points in 2008-09; he captured three World Cup races, and Raich won four. Svindal also took the supergiant slalom (super G) season title and finished in the top five in both the downhill and the giant slalom (GS) standings. The men's downhill title was won for the third time in five seasons

by Michael Walchhofer of Austria. Switzerland's Didier Cuche secured his first GS season title after reigning as the downhill champion in 2006–07 and 2007–08. In slalom, France's Jean-Baptiste Grange cruised to his first season title by 87 points. Carlo Janka of Switzerland earned his first World Cup season crown in combined.

Vonn easily finished 364 points ahead of Germany's Maria Riesch to become the first American woman to win two World Cup overall titles. She also dominated in downhill to take her second straight season title in that discipline and secured her first crown in super G after winning the final race of the season. Overall in 2008–09, Vonn finished on the podium 16 times and won 9 World Cup races. After having won the super G and combined crowns in 2007–08, Riesch cruised to the slalom season title by 211 points over Sarka Zahrobska of the Czech Republic, with Vonn in third place. The women's GS champion was not so clear-cut, but Finland's Tanja Poutiainen, the 2005 season winner in the discipline, hung on to beat Kathrin Zettel of Austria by just seven points. Sweden's Anja Pärson, a five-time Olympic medalist, won the combined discipline by 25 points over Vonn for her seventh career World Cup season title and her first since 2005–06.

At the 2009 FIS Alpine world ski championships in Val d'Isère, France, in February, Svindal took the gold medal in super combined and the bronze in super G. Cuche won the gold in super G, with Janka earning the gold in GS. Canada's John Kucera secured his first world championship title, in the downhill. On the women's side, Vonn won the gold in downhill and super G, and Zettel captured the super combined, while German teammates Riesch and Kathrin Hölzl took the gold in slalom and GS, respectively.

Nordic Skiing. Dario Cologna of Switzerland earned the men's overall cross-country World Cup title in 2008–09 by winning the last competition of the season. Norway's Ola Vigen Hattestad won the men's sprint title for the second consecutive season and earned gold medals in individual sprint and team sprint at the 2009 FIS Nordic world ski championships in Liberec, Czech Rep. Pietro Piller Cottrer of Italy won the World Cup season title in distance. In the women's field, Poland's Justyna Kowalczyk ended the two-year run of Finland's Virpi Kuitunen as overall and distance champion by taking the season titles in both disciplines.

Kowalczyk also won two gold medals and a bronze in Liberec. Petra Majdic of Slovenia won the sprint title for the second straight season.

In Nordic combined, Finland's Anssi Koivuranta captured his first overall title, posting seven World Cup victories. Magnus Moan of Norway finished second, and American Bill Demong placed third for the second straight season. Gregor Schlierenzauer of Austria was the overall ski jumping champion after becoming the first person to win 13 World Cup events and score more than 2,000 points in a season (2,083). American Lindsey Van achieved the first women's FIS ski jumping world championship in Liberec, with a winning jump of 97.5 m.

Freestyle Skiing. Canadian Alexandre Bilodeau won the 2008–09 World Cup moguls title after Australia's Dale Begg-Smith had taken the crown the previous three seasons. Hannah Kearney of the U.S. won the women's moguls title. Canada's Steve Omischl scored his third straight aerials World Cup title, and Lydia Lassila of Australia took the women's crown after having finished second in 2007–08. France's Ophélie David won her sixth straight season title in ski cross; Tomas Kraus of the

On February 20 American ski jumper Lindsey Van holds her skis aloft to celebrate after winning the gold medal in the first-ever women's ski jumping world championship.



Matthias Schrader/AP

Czech Republic earned the men's crown for the second season in a row. Ski halfpipe titles went to France's Kevin Rolland and Virginie Faivre of Switzerland.

Snowboarding. Austria's Siegfried Grabner won the overall World Cup snowboard title in 2008–09, as well as the season crown in parallel. The snowboardcross (SBX) season title went to his compatriot Markus Schairer. Ryo Aono of Japan won the halfpipe title, and Austria's Stefan Gimpl took the big air crown for the second straight season. Doris Günther of Austria was the women's overall winner. American Lindsey Jacobellis finished second overall for the second consecutive season and won the SBX title for the second time in three years. Germany's Amelie Kober took the women's crown in parallel, and Liu Jiayu of China was the halfpipe season champion. (PAUL DIGIACOMO)

SQUASH

The highlight of 2009 was to have been acceptance of squash into the program for the 2016 Rio de Janeiro Olympic Games. A strong bid had been mounted accentuating the universality, competitive structure, and other benefits that made squash a contender. In the end, however, only golf and rugby sevens were accepted by the International Olympic Committee for the 2016 Games; as a result, squash would need to wait another four years to try again.

On court the year saw a near monopoly of titles by Egyptian players. When the men's world team championship took place in Odense, Den., in October, Egypt took the title for the second time, with a squad featuring three of the top-four-ranked players. In a tight final Egypt beat third-seeded France 2–1. Defending champion England lost to France in the semifinals and to Australia in the play-off for the bronze medal. One month later in Kuwait, there was an all-Egyptian final in the men's World Open; Amr Shabana won his fourth World Open title when he beat defending champion Ramy Ashour 11–8, 11–5, 11–5.

Malaysia's Nicol David, who was based in Amsterdam, won the women's World Open, held in that city in September. She beat Australian-born Natalie Grinham, who had recently gained Dutch citizenship, 3–11, 11–6, 11–3, 11–8 in the final. This was the fourth World Open title in five years for David, the sport's number-one-ranked woman since 2006.

At the junior level there was an Egyptian double in the world under-19 individual championships staged in Chennai (Madras), India, in August. The women's title went to 13-year-old Nour El Sherbini, who became the sport's youngest-ever world champion when she beat countrywoman Nour El Tayeb in the final. (A week later El Sherbini also led the Egyptian women to the under-19 team title.) Mohamed El Shorbagy, the 18-year-old top seed from Alexandria, successfully defended his men's individual title, defeating second-seeded Ivan Yuen of Malaysia 11–9, 12–10, 11–2. (ANDREW SHELLEY)

SWIMMING

In 2009, 15 years after the sport of swimming was marred by widespread use of illegal performance-enhancing drugs, primarily on the part of Chinese competitors, swimming was again fraught with controversy—this time over the use of swimsuits made from high-tech materials that clearly enhanced performance in contravention of Fédération Internationale de Natation (FINA) rules. (See Sidebar.) Indeed, many critics referred to the expensive (\$400–\$550) suits as “high-tech doping.” The dispute, which led to the banning of nontextile swimsuits beginning in 2010, became so heated that it overshadowed the performance of the athletes in major meets around the globe, including the year's premier long-course (50-m) event, the 13th FINA world championships held in Rome on July 17–August 2. It also forced the incumbent FINA president to abandon his reelection bid and led to serious discussion of a radical revision of FINA's structure.

The world championships, which featured a record 2,800 aquatic athletes from almost 200 countries, saw some spectacular swimming, though how much was due to the athletes and how much to the suits was debated interminably. As expected, the U.S. won the team crown in Rome, but the medals were dispersed to more countries than ever before: swimmers from 25 countries earned at least one medal, while an unprecedented 17 countries took gold. The championships produced no fewer than 43 world records in the 40 events that were contested. In fact, the world records going into the meet were bettered some 57 times in Rome as even nonwinners often broke the old marks—results one expert dismissed as “absurd.” By the time the meet ended, only a handful of prechampionship world

records remained intact, and by year's end 73 new long-course world records had been set and another 74 had been set in 25-m short-course competitions, though several of those were disallowed.

After taking a three-month break from the sport after the 2008 Beijing Olympic Games, American superstar Michael Phelps quickly got back into shape but opted to swim “only” three individual events and all three relays. The 100-m butterfly turned out to be almost a duplicate of Phelps's triumph over Serbia's Milorad Cavic at the Olympics. Cavic was faster for the first 50 m, and his lead over the American was even greater than in Beijing. That just meant a greater challenge for Phelps, however, and the two men became the first in history to crack the 50-sec barrier, with Phelps touching first in 49.82 sec, just 0.13 sec ahead of Cavic. Phelps then cut half a second off his own global standard in the 200-m fly, touching in 1 min 51.51 sec, almost two seconds in front of a very fast field. Phelps racked up more gold as a member of the three U.S. relay teams. At year's end, *Swim-*

Water skims off of American Ariana Kukors's nontextile Jaked01 swimsuit as she races to a world record of 2 min 07.03 sec in the semifinals of the women's 200-m individual medley at the FINA world championships on July 26. Kukors swam an even-faster 2 min 06.15 sec in the finals the next day.



Mark J. Terrill/AP

ming World magazine named Phelps the male World Swimmer of the Year for the sixth time and the fourth in a row.

Despite Phelps's superb performance, Germany's Paul Biedermann proved the adage that on any given day, no one is unbeatable. First, he thrashed Phelps in the 200-m freestyle, slicing nearly a second off the American's record with a brilliant 1 min 42.00 sec, and then Biedermann carved 0.01 sec off Australian Ian Thorpe's 400-m mark (set in 2002) with a time of 3 min 40.07 sec.

Two other men scored individual doubles: American Ryan Lochte and Brazil's César Cielo. Lochte lowered Phelps's mark in the 200-m individual medley (IM) to 1 min 54.10 sec and then won the 400-m IM. Cielo took the sprint double, charging through the 50-m freestyle in 21.08 sec, just off Frenchman Fred Bousquet's world record but 0.13 sec ahead of Bousquet in the race. Cielo also won the 100 m, posting a record 46.91 sec, just in advance of France's former world record holder Alain Bernard and Bousquet. Cielo lowered the 50-m mark to 20.91 sec in December.

Italy's Federica Pellegrini and Germany's Britta Steffen provided much of the fireworks in the women's competition. Pellegrini swam to two barrier-breaking victories in Rome and was narrowly selected over Steffen as *Swimming World's* female World Swimmer of the Year. In the 200-m freestyle, Pellegrini lowered her own world record by nearly two full seconds to 1 min 52.98 sec. She also became the first woman in history to swim 400 m under the four-minute barrier, with a brilliant 3 min 59.15 sec. Steffen, the Beijing Olympic champion in the 100-m freestyle, proved that she was still the best female sprinter in the world as she sped to a world-record time of 23.73 sec in the 50 m and a record 52.07 sec in the 100 m.

Perhaps the championship's most spectacular performance was by American Ariana Kukors, who destroyed the world record in the 200-m IM twice in two days, ending with an amazing 2 min 06.15 sec, more than two seconds under the previous record set by Australia's Stephanie Rice in Beijing. Astonishingly, Kukors had not even made the U.S. team in this event at the national trials but was added to the event squad when another swimmer decided not to compete in it.

On the political front Mustapha Larfaoui of Algeria had expected to breeze to his sixth consecutive four-year term as FINA president, but FINA treasurer

The Swimsuit War

The sport of swimming faced one of its most difficult challenges in 2009 as athletes, coaches, swimsuit companies, and the Fédération Internationale de Natation (FINA), swimming's international governing body, squared off over the growing use of performance-enhancing high-tech swimsuits. The first shot was fired by Speedo in February 2008 when it introduced the seamless polyurethane LZR (pronounced "laser") Racer, reportedly developed in cooperation with NASA. The most radical version of this swimsuit line was a full bodysuit that covered the swimmer from neck to ankles. Swimming had seen full bodysuits before the LZR, most notably when Australia's Ian Thorpe set world records in 2000–02 while wearing Adidas's bodysuit. There was no convincing evidence that the suit made anyone faster, and in October 1999 FINA had approved the bodysuits for competition. Several companies created new bodysuits for the 2000 and 2004 Olympic Games, but post-Olympic analyses cast doubt on any claims of performance enhancement.

The LZR, however, was "the real deal." LZR-related world records were set within days of the swimsuit's introduction—the first in what became a torrent of increasingly meaningless records. At the 2009 FINA world championships, 40 events were contested and 43 world records were unceremoniously overthrown. That brought to 179 the number of world records (both long- and short-course) set in the 18 months since the first appearance of the LZR. By the end of 2009, the total number of world records broken in those 23

months stood at a staggering 255. In 2009 alone, 147 world records were smashed, although some were later disallowed.

Critics, including some coaches and sportswriters, claimed that the suits undermined such values as hard work, superb conditioning, and technical mastery; rendered meaningless the great performances of the past; and, with records lasting only a few weeks—or even days—risked making the sport a laughingstock. FINA officials dismissed the dissenters as misguided and pointed to innovations that transformed other sports—for example, the clapskate in speed skating and the fibreglass pole in pole vaulting. Unlike those innovations, however, the high-tech swimsuits kept evolving, especially as more manufacturers entered the fray.

While records were falling with monotonous regularity, FINA officials planned for the organization's 201-member Congress to endorse their decision to allow virtually all high-tech suits in competition. When the Congress convened on July 24, however, the U.S. delegation offered a carefully prepared motion to allow only textile swimsuits, to eliminate compression-enhancing features such as zippers, and to limit coverage to "between the waist and knees for males, [and] not beyond the shoulders or below the knees for females," with the arms remaining uncovered for both sexes. The vote was an overwhelming 168–6 in favour of the U.S. resolution and in repudiation of FINA's position. The ban was to become effective on Jan. 1, 2010, bringing to a close the era of the performance-enhancing high-tech suits.

(PHILLIP WHITTEN)

Julio Maglione of Uruguay threw his hat into the ring, forcing what would have been the organization's first contested election in its 100-year history. Ultimately, Larfaoui withdrew from the contest, and Maglione, who promised to stay in office for only one term, was elected president in July.

Diving. Chinese divers won every international meet that they entered in 2009 and then overwhelmed the rest of the world's divers at the world championships in Rome, where they earned gold in 7 of the 10 events and took 14 medals of a possible 16. Guo Jingjing reinforced her credentials as the greatest female diver in history by winning both 3-m springboard events—taking the individual and (with teammate Wu Minxia) the synchronized crowns—for the fifth consecutive world championship. (Guo also took gold in the same events at both the 2004 and 2008 Olympic Games.) Chinese veterans Chen Ruolin and Wang Xin won the 10-m synchronized event. Mexico's Paola Espinosa won her country's first-ever diving world championship gold medal, coming from eighth place to upset Chinese Olympic champion Chen Ruolin decisively in the 10-m final. In the 1-m springboard—a non-Olympic event—

Russia's Yuliya Pakhalina scooped the gold.

Tom Daley, Britain's 15-year-old sensation, pulled off the biggest upset in the men's competition. Daley jumped from fourth to first on his two final dives in the 10-m platform, receiving eight perfect 10s from the judges, to defeat China's Qiu Bo and Zhou Luxin. The remaining four men's events belonged to China. Qin Kai nipped teammate Zhang Xinhua and Australia's Matt Mitcham to take the 1-m springboard. He Chong proved his Olympic gold medal in the 3-m springboard was not a fluke by winning the event in Rome. The synchronized events showcased the near-perfect technique of the Chinese divers. In the 3-m event, Qin Kai and Wang Feng breezed to victory, and the 10-m contest saw China's Huo Liang and Lin Yue triumph as the U.S. nipped Cuba for the silver.

Synchronized Swimming. At the 13th FINA synchronized swimming world championships in Rome, Russian athletes captured six of the seven gold medals, nearly duplicating their six-gold, one-silver effort at the 2007 world championships in Melbourne. This time around, the only event that the Russians did not win was the one in

which they did not compete: the 10-woman free combination, won by Spain, which collected silver in the other six events. Therefore, Spain, with a total of seven medals, topped Russia in the final standings. China, led by the Jiang twins—Tingting and Wenwen—was a distant third with one silver and four bronze medals, followed by Canada and Italy. In all, swimmers from 42 countries competed in the synchronized events in Rome, with athletes from 15 qualifying for at least one final, but 10 countries, including Japan and the U.S., failed to medal.

Three Russians, all veterans with long international careers, topped the individual medal count. Nataliya Ishchenko led the way with four gold, followed by Svetlana Romashina (three) and Anastasiya Davydova (two). Gemma Mengual, a 32-year-old Spaniard, took home one gold and four silver medals.

(PHILLIP WHITTEN)

TENNIS

Across the board, on innumerable levels, Roger Federer of Switzerland was the 2009 Player of the Year in tennis, becoming only the sixth man in history to win all four Grand Slam events. The



On September 14 Juan Martín del Potro of Argentina smashes the ball in the men's singles final of the U.S. Open, where he upset five-time champion Roger Federer of Switzerland for the title.

champion whom many experts considered the best player ever set an all-time record for men when he captured the All-England (Wimbledon) title, his 15th major men's singles championship. He then finished the year at number one in the world in the Association of Tennis Professionals (ATP) rankings for the fifth time in a magnificent six-year span.

Other players also had much to celebrate in 2009. The towering 2-m (6-ft 6-in) Juan Martín del Potro of Argentina garnered his first Grand Slam title at the U.S. Open. Rafael Nadal became the first Spaniard to win the Australian Open, his first major tournament title on a hard court. Serena Williams of the U.S. secured the Australian Open and Wimbledon crowns and ended a year as the Women's Tennis Association (WTA) number one player for only the second time in her illustrious career. Russian Svetlana Kuznetsova took her second career major singles title, winning the French Open. Meanwhile, Belgian Kim Clijsters came out of a 27-month retirement (during which she had a baby) to win a second U.S. Open in only her third tournament back in action. The highest-paid woman on the Sony Ericsson WTA Tour was Williams, with \$6,545,586. Federer was the top prize-money winner on the ATP World Tour, at \$8,768,110.

Australian Open. Clashing for the seventh time in a Grand Slam final, Nadal and Federer put on a stupendous display of shot-making craftsmanship before the Spaniard recorded a 7-5, 3-6, 7-6 (3), 3-6, 6-2 triumph over his Swiss

adversary. It was the third time in a four-tournament span at the majors that Nadal had ousted Federer in the championship match, and the victory gave the Spaniard a 5-2 edge over his chief rival in Grand Slam finals. Nadal was stretched to his limits against Fernando Verdasco in a semifinal showdown between Spanish left-handers. Nadal was down at 4-4, 0-30 in the fifth set but rallied for a 6-7 (4), 6-4, 7-6 (2), 6-7 (1), 6-4 victory.

Number two seed Serena Williams crushed third-seeded Dinara Safina of Russia 6-0, 6-3 in the women's championship match. Williams was on the brink of defeat in her quarterfinal with eighth-seeded Kuznetsova, who served for the match in the second set, but Williams escaped to win the match 5-7, 7-5, 6-1.

French Open. Heading into his fourth-round contest against Robin Söderling of Sweden, Nadal had never been beaten at Roland Garros and had yet to lose a best-of-five-set match anywhere on clay. In one of the biggest upsets ever produced at the world's premier clay court event, however, the four-time champion was ousted by his inspired Swedish opponent, bowing 6-2, 6-7 (2), 6-4, 7-6 (2). Federer, who had lost to Nadal four years in a row at Roland Garros (including three consecutive finals), also struggled in the fourth round. Federer trailed by two sets to love and was down break point at 3-4 in the third set against the seasoned German Tommy Haas, but an audacious forehand winner saved the

Swiss champion, who rallied admirably to win in five sets. He survived another five-set skirmish with del Potro in the semifinals and then took apart Söderling 6-1, 7-6 (1), 6-4 in the final.

Number seven seed Kuznetsova overcame second-seed Williams in the quarterfinal match of the tournament for the women, eclipsing the American 7-6 (3), 5-7, 7-5 in a match that featured one high-quality rally after another. The top-seeded Safina—appearing in a second straight Roland Garros title match—struggled with nerves in the final against Kuznetsova, who prevailed 6-4, 6-2.

Wimbledon. On the fabled British grass courts, Federer collided with his old rival Andy Roddick of the U.S. for the third time in a Wimbledon final, though Roddick had taken only one set in their two previous title matches on the Centre Court. Roddick played a strategically impeccable semifinal match, preventing 22-year-old Andy Murray from becoming the first British man to reach the final at Wimbledon since Bunny Austin lost to American Don Budge in 1938. In the final Roddick gave one of the signature performances of his career, taking the opening set and leading 6-2 in a pivotal second-set tie-break before Federer collected six points in a row to salvage the set. Roddick held serve 37 consecutive times in the match before losing his delivery in the final game of a 5-7, 7-6 (6), 7-6 (5), 3-6, 16-14 encounter. The 77-game match was the longest-ever final at Wimbledon, and the 30-game fifth set was likewise the longest-ever fifth set. Federer served a career-best 50 aces as he collected his record 15th Grand Slam title, with American Pete Sampras, who had won 14 majors between 1990 and 2002, watching in the stands.

Serena Williams took her third championship singles title, beating her sister Venus in the final 7-6 (3), 6-2. Serena, who did not lose her serve once in the match, defeated her older sibling for the sixth time in eight head-to-head clashes in the majors. In the semifinals five-time champion Venus obliterated the top-seeded Safina 6-1, 6-0, and Serena battled back ferociously from match-point down to oust another Russian, fourth-seeded Yelena Dementiyeva, 6-7 (4), 7-5, 8-6.

U.S. Open. Argentina's quietly imposing del Potro lived up to the expectations of many authorities by securing the last major championship of the year. In the semifinals he blasted Nadal off the court 6-2, 6-2, 6-2, and in the final he toppled Federer 3-6, 7-6 (5), 4-6, 7-6 (4), 6-2. No one had ever before

knocked out that illustrious duo in the same Grand Slam event. Federer, in pursuit of a sixth consecutive U.S. Open title, served at 5-4, 30-0 in the second set but was surprisingly broken. In the fourth set, Federer was twice just two points away from prevailing, but del Potro held on to get the win.

The unseeded Clijsters—a wild card—played arguably the best tennis of her career to regain the crown that she had garnered four years earlier. The captivating Belgian took out Marion Bartoli of France (seeded number 14), Venus Williams (number 3), and China's Li Na (number 18) en route to her meeting with second-seed Serena Williams in the semifinals. Williams was down a set and serving at 5-6, 15-30 in the second set when she was called for a foot fault on her second serve. That double fault put her down double-match point. Enraged, Williams verbally lashed out at the lineswoman who made that call, and her profanity-laden diatribe led to a point penalty because she had earlier been warned for racket abuse. The match was over, with Clijsters winning 6-4, 7-5. Clijsters stopped ninth-seeded Caroline Wozniacki of Denmark 7-5, 6-3 in the final, recouping from 2-4, 15-40 to take the crucial first set. Williams was fined \$10,000 by the United States Tennis Association for her tirade but was later assessed an additional \$82,500 by the International Tennis Federation, put on probation for two years, and warned that another "major offense" in that span at any Grand Slam event would result in a larger fine and a suspension from the following U.S. Open.

Other Events. In London, Russian Nikolay Davydenko took the Barclays ATP World Tour Finals, defeating Federer for the first time and then stopping del Potro in a straight-set final. Serena Williams beat her sister Venus in the final of the Sony Ericsson Championships in Doha, Qatar. In the Fed Cup final, held in Calabria, Italy—led by Francesca Schiavone and Flavia Pennetta—beat the U.S. 4-0. Spain—propelled by Nadal and David Ferrer—won its second straight Davis Cup, overwhelming the Czech Republic 5-0 in the final in Barcelona. (STEVE FLINK)

TRACK AND FIELD SPORTS (ATHLETICS)

Usain Bolt of Jamaica made the 2009 track and field season his own, improving his individual sprint world records and winning three world championships golds. Ethiopian dis-

tance runner Kenenisa Bekele won two world titles that cemented his reputation as the most dominating track and field athlete of the decade, but the accomplishments of Bolt and Bekele competed for headlines with a gender controversy surrounding Caster Semenya, the South African teenager who captured the women's 800-m world title.

World Outdoor Championships. Nine meet records were broken at the International Association of Athletics Federations (IAAF) world championships, held Aug. 15-23, 2009, in Berlin. Bolt accounted for the most spectacular of these as he raced to world records of 9.58 sec in the 100 m and 19.19 sec in the 200 m as well as running the third leg on Jamaica's 37.31-sec meet-record win in the 4 × 100-m relay. His only gaffe along the way was a false start in his 100-m semifinal. Bolt attributed his early jump to playful competition with his Antiguan training partner, Daniel Bailey, to see who could achieve a faster reaction time. Bolt incurred no penalty, but a new rule to take effect in 2010 would trigger immediate disqualification for any false start.

Before the 100-m final, the common assumption was that if anyone could challenge Bolt, it would be his American rival Tyson Gay. With a legal 0.9-m/sec wind behind him, Bolt propelled his 1.96-m (6-ft 5-in) frame from the blocks with phenomenal speed. He led the field with his fourth stride, at which point his closest competitors had already taken five steps, and at 20 m held a 0.01-sec margin over the Olympic silver medalist Richard Thompson of

Trinidad and Tobago as Gay ran in fourth place. Over the next 20 m, Gay raced into second place but proved powerless to stop Bolt from widening his lead to more than 1.5 m (nearly 5 ft) at the finish. Gay's time of 9.71 sec left former world record holder Asafa Powell of Jamaica (9.84 sec) a thoroughly beaten third but paled behind Bolt's rush under the 9.60-sec barrier.

In the 200-m final, Bolt defied his own prediction that he would not better his 19.30-sec world record from Beijing. After comfortably leading 2004 Olympic champion Shawn Crawford at the halfway point with a split of 9.92 sec, Bolt shattered the record by 0.11 sec with a 6-m winning margin. For the first time in history, five finishers bettered 20.00 sec in one race.

Bekele sprinted away from Zersenay Tadese of Eritrea on the last lap of the 10,000-m final to win in 26 min 46.31 sec, a meet record that lowered Bekele's own standard set in 2003 in his first world championships appearance. The victory earned the 27-year-old Bekele a clean sweep of all world and Olympic gold medals in the event since 2003, an achievement unmatched by any other athlete in any event during the decade. In the 5,000 m, Bekele outkicked defending champion Bernard Lagat of the U.S. to match his double victory of the Beijing Olympics and become the first man to win the long-distance track double at a world championships.

Anita Włodarczyk of Poland set the only women's world record in Berlin, in the hammer throw. Germany's Betty Heidler, the defending champion, raised

At the IAAF world championships in August, Anita Włodarczyk of Poland set the only women's world record, a stunning 77.96 m (255 ft 9 in) in the hammer throw.



Matt Dunham/AP

the meet record by 7 cm (2 in) in the qualifying round to 75.27 m (246 ft 11 in) and subsequently took the lead from Włodarczyk in the first round of the final. In the second round, however, Włodarczyk spun the hammer out to 77.96 m (255 ft 9 in) to take gold and the world record. While celebrating, Włodarczyk stepped on the track's curb and sprained her ankle so badly that she was forced to skip the rest of the season.

Men's meet records were also set by Kenyans Ezekiel Kemboi in the steeplechase (8 min 0.43 sec) and Abel Kirui in the marathon (2 hr 6 min 54 sec). Olympic champion Melaine Walker of Jamaica set a meet-record 52.42 sec in the women's 400-m hurdles. In the final tally, the U.S. led the world championships medal standings with 22 medals (10 gold), ahead of Jamaica with 13 medals (7 gold).

Semenya incited controversy that had nothing to do with the fact that she tangled with defending 800-m champion Janeth Jepkosgei of Kenya in the first heat, causing Jepkosgei to fall and fail to finish. Jepkosgei advanced to the semifinal on appeal and then earned a place in the final, but Semanya won the championship in 1 min 55.45, flexing her arms in a bodybuilder's pose as she crossed the line. Semanya skipped the postrace press conference and returned home to a heroine's welcome. A media frenzy began with a leaked report that the IAAF had conducted sex tests on the powerfully built 18-year-old Semanya to determine if she was really a woman. As recriminations, apologies, and expressions of sympathy for Semanya passed in the press between her country's federation, Athletics South Africa (ASA), and the IAAF, ASA Pres. Leonard Chuene angrily denied knowing that sex-verification testing was conducted on Semanya in South Africa before the championships. Chuene later admitted to lying on that point. The furor grew more heated after press reports alleged that testing had shown Semanya to have an intersex condition. The unconfirmed accounts claimed that she had internal male genitalia and testosterone levels three times higher than normal for a woman, levels that could impart an athletic advantage. As a result, the South African Sports Confederation and Olympic Committee subsequently ousted Chuene and took over management of ASA. The IAAF reserved comment on the reports until its council meeting in November. Two days before that meeting, the IAAF issued a statement saying that medical testing of

Semenya was not complete and that the council would not discuss the case until further notice. A day later South Africa's sports ministry announced that the IAAF had agreed to let Semanya keep her medal and prize money, but the IAAF declined to comment on the claim.

International Competition. The Golden League series, in which athletes winning their event at each of six elite European invitational meets split a \$1 million jackpot, had its swan song in 2009. Bekele, American 400-m runner Sanya Richards, and Russian pole vaulter Yelena Isinbayeva each earned a third of the prize. Bekele extended his unbeaten streak at 5,000 m to 17 finals and his streak at 10,000 m to 12 finals. Richards lost her first 400 m of the season but thereafter won 10 straight. At the World Athletics Final (WAF), another IAAF fixture that would not be contested in the future, Richards placed second in the 200 m in addition to winning her specialty. Women's shot-putter Valerie Vili of New Zealand, the reigning Olympic and world champion, stretched her unbeaten skein to 25 finals, the longest at the elite level in any individual event. The IAAF was to replace the Golden League and the WAF in 2010 with a new Diamond League, a series of 14 meets in Asia, Europe, the Middle East, and the U.S., with \$6.3 million in prize money on offer and 32 disciplines.

Isinbayeva, who had not lost for six seasons, placed second behind Poland's Anna Rogowska at the London Grand Prix meet in July, and at the world championships she no-heighted. The next week in Zürich, Isinbayeva confessed to complacency and then went out and raised her world record to 5.06 m (16 ft 7¼ in).

In April the International Olympic Committee (IOC) identified 2008 Olympic men's 1,500-m champion Rashid Ramzi of Bahrain as one of six athletes from three sports caught positive for banned CERA, a form of the endurance-boosting drug erythropoietin (EPO). The result came from retesting of Beijing Olympic samples after a test for the previously undetectable drug had been developed. Ramzi proclaimed his innocence, but in November the IOC stripped him of his medal.

Cross Country and Marathon Running. For the first time since 2004, Ethiopia's Haile Gebrselassie did not run the fastest marathon of the year. That honour went to 31-year-old Kenyan Duncan Kibet, who narrowly defeated his countryman James Kwambai with the same time, 2 hr 4 min 27 sec, in Rot-

terdam, Neth. No marathoner besides Gebrselassie had ever run faster, and the pair spearheaded an onslaught of fast times. The 25 sub-2-hr 7-min marathons run in 2009 races accounted for a quarter of history's total.

In the World Marathon Majors, a series scored on a two-year basis in which athletes collect points for placings in five major city marathons—London, Boston, Berlin, Chicago, and New York City—plus the Olympics and world championships races, the 2008–09 men's title went to 2008 Olympic champion Samuel Wanjiru of Kenya, who scored 2009 victories in London and Chicago. The women's title went to Irina Mikitenko of Germany, a repeat series winner, who won in London and placed second in Chicago in 2009. Wanjiru and Mikitenko each collected \$500,000.

At the world cross country championships, held in Amman, Jordan, on March 28, Kenya and Ethiopia shared top honours. Kenya won three of the four team titles, including the senior men's and women's, plus the senior women's individual title, which went to Florence Kiplagat. Ethiopia won the other three individual titles and the junior women's team crown. Ethiopian Gebre Gebremariam won the senior men's individual title. (SIEG LINDSTROM)

VOLLEYBALL

Americans Jen Kessy and April Ross defeated Juliana Felisberta Silva and Larissa Franca of Brazil (30–28, 23–21) to win the women's gold medal at the 2009 Fédération Internationale de Volleyball (FIVB) beach volleyball world championships, held in Stavanger, Nor. Talita Antunes and Maria Antonelli downed fellow Brazilians Ana Paula Connelly and Sandra Pires Tavares (21–13, 21–16) to earn the bronze. Kessy and Ross had finished in 37th place at the 2007 world championships. In the men's competition, Germany's Julius Brink and Jonas Reckermann established themselves as one of the world's premier tandems following a 21–16, 21–19 victory over Brazil's Alison Cerutti and Harley Marques in the final. Defending Olympic and world champions Phil Dalhausser and Todd Rogers of the United States earned the bronze medal by downing David Klemperer and Eric Koreng of Germany 21–11, 21–16.

Brazil recaptured the world's top position in both men's and women's indoor volleyball. In Belgrade, Serbia, the Brazilian men edged the host country

22–25, 25–23, 25–22, 23–25, 15–12 to earn the 2009 FIVB World League championship. It was Brazil's sixth title in the past seven World League competitions and its eighth overall. Sergio Dutra Santos of Brazil was named the tournament Most Valuable Player. Russia easily beat Cuba 25–13, 26–24, 25–16 to win the bronze medal. Brazil's women won their eighth FIVB Grand Prix title after posting a perfect 5–0 record during the final round, which was held in Tokyo. Russia (4–1) and Germany (2–3) captured second and third place, respectively. The key match of the final round occurred when Brazil edged Russia 25–20, 22–25, 25–17, 24–26, 16–14. Brazil closed out the calendar with a victory at the FIVB Grand Champions Cup men's tournament in Japan. The Cuban and Japanese men finished second and third, respectively. In the women's competition an undefeated Italian team upset the defending Brazilians, who settled for second place. The Dominican Republic was third. (RICHARD S. WANNINGER)

WEIGHTLIFTING

The 2009 International Weightlifting Federation world championships were held Nov. 17–29, 2009, in Koyang (Goyang) city, S.Kor. The competition involved 373 athletes (235 men and 138 women) from 72 countries, and 135 medals were awarded in snatch, clean and jerk, and overall total in the eight men's and seven women's body-weight categories. Six senior world records were broken, four of them in the women's division.

In the women's competition the 63 medals were all won by athletes from Asia and Europe. As in past years, China finished with the most medals, 16 (6 gold, 5 silver, and 5 bronze), but Kazakhstan had more gold (7) in addition to 1 bronze. Other countries with multiple medals included Russia with 9, Turkey with 8, and Armenia and South Korea with 6 each. South Korean Jang Mi-Ran bagged her fourth super-heavyweight title with a 323-kg (712.1-lb) overall total and a new world record in clean and jerk: 187 kg (412.3 lb).

In the men's division, China topped the men's rankings with 23 (12 gold), followed by South Korea with 8 (4 gold), Ukraine with 6 (1 gold), Armenia with 6 (no gold), and Indonesia with 5 (1 gold). An Yong-Kwon of South Korea won the superheavyweight category with an overall total of 445 kg (981.1 lb). (DRAGOMIR CIOROSLAN)

WRESTLING

Freestyle and Greco-Roman. In September 2009 Russia earned four gold medals and easily won the Fédération Internationale des Luttes Associées (FILA) men's world freestyle wrestling championships, held in Herning, Den. The favoured Russian team outpointed Azerbaijan 63–48, with third place going to Iran (40 points). The four champions who led the Russians to victory were Besik Kudukhov at 60 kg, Denis Tsargush at 74 kg, Khadzhimurat Gatsalov at 96 kg, and Bilyal Makhov at 120 kg. The American men had another sub-par performance, going away with only two medals—a silver by Jake Herbert at 84 kg and a bronze by Tervel Dlagnev at 120 kg. Azerbaijan, with 42 points and two gold medalists, topped the women's freestyle, ahead of Japan and Canada (both with 37 points) and Ukraine (35).

In the Greco-Roman competition, Turkey captured two gold medals out of the seven weight classes to outlast Iran 44–39. Azerbaijan was a point back with 38, followed by Russia with 31. The gold-medal winners for Turkey were Selcuk Cebi at 74 kg and Nazmi Avluca at 84 kg. The United States earned a silver medal at 120 kg when veteran Dremiel Byers was pinned in the gold medal match by defending Olympic and world champion Mijain López of Cuba.

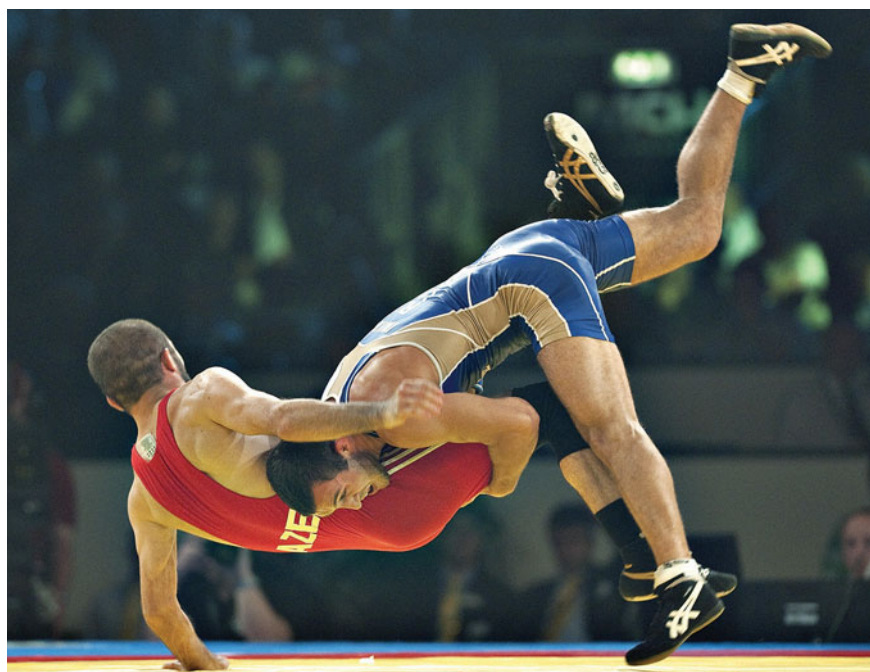
At the National Collegiate Athletic Association wrestling championships in March, the University of Iowa won its second straight title by a slim 96.5–92 margin over Ohio State University. This was Iowa's 22nd mat title since 1975.

(RON GOOD)

Sumo. The two Mongolian *yokozuna* (grand champions) duelled for dominance during 2009. Hakuho compiled a stunning 86–4 record for the year and took his career total of Emperor's Cups to 12 with victories in three *basho* (grand tournaments): the Haru (spring) Basho in March, the Nagoya Basho in July, and the year-ending Kyushu Basho in November. Asashoryu began the year with a win in the Hatsu (New Year's) Basho in January and took the Aki (autumn) Basho in September. Harumafuji, who had changed his *shikona* (fighting name) from Ama in late 2008 upon his promotion to *ozeki* (champion) rank, won the Natsu (summer) Basho in May.

Despite a mediocre win-loss record in 2009, popular *ozeki* Kaio completed his 98th *basho*, eclipsing the record that was formerly held by Takamiyama. Takamiyama, born Jesse Kuhau-lua, retired as sumo's first Hawaiian stablemaster in June, handing his coaching duties to Ushiomaru. Another notable retirement was that of former *ozeki* Dejima. (KEN COLLIER)

Russian freestyle wrestler Besik Kudukhov (right) throws Zelimkhan Huseynov of Azerbaijan in the 60-kg final at the world wrestling championships in September. Kudukhov, who won the 55-kg event in 2007, earned the gold medal.



Henning Bagger—AFP/Getty Images

Sporting Record

ARCHERY

FITA Outdoor World Target Archery Championships*								
Year	Men's individual		Men's team		Women's individual		Women's team	
	Winner	Points	Winner	Points	Winner	Points	Winner	Points
2005	Chung Jae Hun (S.Kor.)	102	South Korea	244	Lee Sung Jin (S.Kor.)	111	South Korea	251
2007	Im Dong Hyun (S.Kor.)	110	South Korea	224	N. Valeeva (Italy)	108	South Korea	226
2009	Lee Chang-Hwan (S.Kor.)	113	South Korea	222	Joo Hyun-Jung (S.Kor.)	113	South Korea	224

*Olympic (recurve) division.

AUTOMOBILE RACING

Formula One Grand Prix Race Results, 2009

Race	Driver	Winner's time (hr:min:sec)
Australian GP	J. Button (U.K.)	1:34:15.784
Malaysian GP	J. Button (U.K.)	0:55:30.622
Chinese GP	S. Vettel (Ger.)	1:57:43.485
Bahrain GP	J. Button (U.K.)	1:31:48.182
Spanish GP	J. Button (U.K.)	1:37:19.202
Monaco GP	J. Button (U.K.)	1:40:44.282
Turkish GP	J. Button (U.K.)	1:26:24.848
British GP	S. Vettel (Ger.)	1:22:49.328
French GP	<i>canceled</i>	
German GP	M. Webber (Austl.)	1:36:43.310
Hungarian GP	L. Hamilton (U.K.)	1:38:23.876
European GP	R. Barrichello (Braz.)	1:35:51.289
Belgian GP	K. Räikkönen (Fin.)	1:23:50.995
Italian GP	R. Barrichello (Braz.)	1:16:21.706
Singapore GP	L. Hamilton (U.K.)	1:56:06.337
Japanese GP	S. Vettel (Ger.)	1:28:20.443
Brazilian GP	M. Webber (Austl.)	1:32:23.081
Abu Dhabi GP	S. Vettel (Ger.)	1:34:03.414

WORLD DRIVERS' CHAMPIONSHIP: Button 95 points; Vettel 84 points; Barrichello 77 points.

CONSTRUCTORS' CHAMPIONSHIP: Brawn-Mercedes 172 points; Red Bull-Renault 153.5 points; McLaren-Mercedes 71 points.

National Association for Stock Car Auto Racing (NASCAR) Sprint Cup Champions*

Year	Winner
2007	J. Johnson
2008	J. Johnson
2009	J. Johnson

*Nextel Cup until 2008.

Daytona 500

Year	Winner	Avg. speed in mph
2007	K. Harvick	149.335
2008	R. Newman	152.672
2009	M. Kenseth	132.816

IndyCar Champions*

Year	Indy Racing League	Champ Car
2007	D. Franchitti (Scot.)	S. Bourdais (Fr.)
2008	S. Dixon (N.Z.)	
2009	D. Franchitti (Scot.)	

*IRL and Champ Car merged in 2008.

Indianapolis 500

Year	Winner	Avg. speed in mph
2007*	D. Franchitti (Scot.)	151.774
2008	S. Dixon (N.Z.)	143.567
2009	H. Castroneves (Braz.)	150.318

*Race stopped after 415 mi because of rain.

Le Mans 24-Hour Grand Prix d'Endurance

Year	Car	Drivers
2007	Audi R10	F. Biela, E. Pirro, M. Werner
2008	Audi R10	R. Capello, T. Kristensen, A. McNish
2009	Peugeot 908	D. Brabham, M. Gene, A. Wurz

Monte-Carlo Rally

Year	Car	Driver
2007	Citroën C4 WRC	S. Loeb (Fr.)
2008	Citroën C4 WRC	S. Loeb (Fr.)
2009*	Peugeot 207 S2000	S. Ogier (Fr.)

*Race not considered part of the World Rally Championship series.

Indranil Mukherjee—AFP/Getty Images



Lin Dan of China focuses on the birdie en route to his third straight world badminton title.

BADMINTON

All England Open Championships—Singles

Year	Men	Women
2007	Lin Dan (China)	Xie Xingfang (China)
2008	Chen Jin (China)	T. Rasmussen (Den.)
2009	Lin Dan (China)	Wang Yihan (China)

Thomas Cup (men)

Year	Winner	Runner-up
2003–04	China	Denmark
2005–06	China	Denmark
2007–08	China	South Korea

Uber Cup (women)

Year	Winner	Runner-up
2003–04	China	South Korea
2005–06	China	Netherlands
2007–08	China	Indonesia

World Badminton Championships

Year	Men's singles	Women's singles	Men's doubles	Women's doubles	Mixed doubles
2006	Lin Dan (China)	Xie Xingfang (China)	Cai Yun, Fu Haifeng (China)	Gao Ling, Huang Sui (China)	N. Robertson, G. Emms (Eng.)
2007	Lin Dan (China)	Zhu Lin (China)	M. Kido, H. Setiawan (Indon.)	Yang Wei, Zhang Jiewen (China)	N. Widiyanto, L. Natsir (Indon.)
2009	Lin Dan (China)	Lu Lan (China)	Cai Yun, Fu Haifeng (China)	Zhang Yawen, Zhao Tingting (China)	T. Laybourn, K. Rytter Juhl (Den.)

BASEBALL

Final Major League Standings, 2009

AMERICAN LEAGUE

East Division				Central Division				West Division			
Won	Lost	G.B.†		Won	Lost	G.B.†		Won	Lost	G.B.†	
*N.Y. Yankees	103	59	—	*Minnesota‡	87	76	—	*L.A. Angels	97	65	—
*Boston	95	67	8	Detroit‡	86	77	1	Texas	87	75	10
Tampa Bay	84	78	19	Chicago W.Sox	79	83	7½	Seattle	85	77	12
Toronto	75	87	28	Cleveland	65	97	21½	Oakland	75	87	22
Baltimore	64	98	39	Kansas City	65	97	21½				

NATIONAL LEAGUE

East Division				Central Division				West Division			
Won	Lost	G.B.†		Won	Lost	G.B.†		Won	Lost	G.B.†	
*Philadelphia	93	69	—	*St. Louis	91	71	—	*L.A. Dodgers	95	67	—
Florida	87	75	6	Chicago Cubs	83	78	7½	*Colorado	92	70	3
Atlanta	86	76	7	Milwaukee	80	82	11	San Francisco	88	74	7
N.Y. Mets	70	92	23	Cincinnati	78	84	13	San Diego	75	87	20
Washington	59	103	34	Houston	74	88	17	Arizona	70	92	25
				Pittsburgh	62	99	28½				

*Qualified for play-offs. †Games behind. ‡Tied at regular season's end, division winner determined by one-game play-off.

World Series*

Year	Winning team	Losing team	Results
2007	Boston Red Sox (AL)	Colorado Rockies (NL)	4–0
2008	Philadelphia Phillies (NL)	Tampa Bay Rays (AL)	4–1
2009	New York Yankees (AL)	Philadelphia Phillies (NL)	4–2

*AL—American League; NL—National League.

Japan Series*

Year	Winning team	Losing team	Results
2007	Chunichi Dragons (CL)	Nippon-Ham Fighters (PL)	4–1
2008	Seibu Lions (PL)	Yomiuri Giants (CL)	4–3
2009	Yomiuri Giants (CL)	Nippon-Ham Fighters (PL)	4–2

*CL—Central League; PL—Pacific League.

BASKETBALL

NBA Final Standings, 2008–09

EASTERN CONFERENCE

Won Lost G.B.†				Won Lost G.B.†				Won Lost G.B.†			
Atlantic Division				Central Division				Southeast Division			
*Boston	62	20	—	*Cleveland	66	16	—	*Orlando	59	23	—
*Philadelphia	41	41	21	*Chicago	41	41	25	*Atlanta	47	35	12
New Jersey	34	48	28	*Detroit	39	43	27	*Miami	43	39	16
Toronto	33	49	29	Indiana	36	46	30	Charlotte	35	47	24
New York	32	50	30	Milwaukee	34	48	32	Washington	19	63	40

WESTERN CONFERENCE

Northwest Division				Pacific Division				Southwest Division			
*Denver	54	28	—	*L.A. Lakers	65	17	—	*San Antonio	54	28	—
*Portland	54	28	—	Phoenix	46	36	19	*Houston	53	29	1
*Utah	48	34	6	Golden State	29	53	36	*Dallas	50	32	4
Minnesota	24	58	30	L.A. Clippers	19	63	46	*New Orleans	49	33	5
Oklahoma City	23	59	31	Sacramento	17	65	48	Memphis	24	58	30

*Qualified for play-offs. †Games behind.

National Basketball Association (NBA) Championship

Season	Winner	Runner-up	Results
2006–07	San Antonio Spurs	Cleveland Cavaliers	4–0
2007–08	Boston Celtics	Los Angeles Lakers	4–2
2008–09	Los Angeles Lakers	Orlando Magic	4–1

Women's National Basketball Association (WNBA) Championship

Season	Winner	Runner-up	Results
2007	Phoenix Mercury	Detroit Shock	3–2
2008	Detroit Shock	San Antonio Silver Stars	3–0
2009	Phoenix Mercury	Indiana Fever	3–2

Caribbean Series

Year	Winning team	Country
2007	Cibao Eagles (Águilas)	Dominican Republic
2008	Licey Tigers (Tigres)	Dominican Republic
2009	Aragua Tigers (Tigres)	Venezuela

Division I National Collegiate Athletic Association (NCAA) Championship—Men

Year	Winner	Runner-up	Score
2007	Florida	Ohio State	84–75
2008	Kansas	Memphis	75–68
2009	North Carolina	Michigan State	89–72

Division I National Collegiate Athletic Association (NCAA) Championship—Women

Year	Winner	Runner-up	Score
2007	Tennessee	Rutgers	59–46
2008	Tennessee	Stanford	64–48
2009	Connecticut	Louisville	76–54

World Basketball Championship—Men

Year	Winner	Runner-up
2004*	Argentina	Italy
2006	Spain	Greece
2008*	United States	Spain

*Olympic champion.

World Basketball Championship—Women

Year	Winner	Runner-up
2004*	United States	Australia
2006	Australia	Russia
2008*	United States	Australia

*Olympic champion.

BILLIARD GAMES

World Three-Cushion Championship*		WPA World Nine-Ball Championships		World Professional Snooker Championship	
Year	Winner	Year	Men's champion	Year	Winner
2007	R. Umeda (Japan)	2007	D. Peach (U.K.)	2007	J. Higgins
2008	M. Zanetti (Italy)	2008	<i>not held</i>	2008	R. O'Sullivan
2009	F. Kasidokostas (Greece)	2009	<i>not held</i>	2009	J. Higgins
*Union Mondiale de Billard champion.		Year	Women's champion		
		2007	Pan Xiaoting (China)		
		2008	Lin Yuan-chun (Taiwan)		
		2009	Liu Shasha (China)		

BOBSLEIGH AND LUGE

Bobsleigh and Skeleton World Championships						
Year	Two-man bobsleigh	Four-man/driver	Women's bobsleigh	Men's skeleton	Women's skeleton	Team
2007	A. Lange, K. Kuske (Ger.)	Switzerland/I. Rueegg	S. Kiriasis, R. Logsch (Ger.)	G. Stähli (Switz.)	N. Pikus-Pace (U.S.)	Germany
2008	A. Lange, K. Kuske (Ger.)	Germany/A. Lange	S. Kiriasis, R. Logsch (Ger.)	K. Bromley (Gr.Brit.)	A. Huber (Ger.)	Germany
2009	I. Rueegg, C. Grand (Switz.)	United States/ S. Holcomb	N. Minichiello, G. Cooke (Gr.Brit.)	G. Stähli (Switz.)	M. Trott (Ger.)	Germany

Luge World Championships*				
Year	Men	Women	Doubles	Team
2007	D. Möller (Ger.)	T. Hüfner (Ger.)	P. Leitner, A. Resch (Ger.)	Germany
2008	F. Loch (Ger.)	T. Hüfner (Ger.)	A. Florschütz, T. Wustlich (Ger.)	Germany
2009	F. Loch (Ger.)	E. Hamlin (U.S.)	G. Plankensteiner, O. Haselrieder (Italy)	Germany

*Artificial track.

BOWLING

USBC Open Bowling Championships—Regular Division					World Tenpin Bowling Championships—Men				
Year	Singles	Score	All-events	Score	Year	Singles	Doubles	Trios	Team (fives)
2007	F. Aki	814	M. Rose, Jr.	2,198	2003	M. Luoto (Fin.)	Sweden	United States	Sweden
2008	B. Young	832	J. Futrell	2,183	2006	R. Ong (Sing.)	Sweden	South Korea	United States
2009	B. Goergen	862	R. Vokes	2,321	2008	W.R. Williams, Jr. (U.S.)	United States	South Korea	United States

USBC Women's Bowling Championships—Classic Division					World Tenpin Bowling Championships—Women				
Year	Singles	Score	All-events	Score	Year	Singles	Doubles	Trios	Team (fives)
2007	T. Stanbrough	745	W. Macpherson	2,161	2005	E. Cheah (Malay.)	Germany	Taiwan	Taiwan
2008	C. Ham	736	L. Johnson	2,113	2007	S. O'Keefe (U.S.)	South Korea	Sweden	Malaysia
2009	M. Feldman	816	R. Romeo	2,172	2009	S. Nation (U.S.)	South Korea	Taiwan	South Korea

PBA Tournament of Champions		PBA World Championship	
Year	Champion	Year	Winner
2006–07	T. Jones	2006–07	D. Kent
2007–08	M. Haugen, Jr.	2007–08	N. Duke
2008–09	P. Allen	2008–09	N. Duke

BOXING

World Heavyweight Champions No Weight Limit		World Cruiserweight Champions Top Weight 195 Pounds (WBC 200 Pounds)		World Light Heavyweight Champions Top Weight 175 Pounds	
WBA		WBA		WBA	
Nikolay Valuyev (Russia; 8/30/08)		Guillermo Jones (Pan.; 9/27/08)		Hugo Hernan Garay (Arg.; 7/3/08)	
David Haye (U.K.; 11/7/09)		WBC		Gabriel Campillo (Spain; 6/20/09)	
WBC		Giacobbe Fragomeni (Italy; 10/24/08)		WBC	
Vitali Klitschko (Ukr.; 10/11/08)		Zsolt Erdei (Hung.; 11/21/09)		Adrian Diaconu (Rom.; 7/11/08)	
IBF		IBF		Jean Pascal (Can.; 6/19/09)	
Wladimir Klitschko (Ukr.; 4/22/06)		Tomasz Adamek (Pol.; 12/11/08)		IBF	
		gave up title in 2009		Chad Dawson (U.S.; 10/11/08)	
				gave up title in 2009	
				Tavoris Cloud (U.S.; 8/28/09)	

BOXING (continued)

**World Super Middleweight Champions
Top Weight 168 Pounds****WBA**

Mikkel Kessler (Den.; 6/21/08)
declared super champion in 2009
Dimitri Sartison (Ger.; 11/21/09)

Andre Ward (U.S.; 11/21/09; defeated Kessler)

WBC

Carl Froch (U.K.; 12/6/08)

IBF

Lucian Bute (Can.; 10/19/07)

**World Middleweight Champions
Top Weight 160 Pounds****WBA**

Felix Sturm (Ger.; 4/28/07)

WBC

Kelly Pavlik (U.S.; 9/29/07)

IBF

Arthur Abraham (Arm.; 12/10/05)
gave up title in 2009
Sebastian Sylvester (Ger.; 9/19/09)

**World Junior Middleweight Champions
Top Weight 154 Pounds
(also called super welterweight)****WBA**

Daniel Santos (P.R.; 7/11/08)
Yuri Foreman (Israel; 11/14/09)

WBC

Vernon Forrest (U.S.; 9/13/08)
stripped of title in 2009

IBF

Verno Phillips (U.S.; 3/27/08)
gave up title in 2008
Cory Spinks (U.S.; 4/24/09)

**World Welterweight Champions
Top Weight 147 Pounds****WBA**

Antonio Margarito (Mex.; 7/26/08)
declared super champion in 2008
Yuriy Nuzhnenko (Ukr.; 10/3/08)
Shane Mosley (U.S.; 1/24/09; defeated Margarito)
declared super champion in 2009
Vyacheslav Senchenko (Ukr.; 4/10/09;
defeated Nuzhnenko)

WBC

Andre Berto (U.S.; 6/21/08)

IBF

Joshua Clottey (Ghana; 8/2/08)
stripped of title in 2009
Isaac Hlatshwayo (S.Af.; 8/1/09)
Jan Zaveck (Slov.; 12/11/09)

**World Junior Welterweight Champions
Top Weight 140 Pounds
(also called super lightweight)****WBA**

Andreas Kotelnik (Ukr.; 3/22/08)
Amir Khan (U.K.; 7/18/09)

WBC

Timothy Bradley (U.S.; 5/10/08)
stripped of title in 2009
Devon Alexander (U.S.; 8/1/09)

IBF

Paul Malignaggi (U.S.; 6/16/07)
gave up title in 2008
Juan Urango (Colom.; 1/30/09)

**World Lightweight Champions
Top Weight 135 Pounds****WBA**

Juan Diaz (U.S.; 7/17/04)
declared unified champion in 2007
José Alfaro (Nic.; 12/29/07)
Nate Campbell (U.S.; 3/8/08; defeated Diaz)
declared super champion in 2008
stripped of title in 2009
Yusuke Kabori (Japan; 5/19/08; defeated Alfaro)
Paulus Moses (Namibia; 1/3/09; defeated Kabori)
Juan Manuel Márquez (Mex.; 2/28/09)
declared super champion in 2009

WBC

Manny Pacquiao (Phil.; 6/28/08)
gave up title in 2009
Edwin Valero (Venez.; 4/4/09)

IBF

Nate Campbell (U.S.; 3/8/08)
stripped of title in 2009

**World Junior Lightweight Champions
Top Weight 130 Pounds
(also called super featherweight)****WBA**

Jorge Linares (Venez.; 11/28/08)
Juan Carlos Salgado (Mex.; 10/10/09)

WBC

Humberto Soto (Mex.; 12/20/08)

IBF

Cassius Baloyi (S.Af.; 5/31/06)
Malcolm Klassen (S.Af.; 4/18/09)
Robert Guerrero (U.S.; 8/22/09)

**World Featherweight Champions
Top Weight 126 Pounds****WBA**

Chris John (Indon.; 9/26/03)
interim champion 2003–05
declared super champion in 2009
Yuriorkis Gamboa (Cuba; 10/10/09)

WBC

Óscar Larios (Mex.; 10/16/08)
Takahiro Aoh (Japan; 3/12/09)
Elio Rojas (Dom.Rep.; 7/14/09)

IBF

Cristóbal Cruz (Mex.; 10/23/08)

**World Junior Featherweight Champions
Top Weight 122 Pounds
(also called super bantamweight)****WBA**

Celestino Caballero (Pan.; 10/4/06)
declared unified champion in 2008
Bernard Dunne (Ire.; 3/21/09)
Poonsawat Kratingdaengym (Thai.; 9/26/09)

WBC

Israel Vázquez (Mex.; 8/4/07)
declared “champion emeritus” in 2008
Toshiaki Nishioka (Japan; 1/3/09)

IBF

Celestino Caballero (Pan.; 11/21/08)

**World Bantamweight Champions
Top Weight 118 Pounds****WBA**

Anselmo Moréno (Pan.; 5/31/08)

WBC

Hozumi Hasegawa (Japan; 4/16/05)

IBF

Joseph Agbeko (Ghana; 9/29/07)
Yonhny Pérez (Colom.; 10/31/09)

**World Junior Bantamweight Champions
Top Weight 115 Pounds
(also called super flyweight)****WBA**

Cristian Mijares (Mex.; 5/17/08)
declared unified champion in 2008
Nobuo Nashiro (Japan; 9/15/08)
Vic Darchinyan (Austl.; 11/1/08; defeated Mijares)
declared unified champion in 2008

WBC

Vic Darchinyan (Austl.; 11/1/08)

IBF

Vic Darchinyan (Austl.; 8/2/08)
gave up title in 2009
Simphiwe Nongqayi (S.Af.; 9/15/09)

*WBC junior featherweight champion
Toshiaki Nishioka of Japan displays
the belt he won in January.*



Kazuhiro Nogi—AFP/Getty Images

BOXING (continued)

World Flyweight Champions
Top Weight 112 Pounds

WBA

Denkaosan Kaovichit (Thai.; 12/31/08)

WBC

Daisuke Naito (Japan; 7/18/07)

Koki Kameda (Japan; 11/29/09)

IBF

Nonito Donaire (Phil.; 7/7/07)
gave up title in 2009**Moruti Mthalane (S.Af.; 11/20/09)**World Junior Flyweight Champions
Top Weight 108 Pounds

WBA

Brahim Asloum (Fr.; 12/8/07)
gave up title in 2009**Giovanni Segura (Mex.; 6/5/09, interim from 3/14)**

WBC

Edgar Sosa (Mex.; 4/14/07)

Rodel Mayol (Phil.; 11/21/09)

IBF

Ulises Solis (Mex.; 1/7/06)

Brian Viloria (U.S.; 4/19/09)World Mini-flyweight Champions
Top Weight 105 Pounds
(also called strawweight)

WBA

Román González (Nic.; 9/15/08)

WBC

Oleydong Sithsanerchai (Thai.; 11/29/07)

IBF

Raúl García (Mex.; 6/14/08)

CHESS

FIDE Olympiad—Open

Year	Winner	Runner-up
2004	Ukraine	Russia
2006	Armenia	China
2008	Armenia	Israel

FIDE Olympiad—Women

Year	Winner	Runner-up
2004	China	United States
2006	Ukraine	Russia
2008	Georgia	Ukraine

Julian Herbert/Getty Images

On February 13, groundsmen in Antigua dig up the sandy cricket pitch after the second Test between England and West Indies was abandoned because officials deemed the outfield “unfit for play.”



CRICKET

Test Match Results, October 2008–September 2009

Host/Ground	Date	Scores	Result
India/Bangalore	Oct. 9–13	Austl. 430 and 228 for 6 dec; India 360 and 177 for 4	Match drawn
India/Mohali	Oct. 17–21	India 469 and 314 for 3 dec; Austl. 268 and 195	India won by 320 runs
India/Delhi	Oct. 29–Nov. 2	India 613 for 7 dec and 208 for 5 dec; Austl. 577 and 31 for 0	Match drawn
India/Nagpur	Nov. 6–10	India 441 and 295; Austl. 355 and 209	India won by 172 runs; India won series 2–0
Bangladesh/Chittagong	Oct. 17–21	Bangl. 245 and 242; N.Z. 171 and 317 for 7	N.Z. won by 3 wickets
Bangladesh/Mirpur	Oct. 25–29	N.Z. 262 for 6 dec and 79 for 1; Bangl. 169 for 9 dec	Match drawn; N.Z. won series 1–0
Australia/Brisbane	Nov. 20–23	Austl. 214 and 268; N.Z. 156 and 177	Austl. won by 149 runs
Australia/Adelaide	Nov. 28–Dec. 1	N.Z. 270 and 203; Austl. 535	Austl. won by an innings and 62 runs; Austl. won series 2–0
South Africa/Bloemfontein	Nov. 19–22	S.Af. 441; Bangl. 153 and 159	S.Af. won by an innings and 129 runs
South Africa/Centurion	Nov. 26–28	Bangl. 250 and 131; S.Af. 429	S.Af. won by an innings and 48 runs; S.Af. won series 2–0
India/Chennai	Dec. 11–15	Eng. 316 and 311 for 9 dec; India 241 and 387 for 4	India won by 6 wickets
India/Mohali	Dec. 19–23	India 453 and 251 for 7 dec; Eng. 302 and 64 for 1	Match drawn; India won series 1–0
New Zealand/Dunedin	Dec. 11–15	N.Z. 365 and 44 for 2; W.Ind. 340	Match drawn
New Zealand/Napier	Dec. 19–23	W.Ind. 307 and 375; N.Z. 371 and 220 for 5	Match drawn; series drawn 0–0
Australia/Perth	Dec. 17–21	Austl. 375 and 319; S.Af. 281 and 414 for 4	S.Af. won by 6 wickets
Australia/Melbourne	Dec. 26–30	Austl. 394 and 247; S.Af. 459 and 183 for 1	S.Af. won by 9 wickets
Australia/Sydney	Jan. 3–7	Austl. 445 and 257 for 4 dec; S.Af. 327 and 272	Austl. won by 103 runs; S.Af. won series 2–1

CRICKET (continued)

Test Match Results, October 2008–September 2009 (continued)			
Host/Ground	Date	Scores	Result
Bangladesh/Mirpur	Dec. 26–31	SriL. 293 and 405 for 6 dec; Bangl. 178 and 413	SriL. won by 107 runs
Bangladesh/Chittagong	Jan. 3–6	SriL. 384 and 447 for 6 dec; Bangl. 208 and 158	SriL. won by 465 runs; SriL. won series 2–0
West Indies/Jamaica	Feb. 4–7	Eng. 318 and 51; W.Ind. 392	W.Ind. won by an innings and 23 runs
West Indies/Antigua	Feb. 13	Eng. 7 for 0	Match abandoned
West Indies/Antigua	Feb. 15–19	Eng. 566 for 9 dec and 221 for 8 dec; W.Ind. 285 and 370 for 9	Match drawn
West Indies/Barbados	Feb. 26–March 2	Eng. 600 for 6 dec and 279 for 2 dec; W.Ind. 749 for 9 dec	Match drawn
West Indies/Trinidad	March 6–10	Eng. 546 for 6 dec and 237 for 6 dec; W.Ind. 544 and 114 for 8	Match drawn; W.Ind. won series 1–0
Pakistan/Karachi	Feb. 21–25	SriL. 644 for 7 dec and 144 for 5; Pak. 765 for 6 dec	Match drawn
Pakistan/Lahore	March 1–5	SriL. 606; Pak. 110 for 1	Match abandoned; series drawn 0–0
South Africa/Johannesburg	Feb. 26–March 2	Austl. 466 and 207; S.Af. 220 and 291	Austl. won by 162 runs
South Africa/Durban	March 6–10	Austl. 352 and 331 for 5 dec; S.Af. 138 and 370	Austl. won by 175 runs
South Africa/Cape Town	March 19–22	Austl. 209 and 422; S.Af. 651	S.Af. won by an innings and 20 runs; Austl. won series 2–1
New Zealand/Hamilton	March 18–21	N.Z. 279 and 279; India 520 and 39 for 0	India won by 10 wickets
New Zealand/Napier	March 26–30	N.Z. 619 for 9 dec; India 305 and 476 for 4	Match drawn
New Zealand/Wellington	April 3–7	India 379 and 434 for 7 dec; N.Z. 197 and 281 for 8	Match drawn; India won series 1–0
England/London (Lord's)	May 6–8	Eng. 377 and 32 for 0; W.Ind. 152 and 256	Eng. won by 10 wickets
England/Durham	May 14–18	Eng. 569 for 6 dec; W.Ind. 310 and 176	Eng. won by an innings and 83 runs; Eng. won series 2–0
Sri Lanka/Galle	July 4–7	SriL. 292 and 217; Pak. 342 and 117	SriL. won by 50 runs
Sri Lanka/Colombo	July 12–14	Pak. 90 and 320; SriL. 240 and 171 for 3	SriL. won by 7 wickets
Sri Lanka/Colombo	July 20–24	Pak. 299 and 425 for 9 dec; SriL. 233 and 391 for 4	Match drawn; SriL. won series 2–0
England/Cardiff	July 8–12	Eng. 435 and 252 for 9; Austl. 674 for 6 dec	Match drawn
England/London (Lord's)	July 16–20	Eng. 425 and 311 for 6 dec; Austl. 215 and 406	Eng. won by 115 runs
England/Birmingham	July 30–Aug. 3	Austl. 263 and 375 for 5; Eng. 376	Match drawn
England/Leeds	Aug. 7–9	Eng. 102 and 263; Austl. 445	Austl. won by an innings and 80 runs
England/London (The Oval)	Aug. 20–23	Eng. 332 and 373 for 9 dec; Austl. 160 and 348	Eng. won by 197 runs; Eng. won series 2–1
West Indies/St. Vincent	July 9–13	Bangl. 238 and 345; W.Ind. 307 and 181	Bangl. won by 95 runs
West Indies/Grenada	July 17–20	W.Ind. 237 and 209; Bangl. 232 and 217 for 6	Bangl. won by 4 wickets; Bangl. won series 2–0
Sri Lanka/Galle	Aug. 18–22	SriL. 452 and 259 for 4 dec; N.Z. 299 and 210	SriL. won by 202 runs
Sri Lanka/Colombo	Aug. 26–30	SriL. 416 and 311 for 5 dec; N.Z. 234 and 397	SriL. won by 96 runs; SriL. won series 2–0

Cricket World Cup

Year	Result			
1999	Australia	133 for 2	Pakistan	132
2003	Australia	359 for 2	India	234
2007	Australia	281 for 4	Sri Lanka	215 for 8

CURLING

World Curling Championship—Men

Year	Winner	Runner-up
2007	Canada	Germany
2008	Canada	Scotland
2009	Scotland	Canada

World Curling Championship—Women

Year	Winner	Runner-up
2007	Canada	Denmark
2008	Canada	China
2009	China	Sweden

At the women's world curling championship in March, Chinese skip Wang Bingyu (centre) crouches to get a better look at the action. Wang's team upset Sweden in the final for China's first world curling title.



Ahn Young-joon/AP

CYCLING

Cycling Champions, 2009					
Event	Winner	Country	Event	Winner	Country
WORLD CHAMPIONS—TRACK			WORLD CHAMPIONS—MOUNTAIN BIKES		
Men			Men		
Sprint	G. Bauge	France	Cross-country	N. Schurter	Switzerland
Individual pursuit	T. Phinney	United States	Downhill	S. Peat	Great Britain
Kilometre time trial	S. Nimke	Germany	4-cross	J. Graves	Australia
Points	C. Meyer	Australia	Women		
Team pursuit	M. Christensen, C. Jorgensen, J.-E. Madsen, A. Rasmussen	Denmark	Cross-country	I. Kalentiyeva	Russia
Keirin	M. Levy	Germany	Downhill	E. Ragot	France
Team sprint	G. Bauge, M. Bourgain, K. Sireau	France	4-cross	C. Buchanan	Australia
Madison	M. Morkov, A. Rasmussen	Denmark	MAJOR ELITE ROAD-RACE WINNERS		
Scratch	M. Kneisky	France	Tour de France	A. Contador	Spain
Omnium	L. Howard	Australia	Tour of Italy	D. Menchov	Russia
Women			Tour of Spain	A. Valverde	Spain
Sprint	V. Pendleton	Great Britain	Tour of Switzerland	F. Cancellara	Switzerland
Individual pursuit	A. Shanks	New Zealand	Milan–San Remo	M. Cavendish	Great Britain
500-m time trial	S. Krupeckaite	Lithuania	Tour of Flanders	S. Devolder	Belgium
Points	G. Bronzini	Italy	Paris–Roubaix	T. Boonen	Belgium
Team pursuit	E. Armistead, W. Houvenaghel, J. Rowsell	Great Britain	Amstel Gold	S. Ivanov	Russia
Keirin	Guo Shuang	China	Liège–Bastogne–Liège	A. Schleck	Luxembourg
Team sprint	K. McCulloch, A. Meares	Australia	Vattenfall Cyclassics	T. Farrar	United States
Scratch	Y. González Valdivieso	Cuba	GP Ouest-France	S. Gerrans	Australia
Omnium	J. Tomic	Australia	San Sebastian Classic	C. Barredo	Spain
WORLD CHAMPIONS—ROAD			Tour of Lombardy	P. Gilbert	Belgium
Men			Paris–Nice	L. Sánchez	Spain
Individual road race	C. Evans	Australia	Ghent–Wevelgem	E. Boasson Hagen	Norway
Individual time trial	F. Cancellara	Switzerland	Flèche Wallonne	D. Rebellin	Italy
Women			Tour of Romandie	R. Kreuziger	Czech Republic
Individual road race	T. Guderzo	Italy	Dauphiné Libéré	A. Valverde	Spain
Individual time trial	K. Armstrong	United States	Tirreno–Adriatico	M. Scarponi	Italy
WORLD CHAMPIONS—CYCLO-CROSS					
Men	N. Albert	Belgium			
Women	M. Vos	Netherlands			

EQUESTRIAN SPORTS

The Kentucky Derby			The Preakness Stakes			The Belmont Stakes		
Year	Horse	Jockey	Year	Horse	Jockey	Year	Horse	Jockey
2007	Street Sense	C. Borel	2007	Curlin	R. Albarado	2007	Rags to Riches	J. Velazquez
2008	Big Brown	K. Desormeaux	2008	Big Brown	K. Desormeaux	2008	Da’ Tara	A. Garcia
2009	Mine That Bird	C. Borel	2009	Rachel Alexandra	C. Borel	2009	Summer Bird	K. Desormeaux
2,000 Guineas			The Derby			The St. Leger		
Year	Horse	Jockey	Year	Horse	Jockey	Year	Horse	Jockey
2007	Cockney Rebel	O. Peslier	2007	Authorized	F. Dettori	2007	Lucarno	J. Fortune
2008	Henrythenavigator	J. Murtagh	2008	New Approach	K. Manning	2008	Conduit	F. Dettori
2009	Sea The Stars	M. Kinane	2009	Sea The Stars	M. Kinane	2009	Mastery	T. Durcan
Triple Crown Champions—U.S.			Triple Crown Champions—British			Melbourne Cup		
Year	Horse		Year	Winner		Year	Horse	Jockey
1973	Secretariat		1918	Gainsborough		2007	Efficient	M. Rodd
1977	Seattle Slew		1935	Bahram		2008	Viewed	B. Shinn
1978	Affirmed		1970	Nijinsky		2009	Shocking	C. Brown
						The Hambletonian Trot		
Year	Horse					Year	Horse	Driver
2007	Donato Hanover					2007	Donato Hanover	R. Pierce
2008	Deweycheatumnhowe					2008	Deweycheatumnhowe	R. Schnittker
2009	Muscle Hill					2009	Muscle Hill	B. Sears

EQUESTRIAN SPORTS (continued)

Major Thoroughbred Race Winners, 2009					
Race	Won by	Jockey	Race	Won by	Jockey
United States			England		
Acorn Stakes	Gabby's Golden Gal	J. Castellano	Two Thousand Guineas	Sea The Stars	M. Kinane
Alabama Stakes	Careless Jewel	R. Landry	One Thousand Guineas	Ghanaati	R. Hills
Alcibiades Stakes	Neglige	R. Maragh	Epsom Derby	Sea The Stars	M. Kinane
American Oaks Invitational	Gozzip Girl	K. Desormeaux	Epsom Oaks	Sariska	J. Spencer
Apple Blossom Handicap	Seventh Street	R. Maragh	St. Leger	Mastery	T. Duncan
Arlington Million	Gio Ponti	R. Dominguez	Coronation Cup	Ask	R. Moore
Ashland Stakes	Hooh Why	C. Lanerie	Ascot Gold Cup	Yeats	J. Murtagh
Beldame Stakes	Music Note	R. Maragh	Coral-Eclipse Stakes	Sea The Stars	M. Kinane
Belmont Stakes	Summer Bird	K. Desormeaux	King George VI and Queen Elizabeth Diamond Stakes	Conduit	R. Moore
Beverly D. Stakes	Dynaforce	K. Desormeaux	Sussex Stakes	Rip Van Winkle	J. Murtagh
Blue Grass Stakes	General Quarters	E. Coa	Juddmonte International Stakes	Sea The Stars	M. Kinane
Breeders' Cup Classic	Zenyatta	M. Smith	Champion Stakes	Twice Over	T. Queally
Breeders' Cup Dirt Mile	Furthest Land	J. Lejaroux			
Breeders' Cup Filly and Mare Sprint	Informed Decision	J. Lejaroux	France		
Breeders' Cup Filly and Mare Turf	Midday	T. Queally	Poule d'Essai des Poulains	Silver Frost	C. Soumillon
Breeders' Cup Juvenile	Vale of York	A. Ajtebi	Poule d'Essai des Pouliches	Elusive Wave	C.-P. Lemaire
Breeders' Cup Juvenile Fillies	She Be Wild	J. Lejaroux	Prix du Jockey-Club (French Derby)	Le Havre	C.-P. Lemaire
Breeders' Cup Juvenile Fillies Turf	Tapitsfly	R. Albarado	Prix de Diane (French Oaks)	Stacelita	C.-P. Lemaire
Breeders' Cup Juvenile Turf	Pounced	F. Dettori	Grand Prix de Paris	Cavalryman	M. Guyon
Breeders' Cup Ladies' Classic	Life Is Sweet	G. Gomez	Grand Prix de Saint-Cloud	Spanish Moon	R. Moore
Breeders' Cup Marathon	Man of Iron	J. Murtagh	Prix Jacques Le Marois	Goldikova	O. Peslier
Breeders' Cup Mile	Goldikova	O. Peslier	Prix Vermeille	Stacelita*	C.-P. Lemaire
Breeders' Cup Sprint	Dancing in Silks	J. Rosario	Prix de l'Arc de Triomphe	Sea The Stars	M. Kinane
Breeders' Cup Turf	Conduit	R. Moore	Prix Jean-Luc Lagardère–Grand Critérium	Siyouni	G. Mosse
Breeders' Cup Turf Sprint	California Flag	J. Talamo	Prix Royal-Oak	Ask	R. Moore
Breeders' Futurity	Noble's Promise	W. Martinez			
Carter Handicap	Kodiak Kowboy	J. Velazquez	Ireland		
Champagne Stakes	Homeboykris	E. Prado	Irish Two Thousand Guineas	Mastercraftsman	J. Murtagh
Cigar Mile Handicap	Kodiak Kowboy	S. Bridgmohan	Irish One Thousand Guineas	Again	J. Murtagh
Citation Handicap	Fluke	J. Talamo	Irish Derby	Fame and Glory	J. Murtagh
Coaching Club American Oaks	Funny Moon	A. Garcia	Irish Oaks	Sariska	J. Spencer
Donn Handicap	Albertus Maximus	A. Garcia	Irish Champion Stakes	Sea The Stars	M. Kinane
Eddie Read Stakes	Global Hunter	C. Nakatani	Irish St. Leger	Alandi	M. Kinane
Florida Derby	Quality Road	J. Velazquez			
Flower Bowl Invitational	Pure Clan	J. Lejaroux	Italy		
Haskell Invitational	Rachel Alexandra	C. Borel	Derby Italiano	Mastery	F. Dettori
Hollywood Derby	The Usual Q.T.	V. Espinoza	Gran Premio del Jockey Club	Schiaparelli	F. Dettori
Hollywood Gold Cup	Rail Trip	J. Valdivia			
Hopeful Stakes	Dublin	J. Theriot	Germany		
Jockey Club Gold Cup	Summer Bird	K. Desormeaux	Deutsches Derby	Wiener Walzer	F. Johansson
Joe Hirsch Turf Classic Invitational	Interpatation	R. Albarado	Grosser Preis von Baden	Getaway	A. De Vries
Kentucky Derby	Mine That Bird	C. Borel	Preis von Europa	Jukebox Jury	R. Ffrench
Kentucky Oaks	Rachel Alexandra	C. Borel			
Man o' War Stakes	Gio Ponti	R. Dominguez	Australia		
Manhattan Handicap	Gio Ponti	G. Gomez	Caulfield Cup	Viewed	B. Rawiller
Matriarch Stakes	Ventura	G. Gomez	Cox Plate	So You Think	G. Boss
Metropolitan Handicap	Bribon	A. Garcia	Melbourne Cup	Shocking	C. Brown
Mother Goose Stakes	Rachel Alexandra	C. Borel			
Pacific Classic	Richard's Kid	M. Smith	United Arab Emirates		
Personal Ensign Stakes	Icon Project	J. Lejaroux	Dubai World Cup	Well Armed	A. Gryder
Preakness Stakes	Rachel Alexandra	C. Borel	Dubai Sheema Classic	Eastern Anthem	A. Ajtebi
Queen Elizabeth II Challenge Cup	Hot Cha Cha	J. Graham	Dubai Duty Free	Gladiatorus	A. Ajtebi
Ruffian Handicap	Swift Temper	A. Garcia			
Santa Anita Derby	Pioneerof The Nile	G. Gomez	Asia		
Santa Anita Handicap	Einstein	J. Lejaroux	Japan Cup	Vodka	C.-P. Lemaire
Secretariat Stakes	Take The Points	K. Desormeaux	Hong Kong Gold Cup	Viva Pataca	D. Beadman
Spinster Stakes	Mushka	K. Desormeaux	Singapore Airlines International Cup	Gloria De Campeao	T. Pereira
Stephen Foster Handicap	Macho Again	R. Albarado			
Sword Dancer Invitational Stakes	Telling	J. Castellano	Canada		
Travers Stakes	Summer Bird	K. Desormeaux	Queen's Plate Stakes	Eye of the Leopard	E. Da Silva
Turf Classic Stakes	Einstein	J. Lejaroux	Prince of Wales Stakes	Gallant	C. Fraser
Turf Mile Stakes	Court Vision	R. Albarado	Breeders' Stakes	Perfect Shower	J. Jones
United Nations Stakes	Presious Passion	E. Trujillo	Woodbine Mile	Ventura	G. Gomez
Vosburgh Stakes	Kodiak Kowboy	S. Bridgmohan	Canadian International Stakes	Champs Elysees	G. Gomez
Whitney Handicap	Bullsbay	J. Rose			
Wood Memorial	I Want Revenge	J. Talamo			
Woodward Stakes	Rachel Alexandra	C. Borel			
Yellow Ribbon Stakes	Magical Fantasy	A. Solis			

*Original winner demoted.

FENCING

World Fencing Championships—Men						
Year	Individual			Team		
	Foil	Épée	Sabre	Foil	Épée	Sabre
2007	P. Joppich (Ger.)	K. Kulcsar (Hung.)	S. Pozdnyakov (Russia)	France	France	Hungary
2008*	B. Kleibrink (Ger.)	M. Tagliariol (Italy)	Zhong Man (China)	Italy	France	France
2009	A. Baldini (Italy)	A. Avdeyev (Russia)	N. Limbach (Ger.)	Italy	France	Romania

*Olympic champions, except for team foil.

World Fencing Championships—Women						
Year	Individual			Team		
	Foil	Épée	Sabre	Foil	Épée	Sabre
2007	V. Vezzali (Italy)	B. Heidemann (Ger.)	Ye. Netchayeva (Russia)	Poland	France	France
2008*	V. Vezzali (Italy)	B. Heidemann (Ger.)	M. Zagunis (U.S.)	Russia	France	Ukraine
2009	A. Shanayeva (Russia)	L. Shutova (Russia)	M. Zagunis (U.S.)	Italy	Italy	Ukraine

*Olympic champions, except for team épée.

FOOTBALL

FIFA World Cup—Men				
Year	Result			
1998	France	3	Brazil	0
2002	Brazil	2	Germany	0
2006	Italy*	1	France	1

*Won on penalty kicks.

FIFA World Cup—Women				
Year	Result			
1999	United States*	0	China	0
2003	Germany	2	Sweden	1
2007	Germany	2	Brazil	0

*Won on penalty kicks.

Association Football National Champions, 2008–09					
Nation	League Champions	Cup Winners	Nation	League Champions	Cup Winners
Algeria	Setif	Belouizdad	Japan	Kashima Antlers	
Argentina	Boca Juniors (Opening)	Vélez Sarsfield (Closing)	Mexico	Toluca	
Australia	Melbourne Victory		Morocco	Raja	FAR Rabat
Austria	Salzburg	FK Austria	New Zealand	Auckland	Wellington
Belgium	Standard Liège	Genk	Nigeria	Bayelsa United	Enyimba
Bolivia	Bolivar (Opening)	Blooming (Closing)	Northern Ireland	Glentoran	Crusaders
Brazil	Flamengo	Corinthians	Norway	Rosenborg	Aalesund
Bulgaria	Levski	Litex	Paraguay	Cerro Porteño (Opening)	Nacional (Closing)
Cameroon	Tiko United	Panthère Sportive	Peru	Universitario	
Chile	Univ de Chile (Opening)	Colo Colo (Closing)	Poland	Wisla	Lech
China	Beijing Guoan		Portugal	Porto	Porto
Colombia	Once Caldas (Opening)	Independiente Medellín (Closing)	Romania	Unirea	Cluj
Costa Rica	Alajuelense		Russia	Rubin Kazan	CSKA Moscow
Côte d'Ivoire	ASEC Mimosas	Africa Sports	Saudi Arabia	Al-Ittihad	Al-Hilal
Croatia	Dinamo Zagreb	Dinamo Zagreb	Scotland	Rangers	Rangers
Czech Republic	Slavia Prague	Teplíce	Senegal	La Linguère	
Denmark	FC Copenhagen	FC Copenhagen	Serbia	Partizan Belgrade	Partizan Belgrade
Ecuador	Deportivo Quito		Slovakia	Slovan Bratislava	Kosice
England	Manchester United	Chelsea	Slovenia	Maribor	Interblock
Finland	HJK Helsinki	Inter	South Africa	SuperSport United	Moroka Swallows
France	Bordeaux	Guingamp	South Korea	Jeonbuk	Suwon Bluewings
Georgia	WIT	Dinamo Tbilisi	Spain	Barcelona	Barcelona
Germany	Wolfsburg	Werder Bremen	Sweden	AIK Stockholm	AIK Stockholm
Ghana	Hearts of Oak	Heart of Lions	Switzerland	Zurich	Sion
Greece	Olympiakos	Olympiakos	Tunisia	Espérance	CS Sfaxien
Holland	AZ	Heerenveen	Turkey	Besiktas	Besiktas
Honduras	Marathón (Opening)	Olimpia (Closing)	Ukraine	Dynamo Kiev	Vorskla Poltava
Hungary	Debreceni	Honved	United States (MLS)	Real Salt Lake	
Ireland	Bohemians	Sporting Fingal	Uruguay	Nacional (Opening)	Defensor (Closing)
Israel	Maccabi Haifa	Beitar Jerusalem	Venezuela	Caracas	
Italy	Internazionale	Lazio			

FIELD HOCKEY

World Cup Field Hockey Championship—Men		
Year	Winner	Runner-up
1998	Netherlands	Spain
2002	Germany	Australia
2006	Germany	Australia

World Cup Field Hockey Championship—Women		
Year	Winner	Runner-up
1998	Australia	Netherlands
2002	Argentina	Netherlands
2006	Netherlands	Australia

Dimitar Dilkov—AFP/Getty Images

Gold medalist Mariel Zagunis of the U.S. (right), lunges at her opponent, Ukraine's Olga Kharlan, in the women's individual sabre final at the world fencing championships.



FOOTBALL (continued)

UEFA Champions League				
Season	Result			
2006–07	AC Milan (Italy)	2	Liverpool FC (Eng.)	1
2007–08	Manchester United (Eng.)*	1	Chelsea (Eng.)	1
2008–09	FC Barcelona (Spain)	2	Manchester United (Eng.)	0

*Won on penalty kicks.

Libertadores de América Cup			
Year	Winner (country)	Runner-up (country)	Scores
2007	Boca Juniors (Arg.)	Grêmio (Braz.)	3–0, 2–0
2008	Liga de Quito (Ecu.)	Fluminense Rio de Janeiro (Braz.)	4–2, 5–5
2009	Estudiantes La Plata (Arg.)	Cruzeiro (Braz.)	0–0, 2–1

MLS Cup				
Year	Result			
2007	Houston Dynamo	2	New England Revolution	1
2008	Columbus Crew	3	New York Red Bulls	1
2009	Real Salt Lake*	1	Los Angeles Galaxy	1

*Won on penalty kicks.

Rose Bowl				
Season	Result			
2007–08	Southern California	49	Illinois	17
2008–09	Southern California	38	Penn State	24
2009–10	Ohio State	26	Oregon	17

Fiesta Bowl				
Season	Result			
2007–08	West Virginia	48	Oklahoma	28
2008–09	Texas	24	Ohio State	21
2009–10	Boise State	17	Texas Christian	10

NFL Final Standings, 2009–10

AMERICAN CONFERENCE															
East Division				North Division				South Division				West Division			
	Won	Lost	Tied		Won	Lost	Tied		Won	Lost	Tied		Won	Lost	Tied
*New England	10	6	0	*Cincinnati	10	6	0	*Indianapolis	14	2	0	*San Diego	13	3	0
*New York Jets	9	7	0	*Baltimore	9	7	0	Houston	9	7	0	Denver	8	8	0
Miami	7	9	0	Pittsburgh	9	7	0	Tennessee	8	8	0	Oakland	5	11	0
Buffalo	6	10	0	Cleveland	5	11	0	Jacksonville	7	9	0	Kansas City	4	12	0

NATIONAL CONFERENCE															
East Division				North Division				South Division				West Division			
	Won	Lost	Tied		Won	Lost	Tied		Won	Lost	Tied		Won	Lost	Tied
*Dallas	11	5	0	*Minnesota	12	4	0	*New Orleans	13	3	0	*Arizona	10	6	0
*Philadelphia	11	5	0	*Green Bay	11	5	0	Atlanta	9	7	0	San Francisco	8	8	0
New York Giants	8	8	0	Chicago	7	9	0	Carolina	8	8	0	Seattle	5	11	0
Washington	4	12	0	Detroit	2	14	0	Tampa Bay	3	13	0	St. Louis	1	15	0

*Qualified for play-offs.

Super Bowl					
	Season	Result			
XLI	2006–07	Indianapolis Colts (AFC)	29	Chicago Bears (NFC)	17
XLII	2007–08	New York Giants (NFC)	17	New England Patriots (AFC)	14
XLIII	2008–09	Pittsburgh Steelers (AFC)	27	Arizona Cardinals (NFC)	23

UEFA Cup				
Season	Result			
2006–07	Seville (Spain)*	2	Espanyol (Spain)	2
2007–08	FC Zenit St. Petersburg (Russia)	2	Rangers FC (Scot.)	0
2008–09	Shakhtar Donetsk (Ukr.)†	2	Werder Bremen (Ger.)	1

*Won on penalty kicks. †Won in overtime.

Copa América			
Year	Winner	Runner-up	Score
2001	Colombia	Mexico	1–0
2004	Brazil	Argentina	2–2, 4–2*
2007	Brazil	Argentina	3–0

*Winner determined in penalty shoot-out.

U.S. College Football National Championship*				
Season	Result			
2007–08	Louisiana State	38	Ohio State	24
2008–09	Florida	24	Oklahoma	14
2009–10	Alabama	37	Texas	21

*BCS championship game.

Orange Bowl				
Season	Result			
2007–08	Kansas	24	Virginia Tech	21
2008–09	Virginia Tech	20	Cincinnati	7
2009–10	Iowa	24	Georgia Tech	14

Sugar Bowl				
Season	Result			
2007–08	Georgia	41	Hawaii	10
2008–09	Utah	31	Alabama	17
2009–10	Florida	51	Cincinnati	24

CFL Grey Cup*

CFL Grey Cup*				
Year	Result			
2007	Saskatchewan Roughriders (WD)	23	Winnipeg Blue Bombers (ED)	19
2008	Calgary Stampeders (WD)	22	Montreal Alouettes (ED)	14
2009	Montreal Alouettes (ED)	28	Saskatchewan Roughriders (WD)	27

CFL Grey Cup*				
Year	Result			
2007	Saskatchewan Roughriders (WD)	23	Winnipeg Blue Bombers (ED)	19
2008	Calgary Stampeders (WD)	22	Montreal Alouettes (ED)	14
2009	Montreal Alouettes (ED)	28	Saskatchewan Roughriders (WD)	27

*ED—Eastern Division; WD—Western Division.

FOOTBALL (continued)

AFL Grand Final

Year	Result			
2007	Geelong Cats	24.19 (163)	Port Adelaide Power	6.8 (44)
2008	Hawthorn Hawks	18.7 (115)	Geelong Cats	11.23 (89)
2009	Geelong Cats	12.8 (80)	St. Kilda	9.14 (68)

Rugby Union World Cup

Year	Result			
1999	Australia	35	France	12
2003	England	20	Australia	17
2007	South Africa	15	England	6

Rugby League World Cup

Year	Result			
1995	Australia	16	England	8
2000	Australia	40	New Zealand	12
2008	New Zealand	34	Australia	20

Six Nations Championship

Year	Result
2007	France
2008	Wales*
2009	Ireland*

*Grand Slam winner.

GOLF

Masters Tournament

Year	Winner
2007	Z. Johnson (U.S.)
2008	T. Immelman (S.Af.)
2009	A. Cabrera (Arg.)

United States Open Championship (men)

Year	Winner
2007	A. Cabrera (Arg.)
2008	T. Woods (U.S.)
2009	L. Glover (U.S.)

British Open Tournament (men)

Year	Winner
2007	P. Harrington (Ire.)
2008	P. Harrington (Ire.)
2009	S. Cink (U.S.)

U.S. Professional Golfers' Association (PGA) Championship

Year	Winner
2007	T. Woods (U.S.)
2008	P. Harrington (Ire.)
2009	Yang Yong-Eun (S.Kor.)

United States Amateur Championship (men)

Year	Winner
2007	C. Knost (U.S.)
2008	D. Lee (N.Z.)
2009	An Byeong-Hun (S.Kor.)

British Amateur Championship (men)

Year	Winner
2007	D. Weaver (U.S.)
2008	R. Saxton (Neth.)
2009	M. Manassero (Italy)

United States Women's Open Championship

Year	Winner
2007	C. Kerr (U.S.)
2008	Park In-Bee (S.Kor.)
2009	Ji Eun-Hee (S.Kor.)

Women's British Open Championship

Year	Winner
2007	L. Ochoa (Mex.)
2008	Shin Ji-Yai (S.Kor.)
2009	C. Matthew (Scot.)

Ladies Professional Golf Association (LPGA) Championship

Year	Winner
2007	S. Pettersen (Nor.)
2008	Y. Tseng (Taiwan)
2009	A. Nordqvist (Swed.)

United States Women's Amateur Championship

Year	Winner
2007	M.J. Uribe (Colom.)
2008	A. Blumenherst (U.S.)
2009	J. Song (U.S.)

Ladies' British Amateur Championship

Year	Winner
2007	C. Ciganda (Spain)
2008	A. Nordqvist (Swed.)
2009	A. Muñoz (Spain)

World Cup (men; professional)

Year	Winner
2007	Scotland (C. Montgomerie and M. Warren)
2008	Sweden (R. Karlsson and H. Stenson)
2009	Italy (E. Molinari and F. Molinari)

Solheim Cup (women; professional)

Year	Result
2005	United States 15½, Europe 12½
2007	United States 16, Europe 12
2009	United States 16, Europe 12

Ryder Cup (men; professional)

Year	Result
2004	Europe 18½, United States 9½
2006	Europe 18½, United States 9½
2008	United States 16½, Europe 11½



Michael Conroy/AP

American golfers Michelle Wie (left) and Christina Kim kiss the crystal trophy that they shared with other members of their team after the U.S. defeated Europe 16–12 to retain the Solheim Cup.

GYMNASTICS

World Gymnastics Championships—Men

Year	All-around team	All-around individual	Horizontal bar	Parallel bars
2007	China	Yang Wei (China)	F. Hambüchen (Ger.)	M. Petkovsek (Sln.)* Kim Dae Eun (S.Kor.)*
2008†	China	Yang Wei (China)	Zou Kai (China)	Li Xiaopeng (China)
2009	<i>not held</i>	K. Uchimura (Japan)	Zou Kai (China)	Wang Guanyin (China)
Year	Pommel horse	Rings	Vault	Floor exercise
2007	Xiao Qin (China)	Chen Yibing (China)	L. Blanić (Pol.)	D. Hypolito (Braz.)
2008†	Xiao Qin (China)	Chen Yibing (China)	L. Blanić (Pol.)	Zou Kai (China)
2009	Zhang Hongtao (China)	Yan Mingyong (China)	M. Dragulescu (Rom.)	M. Dragulescu (Rom.)

*Tied. †Olympic champions.

World Gymnastics Championships—Women

Year	All-around team	All-around individual	Balance beam
2007	United States	S. Johnson (U.S.)	N. Liukin (U.S.)
2008*	China	N. Liukin (U.S.)	S. Johnson (U.S.)
2009	<i>not held</i>	B. Sloan (U.S.)	Deng Linlin (China)
Year	Uneven parallel bars	Vault	Floor exercise
2007	K. Semenova (Russia)	Cheng Fei (China)	S. Johnson (U.S.)
2008*	He Kexin (China)	Hong Un Jong (N.Kor.)	S. Izbasa (Rom.)
2009	He Kexin (China)	K. Williams (U.S.)	E. Tweddle (U.K.)

*Olympic champions.

ICE HOCKEY

NHL Final Standings, 2008–09

EASTERN CONFERENCE

Northeast Division				Atlantic Division				Southeast Division			
	Won	Lost	OTL*		Won	Lost	OTL*		Won	Lost	OTL*
†Boston	53	19	10	†New Jersey	51	27	4	†Washington	50	24	8
†Montreal	41	30	11	†Pittsburgh	45	28	9	†Carolina	45	30	7
Buffalo	41	32	9	†Philadelphia	44	27	11	Florida	41	30	11
Ottawa	36	35	11	†N.Y. Rangers	43	30	9	Atlanta	35	41	6
Toronto	34	35	13	N.Y. Islanders	26	47	9	Tampa Bay	24	40	18

WESTERN CONFERENCE

Central Division				Northwest Division				Pacific Division			
	Won	Lost	OTL*		Won	Lost	OTL*		Won	Lost	OTL*
†Detroit	51	21	10	†Vancouver	45	27	10	†San Jose	53	18	11
†Chicago	46	24	12	†Calgary	46	30	6	†Anaheim	42	33	7
†St. Louis	41	31	10	Minnesota	40	33	9	Dallas	36	35	11
†Columbus	41	31	10	Edmonton	38	35	9	Phoenix	36	39	7
Nashville	40	34	8	Colorado	32	45	5	Los Angeles	34	37	11

*Overtime losses, worth one point. †Qualified for play-offs.

The Stanley Cup

Season	Winner	Runner-up	Results
2006–07	Anaheim Ducks	Ottawa Senators	4–1
2007–08	Detroit Red Wings	Pittsburgh Penguins	4–2
2008–09	Pittsburgh Penguins	Detroit Red Wings	4–3

World Ice Hockey Championship—Men

Year	Winner
2007	Canada
2008	Russia
2009	Russia

World Ice Hockey Championship—Women

Year	Winner
2007	Canada
2008	United States
2009	United States

ICE SKATING

World Figure Skating Champions—Men

Year	Winner
2007	B. Joubert (Fr.)
2008	J. Buttle (Can.)
2009	E. Lysacek (U.S.)

World Figure Skating Champions—Women

Year	Winner
2007	M. Ando (Japan)
2008	M. Asada (Japan)
2009	Kim Yu-Na (S.Kor.)

World Figure Skating Champions—Pairs

Year	Winners
2007	Shen Xue, Zhao Hongbo (China)
2008	A. Savchenko, R. Szolkowy (Ger.)
2009	A. Savchenko, R. Szolkowy (Ger.)

World Ice Dancing Champions

Year	Winners
2007	A. Denkova, M. Staviski (Bulg.)
2008	I. Delobel, O. Schoenfelder (Fr.)
2009	O. Domnina, M. Shabalin (Russia)

Mark Ralston—AFP/Getty Images



Ice dancing champions Oksana Domnina and Maksim Shabalin go for the gold at the world figure skating championships.

ICE SKATING (continued)

World Ice Speed-Skating Records Set in 2009 on Major Tracks*

Event	Name	Country	Result
MEN			
100 m†	Yuya Oikawa	Japan	9.40 sec
1,000 m	Trevor Marsicano	United States	1 min 06.88 sec
	Shani Davis	United States	1 min 06.42 sec
1,500 m	Shani Davis	United States	1 min 41.80 sec
	Shani Davis	United States	1 min 41.04 sec
WOMEN			
100 m†	Jenny Wolf	Germany	10.21 sec
500 m	Jenny Wolf	Germany	37.00 sec
team pursuit	Canada (Kristina Groves, Christine Nesbitt, Brittany Schussler)	Canada	2 min 55.79 sec

*May include records awaiting ISU ratification at year's end.
†Not an officially ratified event; best performance on record.

World Ice Speed-Skating Records Set in 2009 on Short Tracks*

Event	Name	Country	Time
MEN			
500 m	Sung Si-Bak	South Korea	40.651 sec
1,000 m	Charles Hamelin	Canada	1 min 23.454 sec
WOMEN			
none			

*May include records awaiting ISU ratification at year's end.

World All-Around Speed-Skating Champions

Year	Men	Women
2007	S. Kramer (Neth.)	I. Wüst (Neth.)
2008	S. Kramer (Neth.)	P. van Deutekom (Neth.)
2009	S. Kramer (Neth.)	M. Sablikova (Cz.Rep.)

World Short-Track Speed-Skating Championships—Overall Winners

Year	Men	Women
2007	Ahn Hyun-Soo (S.Kor.)	Jin Sun-Yu (S.Kor.)
2008	A.A. Ohno (U.S.)	Wang Meng (China)
2009	Lee Ho-Suk (S.Kor.)	Wang Meng (China)

JUDO

World Judo Championships—Men

Year	Open weights	60 kg	66 kg	73 kg
2005	D. Van der Geest (Neth.)	C. Fallon (Gr.Brit.)	J. Derly (Braz.)	A. Braun (Hung.)
2007	Y. Muneta (Japan)	R. Houkes (Neth.)	J. Derly (Braz.)	Wang Ki-Chun (S.Kor.)
2009	T. Riner (Fr.)*	G. Zantaraia (Ukr.)	T. Hashbaatar (Mong.)	Wang Ki-Chun (S.Kor.)
Year	81 kg	90 kg	100 kg	+100 kg
2005	G. Elmont (Neth.)	H. Izumi (Japan)	K. Suzuki (Japan)	A. Mikhaylin (Russia)
2007	T. Camilo (Braz.)	I. Tsirekidze (Geo.)	L. Corrêa (Braz.)	T. Riner (France)
2009	I. Nifontov (Russia)	Lee Kyu-Won (S.Kor.)	M. Rakov (Kazakh.)	T. Riner (France)

*Competition held separately in December 2008.

World Judo Championships—Women

Year	Open weights	48 kg	52 kg	57 kg
2005	M. Shintani (Japan)	Y. Bermoy (Cuba)	Li Ying (China)	Kye Sun-Hui (N.Kor.)
2007	M. Tsukada (Japan)	R. Tamura Tani (Japan)	Shi Junjie (China)	Kye Sun-Hui (N.Kor.)
2009	Tong Wen (China)*	T. Fukumi (Japan)	M. Nakamura (Japan)	M. Ribout (Fr.)
Year	63 kg	70 kg	78 kg	+78 kg
2005	L. Decosse (Fr.)	E. Bosch (Neth.)	Y. Laborde (Cuba)	Tong Wen (China)
2007	D. González (Cuba)	G. Emane (Fr.)	Y. Laborde (Cuba)	Tong Wen (China)
2009	Y. Ueno (Japan)	Y. Alvear (Colom.)	M. Verkerk (Neth.)	Tong Wen (China)

*Competition held separately in December 2008.



Shani Davis of the U.S. races to a 1,000-m world record of 1 min 6.42 sec at a speed-skating World Cup event in Salt Lake City, Utah, in March. In 2009 Davis set three world records and won the men's world speed-skating sprint championship.

World Speed-Skating Sprint Champions

Year	Men	Women
2007	Lee Kyou-Hyuk (S.Kor.)	A. Friesinger (Ger.)
2008	Lee Kyou-Hyuk (S.Kor.)	J. Wolf (Ger.)
2009	S. Davis (U.S.)	Wang Beixing (China)

RODEO

Men's World All-Around Rodeo Championship

Year	Winner
2007	T. Brazile
2008	T. Brazile
2009	T. Brazile

ROWING

World Rowing Championships—Men								
Year	Single sculls	Min:sec	Double sculls	Min:sec	Quadruple sculls	Min:sec	Coxed pairs	Min:sec
2007	M. Drysdale (N.Z.)	6:45.67	L. Spik, I. Cop (Slvn.)	6:16.65	Poland	5:49.42	D. Paczes, L. Kardas (Pol.)	7:00.10
2008*	O. Tufte (Nor.)	6:59.83	D. Crawshay, S. Brennan (Austl.)	6:27.77	Poland	5:41.33	G. Bergen, J. Dunaway (Can.)	7:06.69
2009	M. Drysdale (N.Z.)	6:33.35	E. Knittel, S. Krüger (Ger.)	6:07.02	Poland	5:38.33	T. Kepper, H. Rummel (U.S.)	6:53.58
Year	Coxless pairs	Min:sec	Coxed fours	Min:sec	Coxless fours	Min:sec	Eights	Min:sec
2007	D. Ginn, D. Free (Austl.)	6:24.89	United States	6:10.36	New Zealand	5:54.24	Canada	5:34.92
2008*	D. Ginn, D. Free (Austl.)	6:37.44			Great Britain	6:06.57	Canada	5:23.89
2009	E. Murray, H. Bond (N.Z.)	6:15.93			Great Britain	5:47.28	Germany	5:24.13

*Olympic champions, except coxed pairs.

World Rowing Championships—Women				
Year	Single sculls	Min:sec	Coxless pairs	Min:sec
2007	Ye. Karsten-Khodotovitch (Bela.)	7:26.52	Yu. Bichyk, N. Helakh (Bela.)	7:06.56
2008*	R. Neykova (Bulg.)	7:22.34	G. Andrunache, V. Susanu (Rom.)	7:20.60
2009	Ye. Karsten-Khodotovitch (Bela.)	7:11.78	Z. Francia, E. Cafaro (U.S.)	7:06.28
Year	Double sculls	Min:sec	Coxless fours	Min:sec
2007	Li Qin, Tian Liang (China)	6:54.38	United States	6:37.94
2008*	C. Evers-Swindell, G. Evers-Swindell (N.Z.)	7:07.32	Belarus	6:39.89
2009	M. Fularczyk, J. Michalska (Pol.)	6:47.18	Netherlands	6:31.34
Year	Quadruple sculls	Min:sec	Eights	Min:sec
2007	Great Britain	6:30.81	United States	6:17.20
2008*	China	6:16.06	United States	6:05.34
2009*	Ukraine	6:18.41	United States	6:05.34

*Olympic champions, except coxless fours.

The Boat Race*			
Year	Winner	Winner's time (min:sec)	Margin of victory
2007	Cambridge	17:49	1¼ lengths
2008	Oxford	20:53	6 lengths
2009†	Oxford	17:00	3½ lengths

*Annual race between the Universities of Cambridge and Oxford. †Historical record: Cambridge 79, Oxford 75, 1 draw.

SAILING (YACHTING)

America's Cup					
Year	Winning yacht	Owner	Skipper	Losing yacht	Owner
2000	<i>Black Magic</i> (N.Z.)	Team New Zealand	R. Coutts	<i>Luna Rossa</i> (Italy)	Prada Challenge
2003	<i>Alinghi</i> (Switz.)	Alinghi Swiss Challenge	R. Coutts	<i>New Zealand</i> (N.Z.)	Team New Zealand
2007	<i>Alinghi</i> (Switz.)	Alinghi	B. Butterworth	<i>New Zealand</i> (N.Z.)	Team New Zealand

World Class Boat Champions, 2009		
Class	Winner	Country
Etchells 22	J. Muir	Australia
Finn	J. Høgh-Christensen	Denmark
J/24	M. Santa Cruz	Brazil
Laser	P. Goodison	Great Britain
Laser Women	S. Multala	Finland
RS:X (men's boards)	N. Dempsey	Great Britain
RS:X (women's boards)	M. Alabau	Spain
470 (men's)	S. Fantela/I. Marenic	Croatia
470 (women's)	L. Westerhof/ L. Berkhout	Netherlands
49er	N. Outteridge/I. Jensen	Australia
2.4 metre	J. Ruf	United States
Moth	B. Gulari	United States
Optimist	S. Jones	Peru
Star	G. Szabo/R. Peters	United States
Tornado	D. Bundock/G. Ashby	Australia
Farr 40	J. Richardson	United States
Transpac 52 (TP52)	Matador (A. Roemmers)	Argentina

Admiral's Cup	
Year	Winning team
1997	United States
1999	Netherlands
2003	Australia

Transpacific Race*		
Year	Winning yacht	Owner/Skipper
2005	<i>Rosebud</i>	R. Sturgeon
2007	<i>Reinrag2</i>	T. Garnier
2009	<i>Samba Pa Ti</i>	J. Kilroy, Jr.

*Overall winner based on corrected time.

Bermuda Race*		
Year	Winning yacht	Owner
2004	<i>Alliance</i>	D. Porco
2006	<i>Sinn Fein</i> †	P. Rebovich
	<i>Lively Lady II</i> ‡	W. Hubbard III
2008	<i>Sinn Fein</i>	P. Rebovich

*St. David's Lighthouse Trophy winner.
†Winner under Offshore Rating Rule (ORR) scoring.
‡Winner under IRC scoring.

SKIING

World Alpine Skiing Championships—Slalom							
Year	Men's slalom	Men's giant slalom	Men's supergiant slalom	Women's slalom	Women's giant slalom	Women's supergiant slalom	Team
2006*	B. Raich (Austria)	B. Raich (Austria)	K.A. Aamodt (Nor.)	A. Pärson (Swed.)	J. Mancuso (U.S.)	M. Dorfmeister (Austria)	Austria <i>canceled</i>
2007	M. Matt (Austria)	A. Svindal (Nor.)	P. Staudacher (Italy)	S. Zahrobska (Cz.Rep.)	N. Hosp (Austria)	A. Pärson (Swed.)	
2009	M. Pranger (Austria)	C. Janka (Switz.)	D. Cuche (Switz.)	M. Riesch (Ger.)	K. Hölzl (Ger.)	L. Vonn (U.S.)	

*Olympic champions.

World Alpine Skiing Championships—Downhill			World Alpine Skiing Championships—Combined		
Year	Men	Women	Year	Men	Women
2006*	A. Dénériaz (Fr.)	M. Dorfmeister (Austria)	2006*	T. Ligety (U.S.)	J. Kostelic (Cro.)
2007	A. Svindal (Nor.)	A. Pärson (Swed.)	2007	D. Albrecht (Switz.)	A. Pärson (Swed.)
2009	J. Kucera (Can.)	L. Vonn (U.S.)	2009	A. Svindal (Nor.)	K. Zettel (Austria)

*Olympic champions.

*Olympic champions.

World Nordic Skiing Championships—Men							
Year	Sprint	Team sprint	Double pursuit	15 km	30 km	50 km	Relay
2006*	B. Lind (Swed.)	Sweden		A. Veerpalu (Est.)	Ye. Dementyev (Russia)	G. Di Centa (Italy)	Italy
2007	J.A. Svartedal (Nor.)	Italy	A. Teichmann (Ger.)	L. Berger (Nor.)		O.-B. Hjelmeset (Nor.)	Norway
2009	O.V. Hattestad (Nor.)	Norway		A. Veerpalu (Est.)	P. Northug, Jr. (Nor.)	P. Northug, Jr. (Nor.)	Norway

*Olympic champions.

World Nordic Skiing Championships—Women							
Year	Sprint	Team sprint	Double pursuit	10 km	15 km	30 km	Relay
2006*	C. Crawford (Can.)	Sweden		K. Smigun (Est.)	K. Smigun (Est.)	K. Neumannova (Cz.Rep.)	Russia
2007	A. Jacobsen (Nor.)	Finland	O. Savjalova (Russia)	K. Neumannova (Cz.Rep.)		V. Kuitunen (Fin.)	Finland
2009	A. Follis (Italy)	Finland		A.-K. Saarinen (Fin.)	J. Kowalczyk (Pol.)	J. Kowalczyk (Pol.)	Finland

*Olympic champions.

World Nordic Skiing Championships—Ski Jump						Alpine World Cup	
Year	Normal hill*	Large hill†	Women (normal hill)	Team jump (large hill)	Nordic combined (7.5 km)	Year	Men
2006‡	L. Bystøl (Nor.)	T. Morgenstern (Austria)		Austria	F. Gottwald (Austria)	2007	A. Svindal (Nor.)
2007	A. Malysz (Pol.)	S. Ammann (Switz.)		Austria	H. Manninen (Fin.)	2008	B. Miller (U.S.)
2009	W. Loitzl (Austria)	A. Küttel (Switz.)	L. Van (U.S.)	Austria		2009	A. Svindal (Nor.)
Year	Nordic combined (mass start; 10 km)	Nordic combined (10 km)	Nordic combined (15 km)	Nordic combined (large hill; 10 km)	Nordic combined Team	Freestyle Skiing World Cup	
2006‡			G. Hettich (Ger.)		Austria	Year	Men
2007			R. Ackermann (Ger.)		Finland	2007	D. Begg-Smith (Austl.)
2009	T. Lodwick (U.S.)	T. Lodwick (U.S.)		B. Demong (U.S.)	Japan	2008	S. Omischl (Can.)

*95-m hill in 2006; 100-m hill in 2007 and 2009. †125-m hill in 2006; 134-m hill in 2007 and 2009. ‡Olympic champions.

Nordic World Cup			Snowboard World Cup		
Year	Men	Women	Year	Men	Women
2007	T. Angerer (Ger.)	V. Kuitunen (Fin.)	2007	S. Schoch (Switz.)	D. Krings (Austria)
2008	L. Bauer (Cz.Rep.)	V. Kuitunen (Fin.)	2008	B. Karl (Austria)	N. Sauerbreij (Neth.)
2009	D. Cologna (Switz.)	J. Kowalczyk (Pol.)	2009	S. Grabner (Austria)	D. Günther (Austria)

SQUASH

British Open Championship—Men		British Open Championship—Women	
Year	Winner	Year	Winner
2007	G. Gaultier (Fr.)	2007	R. Grinham (Austl.)
2008	D. Palmer (Austl.)	2008	N. David (Malay.)
2009	N. Matthew (Eng.)	2009	R. Grinham (Austl.)
World Open Championship—Men		World Open Championship—Women	
Year	Winner	Year	Winner
2007	A. Shabana (Egypt)	2007	R. Grinham (Austl.)
2008	R. Ashour (Egypt)	2008	N. David (Malay.)
2009	A. Shabana (Egypt)	2009	N. David (Malay.)



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SWIMMING

World Swimming Records Set in 2009 in 25-m Pools*

Event	Name	Country	Time
MEN			
50-m freestyle	Roland Schoeman	South Africa	20.30 sec
200-m freestyle	Paul Biedermann	Germany	1 min 39.37 sec
400-m freestyle	Paul Biedermann	Germany	3 min 32.77 sec
50-m backstroke	Peter Marshall	United States	22.75 sec
	Peter Marshall	United States	22.73 sec
	Peter Marshall	United States	22.61 sec
100-m backstroke	Arkady Vyatchanin	Russia	49.17 sec
	Arkady Vyatchanin	Russia	48.97 sec†
	Stanislav Donets	Russia	48.97 sec†
	Nick Thoman	United States	48.94 sec
200-m backstroke	George Du Rand	South Africa	1 min 47.08 sec
	Arkady Vyatchanin	Russia	1 min 46.11 sec
50-m breaststroke	Cameron van der Burgh	South Africa	25.43 sec
	Cameron van der Burgh	South Africa	25.25 sec
100-m breaststroke	Cameron van der Burgh	South Africa	56.39 sec
	Cameron van der Burgh	South Africa	55.99 sec
	Cameron van der Burgh	South Africa	55.61 sec
200-m breaststroke	Christian Sprenger	Australia	2 min 01.98 sec
	Daniel Gyurta	Hungary	2 min 00.67 sec
50-m butterfly	Steffen Deibler	Germany	22.06 sec
	Steffen Deibler	Germany	21.80 sec
100-m butterfly	Yevgeny Korotyshkin	Russia	48.99 sec
	Yevgeny Korotyshkin	Russia	48.48 sec
200-m butterfly	Nikolay Skvortsov	Russia	1 min 50.53 sec
	Kaio Almeida	Brazil	1 min 49.11 sec
100-m individual medley	Sergey Fesikov	Russia	50.95 sec
	Peter Mankoc	Slovenia	50.76 sec
200-m individual medley	Darian Townsend	South Africa	1 min 51.55 sec
400-m individual medley	Laszlo Cseh	Hungary	3 min 57.27 sec
4 × 100-m freestyle relay	United States	United States	3 min 03.30 sec
4 × 200-m freestyle relay	Canada	Canada	6 min 51.05 sec
4 × 100-m medley relay	Canada	Canada	3 min 23.33 sec
	United States	United States	3 min 20.71 sec
	Russia	Russia	3 min 19.16 sec

WOMEN

100-m freestyle	Lisbeth Trickett	Australia	51.01 sec
200-m freestyle	Federica Pellegrini	Italy	1 min 51.17 sec
400-m freestyle	Joanne Jackson	Great Britain	3 min 54.92 sec
1,500-m freestyle	Lotte Friis	Denmark	15 min 28.65 sec
50-m backstroke	Marieke Guehrer	Australia	26.17 sec
	Zhao Jing	China	26.08 sec
	Zhao Jing	China	25.82 sec
100-m backstroke	Sanja Jovanovic	Croatia	25.70 sec
	Shiho Sakai	Japan	56.15 sec
	Shiho Sakai	Japan	55.23 sec
200-m backstroke	Shiho Sakai	Japan	2 min 00.18 sec
50-m breaststroke	Jessica Hardy	United States	29.45 sec
	Jessica Hardy	United States	29.36 sec
	Jessica Hardy	United States	28.96 sec
	Jessica Hardy	United States	28.80 sec
100-m breaststroke	Leisel Jones	Australia	1 min 03.00 sec
	Rebecca Soni	United States	1 min 02.70 sec
200-m breaststroke	Annamay Pierse	Canada	2 min 17.50 sec
	Annamay Pierse	Canada	2 min 16.83 sec
	Leisel Jones	Australia	2 min 15.42 sec
	Rebecca Soni	United States	2 min 14.57 sec
50-m butterfly	Therese Alshammar	Sweden	24.75 sec
	Therese Alshammar	Sweden	24.46 sec
	Therese Alshammar	Sweden	24.38 sec
100-m butterfly	Jessica Hardy	Australia	55.68 sec
	Felicity Galvez	Australia	55.46 sec
	Diane Bui Duyet	France	55.05 sec
200-m butterfly	Liu Zige	China	2 min 02.50 sec
	Liu Zige	China	2 min 00.78 sec
100-m individual medley	Emily Seebohm	Australia	58.54 sec
	Therese Alshammar	Sweden	58.51 sec
	Zhao Jing	China	58.40 sec
	Hinkelien Schreuder	Netherlands	57.74 sec
200-m individual medley	Evelyn Verraszto	Hungary	2 min 06.01 sec
	Evelyn Verraszto	Hungary	2 min 04.64 sec
	Julia Smit	United States	2 min 04.60 sec
400-m individual medley	Kathryn Meaklim	South Africa	4 min 22.88 sec
	Julia Smit	United States	4 min 21.04 sec
4 × 100-m medley relay	Canada	Canada	3 min 49.95 sec
	United States	United States	3 min 47.97 sec

*May include records awaiting FINA ratification at year's end. †Dead heat counts as two records.

World Swimming Records Set in 2009 in 50-m Pools*

Event	Name	Country	Time
MEN			
50-m freestyle	Fred Bousquet	France	20.94 sec
	César Cielo	Brazil	20.91 sec
100-m freestyle	Alain Bernard	France	46.94 sec†
	César Cielo	Brazil	46.91 sec
200-m freestyle	Paul Biedermann	Germany	1 min 42.00 sec
400-m freestyle	Paul Biedermann	Germany	3 min 40.07 sec
800-m freestyle	Zhang Lin	China	7 min 32.12 sec
50-m backstroke	Liam Tancock	Great Britain	24.08 sec
	Liam Tancock	Great Britain	24.04 sec
100-m backstroke	Aschwin Wildeboer	Spain	52.38 sec
	Aaron Peirsol	United States	51.94 sec
200-m backstroke	Ryosuke Irie	Japan	1 min 52.86 sec†
	Aaron Peirsol	United States	1 min 53.08 sec
	Aaron Peirsol	United States	1 min 51.92 sec
50-m breaststroke	Cameron van der Burgh	South Africa	27.06 sec
	Felipe Silva	Brazil	26.89 sec
	Cameron van der Burgh	South Africa	26.74 sec
	Cameron van der Burgh	South Africa	26.67 sec
100-m breaststroke	Brenton Rickard	Australia	58.58 sec
200-m breaststroke	Christian Sprenger	Australia	2 min 07.31 sec
50-m butterfly	Rafael Muñoz	Spain	22.43 sec
100-m butterfly	Michael Phelps	United States	50.22 sec
	Milorad Cavic	Serbia	50.01 sec
	Michael Phelps	United States	49.82 sec
200-m butterfly	Michael Phelps	United States	1 min 51.51 sec
200-m individual medley	Ryan Lochte	United States	1 min 54.10 sec
4 × 200-m freestyle relay	United States	United States	6 min 58.55 sec
4 × 100-m medley relay	United States	United States	3 min 27.28 sec

WOMEN

50-m freestyle	Marleen Veldhuis	Netherlands	23.96 sec
	Britta Steffen	Germany	23.73 sec
100-m freestyle	Britta Steffen	Germany	52.85 sec
	Britta Steffen	Germany	52.56 sec
	Britta Steffen	Germany	52.22 sec
	Britta Steffen	Germany	52.07 sec
200-m freestyle	Federica Pellegrini	Italy	1 min 54.47 sec
	Federica Pellegrini	Italy	1 min 53.67 sec
	Federica Pellegrini	Italy	1 min 52.98 sec
400-m freestyle	Joanne Jackson	Great Britain	4 min 00.66 sec
	Federica Pellegrini	Italy	4 min 00.41 sec
	Federica Pellegrini	Italy	3 min 59.15 sec
50-m backstroke	Zhao Jing	China	27.67 sec†
	Anastasiya Zuyeva	Russia	27.48 sec†
	Anastasiya Zuyeva	Russia	27.47 sec†
	Daniela Samulski	Germany	27.61 sec
	Daniela Samulski	Germany	27.39 sec
	Anastasiya Zuyeva	Russia	27.38 sec
	Zhao Jing	China	27.06 sec
100-m backstroke	Anastasiya Zuyeva	Russia	58.48 sec
	Gemma Spofforth	Great Britain	58.12 sec
200-m backstroke	Kirsty Coventry	Zimbabwe	2 min 04.81 sec
50-m breaststroke	Yuliya Yefimova	Russia	30.23 sec†
	Yuliya Yefimova	Russia	30.05 sec
	Amanda Reason	Canada	30.23 sec
	Yuliya Yefimova	Russia	30.09 sec
	Jessica Hardy	United States	29.95 sec
	Jessica Hardy	United States	29.80 sec
100-m breaststroke	Rebecca Soni	United States	1 min 04.84 sec
	Jessica Hardy	United States	1 min 04.45 sec
200-m breaststroke	Annamay Pierse	Canada	2 min 20.12 sec
50-m butterfly	Therese Alshammar	Sweden	25.44 sec†
	Marleen Veldhuis	Netherlands	25.33 sec
	Marleen Veldhuis	Netherlands	25.28 sec
	Therese Alshammar	Sweden	25.07 sec
100-m butterfly	Sarah Sjöström	Sweden	56.44 sec
	Sarah Sjöström	Sweden	56.06 sec
200-m butterfly	Mary DeScenza	United States	2 min 04.14 sec
	Jessica Hardy	Australia	2 min 03.41 sec
	Liu Zige	China	2 min 01.81 sec
200-m individual medley	Ariana Kukors	United States	2 min 07.03 sec
	Ariana Kukors	United States	2 min 06.15 sec
4 × 100-m freestyle relay	Netherlands	Netherlands	3 min 31.72 sec
4 × 200-m freestyle relay	China	China	7 min 42.08 sec
4 × 100-m medley relay	China	China	3 min 52.19 sec

*May include records awaiting FINA ratification at year's end. †Record disallowed. ‡Equals world record.

SWIMMING (continued)

World Swimming and Diving Championships—Men							
Freestyle							
Year	50 m	100 m	200 m	400 m	800 m	1,500 m	
2005	R. Schoeman (S.Af.)	F. Magnini (Italy)	M. Phelps (U.S.)	G. Hackett (Austl.)	G. Hackett (Austl.)	G. Hackett (Austl.)	
2007	B. Wildman-Tobriner (U.S.)	F. Magnini (Italy)	M. Phelps (U.S.)	Park Tae-Hwan (S.Kor.)	P. Stanczyk (Pol.)*	M. Sawrymowicz (Pol.)	
2009	C. Cielo (Braz.)	C. Cielo (Braz.)	P. Biedermann (Ger.)	P. Biedermann (Ger.)	Zhang Lin (China)	O. Mellouli (Tun.)	
Backstroke				Breaststroke			
	50 m	100 m	200 m	50 m	100 m	200 m	
2005	A. Grigoriadis (Greece)	A. Peirsol (U.S.)	A. Peirsol (U.S.)	M. Warnecke (Ger.)	B. Hansen (U.S.)	B. Hansen (U.S.)	
2007	G. Zandberg (S.Af.)	A. Peirsol (U.S.)	R. Lochte (U.S.)	O. Lisogor (Ukr.)	B. Hansen (U.S.)	K. Kitajima (Japan)	
2009	L. Tancock (U.K.)	J. Koga (Japan)	A. Peirsol (U.S.)	C. Van der Burgh (S.Af.)	B. Rickard (Austl.)	D. Gyurta (Hung.)	
Butterfly				Individual medley		Team relays	
	50 m	100 m	200 m	200 m	400 m	4 × 100-m freestyle	
2005	R. Schoeman (S.Af.)	I. Crocker (U.S.)	P. Korzeniowski (Pol.)	M. Phelps (U.S.)	L. Cseh (Hung.)	United States	
2007	R. Schoeman (S.Af.)	M. Phelps (U.S.)	M. Phelps (U.S.)	M. Phelps (U.S.)	M. Phelps (U.S.)	United States	
2009	M. Cavic (Serbia)	M. Phelps (U.S.)	M. Phelps (U.S.)	R. Lochte (U.S.)	R. Lochte (U.S.)	United States	
Diving							
	4 × 200-m freestyle	4 × 100-m medley	1-m springboard	3-m springboard	Platform	3-m synchronized	10-m synchronized
2005	United States	United States	A. Despatie (Can.)	A. Despatie (Can.)	Hu Jia (China)	China	Russia
2007	United States	Australia	Luo Yutong (China)	Qin Kai (China)	G. Galperin (Russia)	China	China
2009	United States	United States	Qin Kai (China)	He Chong (China)	T. Daley (U.K.)	China	China

*Original winner stripped after failing drug test.

World Swimming and Diving Championships—Women							
Freestyle							
Year	50 m	100 m	200 m	400 m	800 m	1,500 m	
2005	L. Lenton (Austl.)	J. Henry (Austl.)	S. Figueis (Fr.)	L. Manaudou (Fr.)	K. Ziegler (U.S.)	K. Ziegler (U.S.)	
2007	L. Lenton (Austl.)	L. Lenton (Austl.)	L. Manaudou (Fr.)	L. Manaudou (Fr.)	K. Ziegler (U.S.)	K. Ziegler (U.S.)	
2009	B. Steffen (Ger.)	B. Steffen (Ger.)	F. Pellegrini (Italy)	F. Pellegrini (Italy)	L. Friis (Den.)	A. Filippi (Italy)	
Backstroke				Breaststroke			
	50 m	100 m	200 m	50 m	100 m	200 m	
2005	G. Rooney (Austl.)	K. Coventry (Zimb.)	K. Coventry (Zimb.)	J. Edmestone (Austl.)	L. Jones (Austl.)	L. Jones (Austl.)	
2007	L. Vaziri (U.S.)	N. Coughlin (U.S.)	M. Hoelzer (U.S.)	J. Hardy (U.S.)	L. Jones (Austl.)	L. Jones (Austl.)	
2009	Zhao Jing (China)	G. Spofforth (U.K.)	K. Coventry (Zimb.)	Yu. Efimova (Russia)	R. Soni (U.S.)	N. Higl (Serbia)	
Butterfly				Individual medley		Team relays	
	50 m	100 m	200 m	200 m	400 m	4 × 100-m freestyle	
2005	D. Miatke (Austl.)	J. Schipper (Austl.)	O. Jedrzejczak (Pol.)	K. Hoff (U.S.)	K. Hoff (U.S.)	Australia	
2007	T. Alshammar (Swed.)	L. Lenton (Austl.)	J. Schipper (Austl.)	K. Hoff (U.S.)	K. Hoff (U.S.)	Australia	
2009	M. Guehrer (Austl.)	S. Sjöström (Swed.)	J. Schipper (Austl.)	A. Kukors (U.S.)	K. Hosszu (Hung.)	Netherlands	
Diving							
	4 × 200-m freestyle	4 × 100-m medley	1-m springboard	3-m springboard	Platform	3-m synchronized	10-m synchronized
2005	United States	Australia	B. Hartley (Can.)	Guo Jingjing (China)	L. Wilkinson (U.S.)	China	China
2007	United States	Australia	He Zi (China)	Guo Jingjing (China)	Wang Xin (China)	China	China
2009	China	China	Yu. Pakhalina (Russia)	Guo Jingjing (China)	P. Espinosa (Mex.)	China	China

TABLE TENNIS

World Table Tennis Championships—Men		
Year	St. Bride's Vase (singles)	Iran Cup (doubles)
2005	Wang Liqin (China)	Kong Linghui, Wang Hao (China)
2007	Wang Liqin (China)	Chen Qi, Ma Lin (China)
2009	Wang Hao (China)	Chen Qi, Wang Hao (China)

World Table Tennis Championships—Women		
Year	G. Geist Prize (singles)	W.J. Pope Trophy (doubles)
2005	Zhang Yining (China)	Wang Nan, Zhang Yining (China)
2007	Guo Yue (China)	Wang Nan, Zhang Yining (China)
2009	Zhang Yining (China)	Guo Yue, Li Xiaoxia (China)

Table Tennis World Cup	
Year	Men
2007	Wang Hao (China)
2008	Wang Hao (China)
2009	V. Samsonov (Bela.)
Year	Women
2007	Wang Nan (China)
2008	Li Xiaoxia (China)
2009	Liu Shiwen (China)

World Table Tennis Championships—Mixed	
Year	Heydusek Prize
2005	Guo Yue, Wang Liqin (China)
2007	Guo Yue, Wang Liqin (China)
2009	Cao Zhen, Li Ping (China)

World Table Tennis Championships—Team		
Year	Swaythling Cup (men)	Corbillon Cup (women)
2004	China	China
2006	China	China
2008	China	China

TENNIS

Australian Open Tennis Championships—Singles

Year	Men	Women
2007	R. Federer (Switz.)	S. Williams (U.S.)
2008	N. Djokovic (Serbia)	M. Sharapova (Russia)
2009	R. Nadal (Spain)	S. Williams (U.S.)

Australian Open Tennis Championships—Doubles

Year	Men	Women
2007	B. Bryan, M. Bryan	C. Black, L. Huber
2008	J. Erlich, A. Ram	A. Bondarenko, K. Bondarenko
2009	B. Bryan, M. Bryan	S. Williams, V. Williams

French Open Tennis Championships—Singles

Year	Men	Women
2007	R. Nadal (Spain)	J. Henin (Belg.)
2008	R. Nadal (Spain)	A. Ivanovic (Serbia)
2009	R. Federer (Switz.)	S. Kuznetsova (Russia)

French Open Tennis Championships—Doubles

Year	Men	Women
2007	M. Knowles, D. Nestor	A. Molik, M. Santangelo
2008	P. Cuevas, L. Horna	A. Medina Garrigues, V. Ruano Pascual
2009	L. Dlouhy, L. Paes	A. Medina Garrigues, V. Ruano Pascual

All-England (Wimbledon) Tennis Championships—Singles

Year	Men	Women
2007	R. Federer (Switz.)	V. Williams (U.S.)
2008	R. Nadal (Spain)	V. Williams (U.S.)
2009	R. Federer (Switz.)	S. Williams (U.S.)

All-England (Wimbledon) Tennis Championships—Doubles

Year	Men	Women
2007	A. Clément, M. Llodra	C. Black, L. Huber
2008	D. Nestor, N. Zimonjic	S. Williams, V. Williams
2009	D. Nestor, N. Zimonjic	S. Williams, V. Williams

United States Open Tennis Championships—Singles

Year	Men	Women
2007	R. Federer (Switz.)	J. Henin (Belg.)
2008	R. Federer (Switz.)	S. Williams (U.S.)
2009	J. del Potro (Arg.)	K. Clijsters (Belg.)

United States Open Tennis Championships—Doubles

Year	Men	Women
2007	S. Aspin, J. Knowle	N. Dechy, D. Safina
2008	B. Bryan, M. Bryan	C. Black, L. Huber
2009	L. Dlouhy, L. Paes	S. Williams, V. Williams

Davis Cup (men)

Year	Winner	Runner-up	Results
2007	United States	Russia	4–1
2008	Spain	Argentina	3–1
2009	Spain	Czech Republic	5–0

Fed Cup (women)

Year	Winner	Runner-up	Results
2007	Russia	Italy	4–0
2008	Russia	Spain	4–0
2009	Italy	United States	4–0

TRACK AND FIELD SPORTS (ATHLETICS)

World Outdoor Track and Field Championships—Men

Event	2007	2009
100 m	T. Gay (U.S.)	U. Bolt (Jam.)
200 m	T. Gay (U.S.)	U. Bolt (Jam.)
400 m	J. Wariner (U.S.)	L. Merritt (U.S.)
800 m	A.K. Yego (Kenya)	M. Mulaudzi (S.Af.)
1,500 m	B. Lagat (U.S.)	Y.S. Kamel (Bahrain)
5,000 m	B. Lagat (U.S.)	K. Bekele (Eth.)
10,000 m	K. Bekele (Eth.)	K. Bekele (Eth.)
steeplechase	B.K. Kipruto (Kenya)	E. Kemboi (Kenya)
110-m hurdles	Liu Xiang (China)	R. Brathwaite (Barb.)
400-m hurdles	K. Clement (U.S.)	K. Clement (U.S.)
marathon	L. Kibet (Kenya)	A. Kirui (Kenya)
20-km walk	J. Pérez (Ecua.)	V. Borchin (Russia)
50-km walk	N. Deakes (Austl.)	S. Kirdyapkin (Russia)
4 × 100-m relay	United States (D. Patton, W. Spearmon, T. Gay, L. Dixon)	Jamaica (S. Mullings, M. Frater, U. Bolt, A. Powell)
4 × 400-m relay	United States (L. Merritt, A. Taylor, D. Williamson, J. Wariner)	United States (A. Taylor, J. Wariner, K. Clement, L. Merritt)
high jump	D. Thomas (Bah.)	Y. Rybakov (Russia)
pole vault	B. Walker (U.S.)	S. Hooker (Austl.)
long jump	I. Saladino (Pan.)	D. Phillips (U.S.)
triple jump	N. Évora (Port.)	P. Idowu (Gr.Brit.)
shot put	R. Hoffa (U.S.)	C. Cantwell (U.S.)
discus throw	G. Kanter (Est.)	R. Harting (Ger.)
hammer throw	I. Tikhon (Bela.)	P. Kozmus (Slov.)
javelin throw	T. Pitkämäki (Fin.)	A. Thorkildsen (Nor.)
decathlon	R. Sebrle (Cz.Rep.)	T. Hardee (U.S.)

World Outdoor Track and Field Championships—Women

Event	2007	2009
100 m	V. Campbell (Jam.)	S.-A. Fraser (Jam.)
200 m	A. Felix (U.S.)	A. Felix (U.S.)
400 m	C. Ohuruogu (Gr.Brit.)	S. Richards (U.S.)
800 m	J. Jepkosgei (Kenya)	C. Semanya (S.Af.)
1,500 m	M.Y. Jamal (Bahrain)	M.Y. Jamal (Bahrain)
5,000 m	M. Defar (Eth.)	V. Cheruiyot (Kenya)
10,000 m	T. Dibaba (Eth.)	L.C. Masai (Kenya)
steeplechase	Ye. Volkova (Russia)	M. Domínguez (Spain)
100-m hurdles	M. Perry (U.S.)	B. Foster-Hylton (Jam.)
400-m hurdles	J. Rawlinson (Austl.)	M. Walker (Jam.)
marathon	C. Ndereba (Kenya)	Bai Xue (China)
20-km walk	O. Kaniskina (Russia)	O. Kaniskina (Russia)
4 × 100-m relay	United States (L. Williams, A. Felix, M. Barber, T. Edwards)	Jamaica (S. Facey, S.-A. Fraser, A. Bailey, K. Stewart)
4 × 400-m relay	United States (D. Trotter, A. Felix, M. Wineberg, S. Richards)	United States (D. Dunn, A. Felix, L. Demus, S. Richards)
high jump	B. Vlasic (Cro.)	B. Vlasic (Cro.)
pole vault	Ye. Isinbayeva (Russia)	A. Rogowska (Pol.)
long jump	T. Lebedeva (Russia)	B. Reese (U.S.)
triple jump	Y. Savigne (Cuba)	Y. Savigne (Cuba)
shot put	V. Vili (N.Z.)	V. Vili (N.Z.)
discus throw	F. Dietzsch (Ger.)	D. Samuels (Austl.)
hammer throw	B. Heidler (Ger.)	A. Włodarczyk (Pol.)
javelin throw	B. Spotakova (Cz.Rep.)	S. Nerijs (Ger.)
heptathlon	C. Klüft (Swed.)	J. Ennis (Gr.Brit.)

TRACK AND FIELD SPORTS (ATHLETICS) (continued)

World Indoor Track and Field Championships—Men		
Event	2006	2008
60 m	L. Scott (U.S.)	O.A. Fasuba (Nigeria)
400 m	A. Francique (Grenada)	T. Christopher (Can.)
800 m	W. Bungei (Kenya)	A. Kaki Khamis (Sudan)
1,500 m	I. Heshko (Ukr.)	D. Mekonnen (Eth.)
3,000 m	K. Bekele (Eth.)	T. Bekele (Eth.)
60-m hurdles	T. Trammell (U.S.)	Liu Xiang (China)
4 × 400-m relay	United States (T. Washington, L. Merritt, M. Campbell, W. Spearmon)	United States (J. Davis, J. Torrance, G. Nixon, K. Willie)
high jump	Ya. Rybakov (Russia)	S. Holm (Swed.)
pole vault	B. Walker (U.S.)	Ye. Lukyanenko (Russia)
long jump	I. Gaisah (Ghana)	G.K. Mokoena (S.Af.)
triple jump	W. Davis (U.S.)	P. Idowu (Gr.Brit.)
shot put	R. Hoffa (U.S.)	C. Cantwell (U.S.)
heptathlon	A. Niklaus (Ger.)	B. Clay (U.S.)

World Indoor Track and Field Championships—Women		
Event	2006	2008
60 m	M. Barber (U.S.)	A. Williams (U.S.)
400 m	O. Krasnomovets (Russia)	O. Zykina (Russia)
800 m	M. Mutola (Mozam.)	T. Lewis (Austl.)
1,500 m	Yu. Chizhenko (Russia)	Ye. Soboleva (Russia)
3,000 m	M. Defar (Eth.)	M. Defar (Eth.)
60-m hurdles	D. O'Rourke (Ire.)	L. Jones (U.S.)
4 × 400-m relay	Russia (T. Levina, N. Nazarova, O. Krasnomovets, N. Antyukh)	Russia (Yu. Gushchina, T. Levina, N. Nazarova, O. Zykina)
high jump	Ye. Slesarenko (Russia)	B. Vlasic (Cro.)
pole vault	Ye. Isinbayeva (Russia)	Ye. Isinbayeva (Russia)
long jump	T. Kotova (Russia)	N. Gomes (Port.)
triple jump	T. Lebedeva (Russia)	Y. Savigne (Cuba)
shot put	N. Khoroneko (Bela.)	V. Vili (N.Z.)
pentathlon	L. Blonska (Ukr.)	T. Hellebaut (Belg.)

2009 World Indoor Records—Men*		
Event	Competitor and country	Performance
none		

Boston Marathon		
Year	Men	hr:min:sec
2007	R.K. Cheruiyot (Kenya)	2:14:13
2008	R.K. Cheruiyot (Kenya)	2:07:46
2009	D. Merga (Eth.)	2:08:42
Year	Women	hr:min:sec
2007	L. Grigoryeva (Russia)	2:29:18
2008	D. Tune (Eth.)	2:25:25
2009	S. Kosgei (Kenya)	2:32:16

Chicago Marathon		
Year	Men	hr:min:sec
2007	P. Ivuti (Kenya)	2:11:11
2008	E. Cheruiyot (Kenya)	2:06:25
2009	S. Wanjiru (Kenya)	2:05:41
Year	Women	hr:min:sec
2007	B. Adere (Eth.)	2:33:49
2008	L. Grigoryeva (Russia)	2:27:17
2009	L. Shobukhova (Russia)	2:25:56

London Marathon		
Year	Men	hr:min:sec
2007	M. Lel (Kenya)	2:07:41
2008	M. Lel (Kenya)	2:05:15
2009	S. Wanjiru (Kenya)	2:05:10
Year	Women	hr:min:sec
2007	Zhou Chunxiu (China)	2:20:38
2008	I. Mikitenko (Ger.)	2:24:14
2009	I. Mikitenko (Ger.)	2:22:11

New York City Marathon		
Year	Men	hr:min:sec
2007	M. Lel (Kenya)	2:09:04
2008	M. Gomes dos Santos (Braz.)	2:08:43
2009	M. Keflezighi (U.S.)	2:09:15
Year	Women	hr:min:sec
2007	P. Radcliffe (U.K.)	2:23:09
2008	P. Radcliffe (U.K.)	2:23:56
2009	D. Tulu (Eth.)	2:28:52

2009 World Indoor Records—Women*		
Event	Competitor and country	Performance
two miles†	Meseret Defar (Eth.)	9 min 6.26 sec
5,000 m	Meseret Defar (Eth.)	14 min 24.37 sec
pole vault	Yelena Isinbayeva (Russia)	4.97 m (16 ft 3½ in)
	Yelena Isinbayeva (Russia)	5.00 m (16 ft 4¾ in)
distance medley relay†	University of Tennessee (Phoebe Wright, Brittany Jones, Chanelle Price, Sarah Bowman)	10 min 50.98 sec
*May include records awaiting IAAF ratification at year's end. †Not an officially ratified event; best performance on record.		

2009 World Outdoor Records—Men*		
Event	Competitor and country	Performance
100 m	Usain Bolt (Jam.)	9.58 sec
150 m†	Usain Bolt (Jam.)	14.35 sec
200 m	Usain Bolt (Jam.)	19.19 sec
10-km road race	Micah Kogo (Kenya)	27 min 01 sec
15-km road race	Deriba Merga (Eth.)	41 min 29 sec‡
30-km road race	Haile Gebrselassie (Eth.)	1 hr 27 min 49 sec
4 × 1,500-m relay	Kenya (William Biwott Tanui, Gideon Gathimba, Geoffrey Kipkoech Rono, Augustine Kiprono Choge)	14 min 36.23 sec
*May include records awaiting IAAF ratification at year's end. †Not an officially ratified event; best performance on record. ‡Equals world record.		

2009 World Outdoor Records—Women*		
Event	Competitor and country	Performance
15-km road race	Tirunesh Dibaba (Eth.)	46 min 28 sec
pole vault	Yelena Isinbayeva (Russia)	5.06 m (16 ft 7¼ in)
hammer throw	Anita Wlodarczyk (Pol.)	77.96 m (255 ft 9 in)
sprint medley relay†	Jamaica (Sheri-Ann Brooks, Rosemarie Whyte, Moya Thompson, Kenia Sinclair)	3 min 34.56 sec
4 × 1,500-m relay†	University of Tennessee (Chanelle Price, Phoebe Wright, Rolanda Bell, Sarah Bowman)	17 min 8.34 sec
*May include records awaiting IAAF ratification at year's end. †Not an officially ratified event; best performance on record.		

TRACK AND FIELD SPORTS (ATHLETICS) (continued)

World Cross Country Championships—Men		
Year	Individual	Team
2007	Z. Tadese (Eritrea)	Kenya
2008	K. Bekele (Eth.)	Kenya
2009	G. Gebremariam (Eth.)	Kenya

World Cross Country Championships—Women		
Year	Individual	Team
2007	L. Kiplagat (Neth.)	Ethiopia
2008	T. Dibaba (Eth.)	Ethiopia
2009	F. Kiplagat (Kenya)	Kenya

VOLLEYBALL

Beach Volleyball World Championships		
Year	Men	Women
2005	M. Araujo, F. Magalhães (Braz.)	M. May-Treanor, K. Walsh (U.S.)
2007	P. Dalhausser, T. Rogers (U.S.)	M. May-Treanor, K. Walsh (U.S.)
2009	J. Brink, J. Reckermann (Ger.)	J. Kessy, A. Ross (U.S.)

World Volleyball Championships		
Year	Men	Women
2004*	Brazil	China
2006	Brazil	Russia
2008*	United States	Brazil

*Olympic champions.

WEIGHTLIFTING

World Weightlifting Champions, 2009					
MEN			WOMEN		
Weight class	Winner and country	Performance	Weight class	Winner and country	Performance
56 kg (123.5 lb)	Long Qingquan (China)	292 kg (643.7 lb)	48 kg (105.8 lb)	Wang Mingjuan (China)	208 kg (458.6 lb)
62 kg (136.7 lb)	Ding Jianjun (China)	316 kg (696.7 lb)	53 kg (116.8 lb)	Zulfiya Chinshanlo (Kazak.)	219 kg (482.8 lb)
69 kg (152.1 lb)	Liao Hui (China)	346 kg (762.8 lb)	58 kg (127.9 lb)	Li Xuenying (China)	239 kg (526.9 lb)
77 kg (169.8 lb)	Lu Xiaojun (China)	378 kg (833.3 lb)	63 kg (138.9 lb)	Maiya Maneza (Kazak.)	246 kg (542.3 lb)
85 kg (187.4 lb)	Lu Yong (China)	383 kg (844.4 lb)	69 kg (152.1 lb)	Nazik Avdalyan (Arm.)	266 kg (586.4 lb)
94 kg (207.2 lb)	Vladimir Sedov (Kazak.)	402 kg (886.3 lb)	75 kg (165.3 lb)	Svetlana Podobedova (Kazak.)	292 kg (643.7 lb)
105 kg (231.5 lb)	Marcin Dolega (Pol.)	421 kg (928.1 lb)	+75 kg (+165.3 lb)	Jang Mi-Ran (S.Kor.)	323 kg (712.1 lb)
+105 kg (+231.5 lb)	An Yong-Kwon (S.Kor.)	445 kg (981.1 lb)			

WRESTLING

World Wrestling Championships—Freestyle				
Year	55 kg	60 kg	66 kg	74 kg
2007	B. Kudukhov (Russia)	M. Batirov (Russia)	R. Sahin (Tur.)	M. Murtazaliyev (Russia)
2008*	H. Cejudo (U.S.)	M. Batirov (Russia)	R. Sahin (Tur.)	B. Saytiyev (Russia)
2009	Yang Kyong-Il (N.Kor.)	B. Kudukhov (Russia)	M. Taghavi (Iran)	D. Tsargush (Russia)
Year	84 kg	96 kg	120 kg	
2007	G. Ketoyev (Russia)	K. Gatsalov (Russia)	B. Makhov (Russia)	
2008*	R. Mindorashvili (Geo.)	S. Muradov (Russia)	A. Taymazov (Uzbek.)	
2009	Z. Sokhiev (Uzbek.)	K. Gatsalov (Russia)	B. Makhov (Russia)	

*Olympic champions.

World Wrestling Championships—Greco-Roman Style				
Year	55 kg	60 kg	66 kg	74 kg
2007	H. Soryan-Reihanpour (Iran)	D. Bedinadze (Geo.)	F. Mansurov (Azer.)	Y. Yanakiev (Bulg.)
2008*	N. Mankiyev (Russia)	I.-B. Albiyev (Russia)	S. Guénot (Fr.)	M. Kvirkelia (Geo.)
2009	H. Soryan-Reihanpour (Iran)	I.-B. Albiyev (Russia)	F. Mansurov (Azer.)	S. Cebi (Tur.)
Year	84 kg	96 kg	120 kg	
2007	A. Mishin (Russia)	R. Nozadze (Geo.)	M. López (Cuba)	
2008*	A. Minguzzi (Italy)	A. Khushotov (Russia)	M. López (Cuba)	
2009	N. Avluca (Tur.)	B. Kiss (Hung.)	M. López (Cuba)	

*Olympic champions.

Sumo Tournament Champions, 2009			
Tournament	Location	Winner	Winner's record
Hatsu Basho (New Year's tournament)	Tokyo	Asashoryu	14–1
Haru Basho (spring tournament)	Osaka	Hakuho	15–0
Natsu Basho (summer tournament)	Tokyo	Harumafuji	14–1
Nagoya Basho (Nagoya tournament)	Nagoya	Hakuho	14–1
Aki Basho (autumn tournament)	Tokyo	Asashoryu	14–1
Kyushu Basho (Kyushu tournament)	Fukuoka	Hakuho	15–0

The World in 2009

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oser y estornudar con un pañuelo desechable
on enfermos. • Cuando compartas alimentos, si
corre, camina, brinca, baila, etc.

Uenza

able o con el antebrazo. •Tira inmediatamente el pañuelo dese
s, siempre utiliza cuchara para servir. No compartas vasos o cubie

Wearing surgical masks to help prevent the contraction of the H1N1 virus, two people in Mexico City walk past a warning sign that provides information about the illness.

Joe Raedle/Getty Images

World Affairs

SUFFERING from the effects of a global **RECESSION**, many countries **STRUGGLED** with high **UNEMPLOYMENT** and **SHRINKING** budgets. An **H1N1** flu pandemic **INFECTED** tens of thousands of people worldwide. While **CHINA** mounted **ELABORATE** celebrations to mark the **60TH ANNIVERSARY** of the founding of the People's Republic, Germany too prepared festivities in remembrance of the fall of the **BERLIN WALL** 20 years earlier.

UNITED NATIONS

The United Nations in 2009 continued its efforts to deal with important global issues on many fronts but was forced to do so in the context of the continuing global economic and financial crisis. It was the UN Year of Climate Change, but little progress toward a comprehensive global climate change agreement emerged. The global food crisis persisted, but few new concerted global actions were targeted for dealing with it coherently. Afghanistan rose to the top of the global security agenda as insecurity and the death toll there mounted significantly during the year. Progress toward attainment of the Millennium Development Goals (MDGs) stagnated along with the global economy. On a more positive note, 2009 marked the return to greater engagement in multilateral affairs of the United States, led by the new administration of Pres. Barack Obama.

Peace and Security. The wars in Iraq and Afghanistan continued to dominate global peace and security news. The security situation in Afghanistan continued to decline. Much of the violence centred on the lead-up to and the follow-up to the presidential elections. This fact was highlighted when on October 28 five staff members of the UN Assistance Mission in Afghanistan (UNAMA) were killed in a suicide attack in Kabul. UNAMA estimated that Afghan civilian

deaths exceeded 2,000 during the first 10 months of the year.

The UN Assistance Mission for Iraq continued its work in support of political reconciliation, institution building, and establishment of the rule of law in the country. At the end of the year, the UN fielded 17 peace missions comprising more than 117,000 troops, police, and civilians, with a total annual

Libyan leader Col. Muammar al-Qaddafi pretends to rip up a copy of the UN Charter as he delivers his first-ever address to the UN General Assembly in New York City in September; during his speech he accused the veto-wielding members of the Security Council of violating the principles of the UN Charter.



Mike Segar—Reuters/Landov

budget of nearly \$7.8 billion. Troops and personnel were contributed by more than 100 member states, with the largest contributors being Pakistan, Bangladesh, India, and Nigeria. Of the 17 missions, 8 were in Africa, where the UN increased its presence in Chad, Darfur (a region of The Sudan), and the Democratic Republic of the Congo (DRC).

Highlighting the situation in Africa, the UN Security Council in January authorized the deployment of 5,500 uniformed personnel to replace the European Union EUFOR military force. As of October 31, just under 3,000 uniformed personnel were in place. By the end of November 2009, the hybrid United Nations/African Union Mission in Darfur (UNAMID) had been increased to 19,588 uniformed personnel. The primary mandate of the force remained the protection of civilians and humanitarian assistance providers as well as the monitoring of the implementation of agreements, assistance in the develop-

ment of political processes, and promotion of good governance. As in 2008, UNAMID's work remained hampered by the lack of transport and aviation assets and logistic support. The UN Mission in the Sudan (UNMIS) continued its main mandate to help resolve core issues that stood in the way of implementation of the 2005 Comprehensive Peace Agreement. By December UNMIS, with 9,955 uniformed personnel in the field, had nearly reached its authorized level of 10,000. The UN mission in the DRC continued to be the largest. In November 2008 the Security Council authorized the expansion of the force by 3,000 military and police, and as of Nov. 30, 2009, 20,255 uniformed personnel were in the field. Meanwhile, the UN Operation in Côte d'Ivoire stood at more than 8,000 in October 2009. Somalia remained high on the list of international security concerns. At year's end the Security Council approved sanctions on Eritrea for aiding Somali insurgents and continuing its conflict with Djibouti.

Preventative diplomacy and the use by Secretary-General Ban Ki-Moon of special and personal representatives and envoys became ever-increasing tools in the UN's peace-building efforts. In 2009 such special envoys were actively engaged in more than 30 countries or regions, and more than two dozen other UN emissaries were assigned to deal with specific global policy issues, such as climate change, financing for development, human rights, humanitarian aid, and so forth. The importance placed on postconflict peace building also grew in recent years. By April 2009 the UN's Peace-building Fund had received more than \$300 million in contributions and had allocated more than \$131 million to 12 countries for 65 projects.

The review process for the Treaty on the Non-Proliferation of Nuclear Weapons picked up momentum, and a formal review conference was in the works for 2010. Nuclear and conventional weapons proliferation remained an important agenda item, with particular focus on North Korea and Iran. The former conducted a second nuclear test in May 2009 in violation of Security Council resolutions, and concern continued over Iran's evolving nuclear program. On October 30, UN member states agreed to a timetable for negotiating an arms trade treaty by 2012.

Terrorism. In September 2008 the UN General Assembly renewed its commitment to the Global Counter-Terrorism Strategy that it had adopted two years earlier. A UN Counter-Terrorism Implementation Task Force had been established in 2005, and Secretary-General Ban was requested to make the necessary institutional changes to enhance the organization's support of the task force's work, which was organized around eight working groups focusing on cross-cutting themes.

On Dec. 17, 2009, the UN Security Council passed a U.S.-sponsored resolution (Res. 1904) to revise the content and process of the UN 1267 Committee's sanctions list, making it more transparent and fair and providing recourse for individuals and firms wrongly included on the UN sanctions list. The primary purpose of the UN list was to serve as a tool for governments to deny terrorists access to funding, weapons, travel, and other resources.

Humanitarian Affairs and Human Rights. UN humanitarian relief efforts reached near-record levels in 2008, responding to 55 emergencies, including natural disasters, the global food crisis, and

civil conflict. More than \$12 billion was mobilized globally for such efforts. In late November 2009 the UN launched a \$7.1 billion appeal for contributions for 2010 to assist 48 million people in 25 countries. The number of refugees declined in 2008. The year ended with 10.5 million refugees under the care of the UN High Commissioner for Refugees (UNHCR) and 4.7 million receiving assistance from the UN Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). In addition, another 839,000 individuals filed claims for asylum or refugee status, and 827,000 cases awaited determination at the end of the year. Nearly half of the refugees who were receiving assistance from UNHCR were from Iraq and Afghanistan; another 20% were from Africa. More than two-thirds of the world's displaced peoples remained inside their own countries. The number of internally displaced persons (IDPs) remained around 26 million for the second consecutive year. UNHCR cared for more than half of these IDPs. Nineteen African countries accounted for 11.6 million IDPs, and The Sudan, Colombia, and Iraq were home to the largest number of internally displaced persons.

Reversing the administration policy of former president George W. Bush toward the UN Human Rights Council, the U.S. sought and won election to the world's highest human rights body in May 2009. Upon taking office, President Obama moved to ban the use of torture by the U.S. military and issued an executive order to close the infamous Guantánamo Bay, Cuba, detention centre (known as Gitmo) within one year. A military judge at Guantánamo and later the U.S. Senate moved to block the order, however. More than 200 detainees remained at Gitmo in November, but on December 15 Obama issued a presidential memorandum ordering the transfer of detainees to Thomson Correctional Center in Illinois. The measure would need approval by the U.S. Congress, however.

As 2009 drew to a close, domestic violence in Iran intensified. UNHCR expressed concern over excessive use of force and human rights violation by Iranian security forces and called on the government to halt these activities.

Development and the MDGs. Only six years remained until the 2015 target deadline for achieving the MDGs. Yet, in the words of the 2009 UN Millennium Development Goals Report, the outlook was "grim." The global economic downturn had a significant impact on the

MDG process. Progress toward achieving the goals was slowed in many areas and even reversed in others. In regard to MDG 1—reducing extreme poverty—the strides made during the preceding decade and a half were blunted, and although overall poverty rates continued to decline, the UN estimated that 55 million to 90 million more people would be living in extreme poverty than had been anticipated prior to the economic crisis that began in late 2008. The situation for girls and women was especially problematic. Women continued to be much more vulnerable with regard to sustainable livelihoods, and four years after the MDG target date for reaching gender parity in primary- and secondary-school education, girls lagged behind. Maternal health—the MDG on which there was the least progress to date—remained an elusive quest.

The UN reported that the gap between the goal of creating an international trading system that was rule-based, predictable, equitable, and nondiscriminatory and the reality of the 2009 global trading system was widening. In 2008 official development assistance (ODA) reached its highest level ever, increasing by 10% in real terms over 2007. Over the previous decade, assistance to less-developed countries (LDCs)—especially sub-Saharan African countries—had increased substantially. LDCs accounted for about 30% of all ODA. Yet ODA distribution and coverage remained very skewed. In 2007, for example, two countries, Iraq and Afghanistan, with less than 2% of the population of less-developed countries, received one-sixth of the total country-allocatable ODA.

Food Crisis. The world food crisis that had significantly worsened in 2008 remained one of the world's greatest challenges in 2009. Despite a decrease in prices in late 2008, food costs continued to be high.

A World Food Summit on food security was held in Rome on Nov. 16–18, 2009. The final conference document, while calling on governments to reinforce efforts to meet the MDG target of reducing hunger by half by 2015, contained no new financial commitments for doing so. On a more positive note, the World Bank announced in late November that it had launched a \$1.5 billion trust fund to promote agricultural production in poor countries. Donor countries pledged a total of \$20 billion in aid.

Health. Beginning in April 2009, the world witnessed the first influenza pan-

demic in more than four decades—influenza A H1N1. By year's end 12,220 deaths had been reported worldwide, and the World Health Organization (WHO) had declared the pandemic on the decline. H1N1 vaccines were finally becoming available in many areas worldwide. (See Special Report on page 194.)

As a result largely of global and regional immunization campaigns, especially in sub-Saharan Africa, deaths from measles dropped 74% from 2000 to 2007. More than 80% of children 12–23 months old in less-developed regions received at least one dose of measles vaccine.

The global campaign against malaria made inroads, but nearly a million people died annually of the disease. Malaria deaths were highly regionalized, with 89% in sub-Saharan Africa in 2008; the overwhelming majority of fatalities were children. To frustrate matters, in late December 2009, news broke of a new drug-resistant strain of malaria in the Cambodia-Thailand border region.

Globally, the number of people living with HIV/AIDS continued to hover around 33 million. In some regions, however, infection rates continued to rise. In Eastern Europe and Central Asia, for example, HIV prevalence rates had doubled since 2001, and the number of persons living with HIV/AIDS had ballooned from 630,000 in 2001 to 1,600,000 in 2007. Two-thirds of persons living with HIV were located in sub-Saharan Africa, and most of these were women.

Maternal mortality continued to plague the LDCs worldwide; in 2005 (the year for which the most recent statistics were available), more than half a million women and girls died annually from birth-related complications—representing 99% of such deaths globally. Half of all maternal deaths occurred in sub-Saharan Africa, and another third occurred in South Asia.

Environment. In October 2008 the UN Environment Programme (UNEP) called for a “Global Green New Deal” and launched the Green Economy Initiative to provide a long-term strategy for dealing with global environmental degradation. Two months later Secretary-General Ban reiterated this call and challenged member states to provide investment to create millions of green jobs. By 2009 various UN agencies were mobilized for the effort.

The year 2009 was the UN-designated Year of Climate Change. A series of major international conferences were held,

culminating in a final global agreement in Copenhagen in December to replace the Kyoto Protocol, which was scheduled to expire in 2012. The rather contentious conference in Copenhagen, (attended by representatives from 193 countries) elicited a very weak non-binding global agreement. The outcome document provided for \$100 billion in aid by 2020 for poor countries to address climate change and noted the importance of taking measures to limit global warming to a target level of 2 °C (3.6 °F). There were no binding targets, however.

Administration and Reform. By the end of 2009, the number of UN member states stood at 192. The regular biennial budget for 2008–09 was \$4.87 billion. Secretary-General Ban's restructuring of the UN's peace and security operations—including the Department of Peacekeeping Operations, the Department of Field Support, the Office of Rule of Law and Security Institutions, and Integrated Operational Teams—continued during the year. In an attempt to revitalize the UN Secretariat, the General Assembly agreed to streamline the organization's personnel and service-delivery systems.

(ROGER A. COATE)

EUROPEAN UNION

The European Union faced a series of daunting challenges as 2009 opened. At the top of the list—and the most urgent—was how to respond to the global economic crisis. How would a union of 27 states, comprising the stronger economies of its Western member countries and the poorer former communist states that were more recent entrants, forge a coherent strategy? Should the union back the U.K.'s calls for a massive global fiscal stimulus of the kind championed by the United States or sit tight and resist higher borrowing in an attempt to ride out the recession?

Dark clouds also hung over the EU project itself as the year began. The bloc's drive to reform its own institutions so they could perform better with an enlarged membership of 27 remained in deep trouble. The EU's Lisbon Treaty—the product of eight years of painstaking work—had been drawn up with the intention of pooling more powers at the European level, in part by creating the new posts of EU president and a more powerful foreign policy chief and by reducing the right of one country to veto the wishes of the rest. The idea was that if Europe could

speak as one, rather than as 27, it would be far better able to punch its weight in global negotiations, whether on trade and the economy, foreign affairs, or the environment. Yet some member states were determined not to back the deal, arguing that too much power was being transferred from national governments to Europe.

It was just these kinds of concerns that had led Ireland to reject the treaty in a referendum in June 2008. Countries such as the Czech Republic were also showing a reluctance to sign up. If just one of the 27 states refused to agree, the treaty would be dead. Somehow, Ireland had to be persuaded to vote again, and the other doubters had to be won round.

There were also divisions over plans to expand the community farther eastward by admitting new member states in years to come. The question of whether Turkey should win admission continued to split the union.

Moreover, rather than forge a spirit of unity, the economic crisis opened up deep divisions. By early February the Czechs, who held the rotating presidency of the EU for the first six months of 2009, had become involved in a damaging spat with France, which Czech leaders accused of having pushed protectionist policies to help its own car industry at the very time Europe should have been acting together as one. French Pres. Nicolas Sarkozy responded to the economic downturn by criticizing French car companies that relocated plants to Eastern European countries in an effort to cut costs, and these countries cried foul. Czech Prime Minister Mirek Topolánek accused Sarkozy of having adopted “beggar thy neighbour” policies to protect France's interests. It seemed that the economic difficulties were forcing some countries to look to their national interests, not the broader European one. Would Europe's entire single market fracture under the pressure?

The arguments spilled over into discussions of whether the EU should back big fiscal stimulus packages or keep a tight rein on borrowing. In late March, Topolánek described the U.S. and U.K. approach, which favoured pumping in huge sums of money to keep the world economy afloat, as “the road to hell.” U.K. Prime Minister Gordon Brown, on the other hand, said that he believed that “global leaders recognize the need to cooperate.” In the end, as so often happened in Europe, it was left for countries to

Zeng Yi—Xinhua/Landov



On December 1 the European Union's circle of stars logo is projected onto Lisbon's historic Belem Tower as fireworks light up the sky in celebration of the entry into force of the EU's Lisbon Treaty after eight years of negotiations.

agree to disagree and to launch their own fiscal stimulus packages if they so desired.

In June the EU staged elections to the increasingly powerful, but still fledgling, European Parliament. Centre-right parties enjoyed the greatest success, and in July conservative former Polish prime minister Jerzy Buzek (see BIOGRAPHIES) was elected the body's president. Centre-left parties in power in countries such as the U.K., Spain, and Portugal took a battering in the June elections because they were blamed for the economic downturn. Disillusion with the European Union, and politicians in general, was evident in a turnout of just 43% of the 388 million eligible voters. Most alarming was the success of far-right parties, which took advantage of rising nationalist sentiment and suspicion of remote government. In the U.K. the political establishment was shaken when the openly antiforeigner British National Party seized two seats in the European Parliament. It was the first time that the party had ever gained a foothold in Europe's emerging legislative assembly. Far-right parties also increased their votes dramatically in several other countries, including Austria, The Netherlands, Hungary, Denmark, and Finland. It was another alarming sign that the people of Europe were splintering off from a political elite intent on centralizing its power base at a European level.

By early summer, however, the EU was renewing its enthusiasm to drive

forward with political integration and expansion. Turkey expressed its continued eagerness to join the union, although its bid met with intense resistance from countries such as Austria and France. Both Albania and Iceland formally applied for membership in the EU in 2009. Iceland had long stood aloof from the EU, believing it could thrive on its own, but the economic crisis that had ravaged its banking system left it feeling vulnerable. Carl Bildt, foreign minister of Sweden, which had assumed the presidency of the EU in June, welcomed Iceland's newfound community spirit. The country's existing level of economic integration with the rest of Europe, Bildt said, would allow it to be placed on a "shorter track" for membership than states that were economically and politically less prepared, such as countries in the Balkans.

Meanwhile, the bloc's leaders tried to reinvigorate the union's stalled reform process. They agreed to measures designed to make the Lisbon Treaty more acceptable to the Irish. New guarantees ensured that Ireland would retain its military neutrality and the right to determine its own taxes and policies on issues such as abortion. Ireland held a second referendum in October, and this time Irish voters backed the treaty by 67.1% to 32.9%—a swing of 20.5% to the "yes" camp since the summer of 2008. Most European leaders were elated. Within days, Polish Pres. Lech

Kaczynski signed the treaty. The only country left to put its name to Lisbon was the Czech Republic. Eventually, after receiving some further guarantees for his country, Czech Pres. Vaclav Klaus, a strong Euroskeptic, reluctantly ratified the treaty in November.

There was no time for self-congratulation, however, since arguments had already begun over who should fill the top posts created under the Lisbon Treaty, particularly that of first permanent president of the European Council. Although the role was not clearly defined in the treaty, it was obvious that it would carry huge power and prestige. The occupant would represent the EU in global meetings and serve as the face of Europe. For weeks there was discussion about whether Tony Blair, the former U.K. prime minister, should be given the role. Many member states, however, objected to Blair, mainly because of his support for the war in Iraq and the U.K.'s failure to adopt the euro during his tenure as prime minister. At a summit in late October, it became clear that even France and Germany—the "big two" of the EU—had profound doubts about Blair. Other names were floated, but as agreement proved elusive, the decision was postponed to another meeting in mid-November.

In the end the matter was resolved without the expected drama. Blair was rejected by EU leaders in favour of Belgian Prime Minister Herman Van Rompuy. (See BIOGRAPHIES.) Rather than opting for a world-renowned figure who would have overshadowed the 27 EU heads of government, the decision was made to appoint a low-key figure, an effective organizer who was little known outside Belgium—and who was uncontroversial. The appointment of British Baroness Ashton (see BIOGRAPHIES), the EU trade commissioner, as the first high representative for foreign affairs and security policy was also something of an anticlimax. Ashton, while respected, was pretty much unheard of outside the U.K.'s Labour Party and the European Commission, on which she had served for a little over a year. In deciding on these appointments, the European Union had shown, however, that it was pressing ahead after an eight-year struggle to modernize. The Lisbon Treaty came into force on December 1.

The year ended in disappointment when world leaders gathering for the UN climate-change talks in Copenhagen failed to agree to legally binding

John Thys—AFP/Getty Images



Baroness Ashton, the new European Union high representative for foreign affairs and security policy, departs from an EU summit meeting held in December in Brussels, where discussions focused on climate change.

targets to cut greenhouse-gas emissions. The EU had taken a lead role in pushing for firm commitments backed by international law and had set its sights on a deal that would have committed countries to a 30% cut in emissions, compared with 1990 levels, by 2020. When a deal finally came, much of the detail was struck by the U.S. and China, and this left an impression that the EU had been bypassed. The accord contained aspirations to cut emissions and finance measures to mitigate the effects of climate change in poorer countries—but there was nothing legally binding. While some form of unity was achieved after two weeks of haggling, the accord fell far short of the EU's hopes and showed that in China it had an increasingly powerful force to confront in global affairs.

(TOBY HELM)

MULTINATIONAL AND REGIONAL ORGANIZATIONS

The global financial crisis that began in 2008 set the agendas for many multinational and regional organizations in 2009. The focus of many such groups was on stimulating recovery, providing greater regulation of financial institutions, and increasing cooperation.

One striking development was the eclipse of the Group of Seven/Eight by

the Group of 20 (G-20). In April and September, G-20 leaders met to discuss the economic crisis and the reform of financial regulatory systems and to jump-start the Doha round of World Trade Organization negotiations. The summits largely produced agreements to continue talking about the issues. The September summit, however, approved the "Pittsburgh Pact," which signified the G-20's new role as the primary forum for global economic cooperation. The leaders adopted broad outlines for stronger capital standards for banks and greater voting power in the IMF and World Bank for China and other fast-growing developing countries.

In June the BRIC countries (Brazil, Russia, India, and China) held their own, inaugural summit. Accounting for about 15% of the world economy and 40% of global currency reserves, they were drawn together by their dissatisfaction with the U.S.'s role in the global financial system, especially the dollar's status as the world reserve currency. The BRIC countries were a disparate group, however, and their summit produced more rhetoric than substance.

At the year's two summits of the Shanghai Cooperation Organization (SCO), the financial crisis took precedence over the usual regional security issues. Summit communiqués stressed the priority of speeding the implementation of plans to increase international cooperation within the region—particularly regarding infrastructure and communication to counter threats to stability.

Asia-Pacific Economic Cooperation (APEC) celebrated its 20th anniversary in 2009. Various meetings were held throughout the year in Singapore on the theme of "Sustaining Growth, Connecting the Region." The November summit was short on substance and long on rhetoric about recovering from the financial crisis, fostering sustainable economic growth, strengthening regional integration and global regulatory policies, resisting protectionism, and concluding the Doha negotiations.

The October summit of the Association of Southeast Asian Nations (ASEAN) was attended by leaders from China, Japan, South Korea, Australia, India, and New Zealand. Their agenda included discussing the expansion of regional trade, finding new paths to growth that were independent of U.S. and European markets, and addressing the poor transportation infrastructure in parts of the region. The organization's leaders asserted that they were on track

to implement the ASEAN Free Trade Area in January 2010, which would initially eliminate tariffs on more than 87% of imports within six of the member countries. In late October ASEAN also inaugurated its Intergovernmental Commission on Human Rights to help promote social development and justice. The commission, however, encountered charges that it would be a "toothless" body, given ASEAN members' strong adherence to the norm of noninterference.

Along with calling for increased economic cooperation and reforms of global financial architecture, organizations in Latin America and Africa also dealt with challenges to democracy. The Organization of American States (OAS), the South American Common Market (Mercosur), and the Union of South American Nations (UNASUR) were all involved in a crisis in Honduras, where the elected president was ousted in a coup in June. These groups called for his reinstatement, and the OAS also suspended Honduras and led efforts to mediate a solution—efforts that produced agreement among the parties but little movement toward implementation. In a major step, the OAS voted to lift Cuba's long suspension from the organization, provided that Cuba met certain conditions.

The African Union (AU), the Southern African Development Community (SADC), and the Economic Community of West African States (ECOWAS) were involved in political crises in Madagascar, Zimbabwe, Niger, Guinea, and Guinea-Bissau. Both the AU and the SADC suspended Madagascar, and the AU led mediation efforts concerning that country's transitional government and elections. Following an extraordinary summit in October, ECOWAS suspended Niger and appointed mediators to address the situations in both Niger and Guinea.

The AU continued to bear a significant burden for peacekeeping in the Darfur region of The Sudan and in Somalia. Along with the Arab League, it had been vocal in rejecting the International Criminal Court's arrest warrant against Sudanese Pres. Omar al-Bashir on war crimes charges. Bashir was welcomed at both the AU and Arab League summits, but both organizations supported the creation of a hybrid tribunal of Sudanese and foreign judges appointed by the AU in order to try Bashir.

In February the Arab League sent a delegation to the Gaza Strip to investigate charges of Israeli war crimes dur-

ing military operations there in late 2008 and early 2009. In September, following publication of a UN fact-finding commission's report, the league's secretary-general submitted a request for an International Criminal Court investigation of war crimes committed in Gaza. Although the league faced problems with unity in 2009, members were united in their decision to call for a freeze on the expansion of Jewish settlements in the Israeli-occupied territories as a prerequisite for both further peace talks between Israel and the Palestinians and formal recognition of Israel. (MARGARET P. KARNS)

DEPENDENT STATES

Europe and the Atlantic. On June 21, 2009, Greenland's national day and the 30th anniversary of the Danish territory's home rule, Greenland celebrated the beginning of a new era under an expanded self-government agreement (approved by referendum in November 2008). During a day of festivities, Denmark's Queen Margrethe II handed over the official self-rule documents in a ceremony in Greenland's capital, Nuuk, attended by dignitaries from 17 other countries and territories. On June 2 the left-wing Inuit Ataqatigiit (IA; "Community of the People") won a landslide victory in elections to Greenland's 31-seat Landsting (legislature), with 43.7% of the vote and 14 seats (up from 7 in the 2005 ballot). The Forward (Siumut) Party, senior member of the

outgoing ruling coalition, fell to second place with 26.5% and 9 seats (down from 10). IA leader Kuupik Kleist was sworn in as prime minister on June 12.

In October an unexpected source of rare-earth metals was discovered in Greenland that could challenge China's domination (95%) of world supplies of rare-earth metals. The Ilimaussaq field was the world's largest-known reserve of rare-earth metals, and according to the Australian mining company that held the development rights, it could meet at least 25% of global demand for the forthcoming half century and double Greenland's GDP. Under the new agreement with Denmark, Greenland would keep half of the income from oil and minerals, with the ultimate goal of full financial and political independence.

On July 21 Spanish Foreign Minister Miguel Ángel Moratinos arrived in Gibraltar for talks with his British counterpart, David Miliband, and Gibraltar Chief Minister Peter Caruana. It was the first formal visit in some 300 years by a Spanish minister to Gibraltar, which was ceded to British control in 1713. (MELINDA C. SHEPHERD)

Caribbean and Bermuda. Luis Fortuño of the pro-statehood New Progressive Party was sworn in on Jan. 2, 2009, as governor of Puerto Rico. Former governor Aníbal Acevedo Vilá was acquitted in March on several corruption charges, which had dogged him throughout his unsuccessful 2008 reelection campaign against Fortuño.

U.S. President-elect Barack Obama reassured Puerto Rico in early January that its current Commonwealth status would be examined again during his term in office, and in July the U.S. House of Representatives approved another referendum for Puerto Rico. Referenda on the territory's constitutional status had been held previously in 1967, 1993, and 1998, all of which rejected the options of statehood or independence.

Fortuño's new administration made clear its determination to offer strong support to the development of renewable energy in Puerto Rico when in January it canceled a \$74 million natural gas pipeline being built by Sweden's Skanska for the state-owned Puerto Rico Electric Power Authority (PREPA). The Skanska pipeline was to take natural gas from the EcoEléctrica power plant in Peñuelas to PREPA's 700-MW plant at Salinas.

The Dutch territory of Curaçao in a nonbinding referendum in May narrowly approved the 2006 agreement designed to elevate Curaçao to the status of autonomous territory within The Netherlands. Bonaire's final status remained unsettled at year's end, with a referendum likely to take place in early 2010.

Civil unrest returned to the French dependency of Guadeloupe in February, with at least one death reported, following violence and looting against the background of a general strike that began in January and also spread to Martinique. Union leaders blamed high prices and "inadequate" wages for their withdrawal of labour. The strike was called off in March after agreement was reached on a new wage deal for lower-paid workers.

In August the U.K. government suspended parts of the constitution of its Turks and Caicos colony, removing the premier and cabinet and dissolving the 21-member House of Assembly. The day-to-day running of the colony was transferred to the U.K.-appointed governor, Gordon Wetherell. The action, which had been announced in March, was taken following the interim report of a commission of inquiry set up in July 2008 to investigate allegations of corruption against elected officials. The commission found that corruption was "endemic," and in July 2009 the U.K. said that it was considering a criminal investigation of former premier Michael Misick and four of his cabinet ministers.

The opposition United Democratic Party swept to victory in the May gen-

(Left to right) Gibraltar Chief Minister Peter Caruana, Spanish Foreign Minister Miguel Ángel Moratinos, and British Foreign Secretary David Miliband shake hands before their meeting in Gibraltar on July 21.



Cristina Quicler—AFP/Getty Images

Ricardo Arduengo/AP



A masked protester displays a Puerto Rican flag during a peaceful demonstration in San Juan on October 15. Thousands of demonstrators gathered to protest the layoff of some 20,000 government workers in the financially strapped territory.

eral election in the U.K.'s Cayman Islands, taking 9 seats in the 15-member Legislative Assembly. The Movement for Change and Prosperity regained office in Montserrat in September when its leader, Reuben Meade, led the party to victory in the general election, winning six out of nine Legislative Council seats.

Bermuda Premier Ewart Brown's decision to give sanctuary to four Chinese Muslim Uighurs on their release in June from the U.S. prison at Guantánamo Bay, Cuba, triggered a motion of no confidence against him in the Bermuda parliament, which he survived. The U.K. government expressed displeasure that the premier had not discussed the matter with the British-appointed governor beforehand.

(DAVID RENWICK)

Pacific Ocean. On Sept. 29, 2009, an earthquake of magnitude 8.0 took place about 190 km (120 mi) southwest of American Samoa. That same day the resulting tsunami struck American Samoa, killing more than 20 people and causing extensive damage in the capital, Pago Pago. U.S. Pres. Barack Obama later that day declared the territory a disaster area. American Samoa already faced economic problems, as a mandated increase in the U.S. federal minimum wage was blamed for cutbacks at two tuna canneries that provided the majority of private-sector employment in the territory. In Sep-

tember the government sought a loan in a last-minute bid to retain 2,000 jobs by purchasing one cannery, which was scheduled to close at month's end.

In September the first U.S. military and related personnel arrived in Guam from the Japanese island of Okinawa. Japan, which was funding a significant part of the bill for the relocation of 8,000 U.S. marines and 9,000 dependents, had provided \$740 million for rebuilding Guam's aging infrastructure. A U.S. congressional report suggested that this funding would not be sufficient to cover the costs of the realignment agreed to in 2006.

An Asian Development Bank report in August asserted that in the Cook Islands lending to business was down, import demand and export volumes were low, and tax revenue was falling. The local economy received a boost in the second half of the year from the Pacific Mini Games and aggressive marketing of tourism in regional markets. The Cook Islands also submitted a claim in the UN to 400,000 sq km (154,000 sq mi) of extended continental shelf that might contain valuable manganese nodules.

French Polynesian Pres. Gaston Tong Sang, facing a vote of no confidence, resigned on February 7 after only nine months in office. The territory's Assembly elected its own speaker, former president Oscar Temaru, as Tong Sang's replacement. On November 24, how-

ever, Temaru's coalition government—the fourth since the 2008 election—fell to a no-confidence motion and was replaced by one led by Tong Sang. In September former president Gaston Flosse was convicted on the first of several charges of corruption and ordered stripped of his Senate seat. Flosse appealed the loss of his seat, and thus his immunity, to the French constitutional court. This loss of immunity allowed the prosecutor to detain Flosse while the corruption inquiry proceeded. The territory received some \$232 million in aid from the French Development Agency in 2008 to offset the declining economic conditions and to generate growth. A Council of State in Paris annulled a French Polynesia Assembly vote to suspend a controversial pearl export tax until December 2009.

After provincial elections in May, the New Caledonian Congress named Philippe Gomès as the new head of government. Tension arose in the territory in May as members of the Kanak USTKE union confronted local aviation interests and French police at the domestic airport, and six union leaders were jailed for up to one year. In re-

Dependent States¹

Australia	United Kingdom
Christmas Island	Anguilla
Cocos (Keeling) Islands	Bermuda
Norfolk Island	British Virgin Islands
	Cayman Islands
Denmark	Falkland Islands
Faroe Islands	Gibraltar
Greenland	Guernsey
	Isle of Man
France	Jersey
French Guiana ²	Montserrat
French Polynesia	Pitcairn Islands
Guadeloupe ²	Saint Helena
Martinique ²	Tristan da Cunha
Mayotte	Turks and Caicos Islands
New Caledonia	
Réunion ²	United States
Saint-Barthélemy	American Samoa
Saint-Martin	Guam
Saint-Pierre and Miquelon	Northern Mariana Islands
Wallis and Futuna	Puerto Rico
Netherlands, The	Virgin Islands (of the U.S.)
Aruba	
Netherlands Antilles	
New Zealand	
Cook Islands	
Niue	
Tokelau	

¹Excludes territories (1) to which Antarctic Treaty is applicable in whole or in part, (2) without permanent civilian population, (3) without internationally recognized civilian government (Western Sahara), or (4) representing unadjudicated unilateral or multilateral territorial claims. ²Legally classified as overseas *département* of France.

sponse, the French sent additional paramilitary forces to the territory. The union suspended its strike in June, but after a Court of Appeal rejected its appeal in September, the union resumed the general strike and prepared to appeal the imprisonment of its leaders to France's highest court.

(CLUNY MACPHERSON)

Indian Ocean. On March 29, 2009, voters on Mayotte (the only one of the four islands in the Comoros group that voted in 1974 to remain a French dependency) participated in a referendum on the island's future relationship with France. More than 95% approved a change of status from that of a departmental collectivity to an overseas *département* of France. This would necessitate replacing the local Muslim legal system, including the practice of polygamy, with French law. Comoros, which did not recognize French rule in Mayotte, protested the vote and criticized the treatment of Comoran immigrants to Mayotte.

Civil unrest in French Caribbean dependencies flared over high prices and inadequate wages and spread in early March to Réunion, where protesters called for a general strike on March 10. It was reported in 2009 that Réunion registered the highest unemployment rate in the EU, 25.2%, with some 50% of people aged 15–24 out of work.

In early 2009 the Chagos Conservation Trust and other environmental groups called for the creation of a marine reserve in the uninhabited British Indian Ocean Territory coral atoll. Exiled Chagos islanders, who in 2008 had lost their battle in the British House of Lords for the right of return, appealed that decision to the European Court of Human Rights in 2009 and protested that the reserve would be more effective if they were permitted to return as "custodians of the environment."

Australian Immigration Minister Chris Evans was forced to double the size of the Australian detention centre on Christmas Island to house 2,300 people. This followed a sharp increase in the arrival of asylum seekers on boats sailing into Australian waters. Late in the year the Australian government transferred some asylum seekers to mainland Australia for processing. Evans rejected claims by the new Australian opposition leader, Tony Abbott, that the government had abandoned offshore processing of asylum seekers and reiterated that the government was committed to mandatory detention of unauthorized boat arrivals.

(A.R.G. GRIFFITHS)

ANTARCTICA

Ice averaging roughly 2,160 m (7,085 ft) in thickness covers more than 98% of the continent of Antarctica, which has an area of 14 million sq km (5.4 million sq mi). There is no indigenous human population, and there is no land-based industry. Human activity consists mainly of scientific research. The 47-nation Antarctic Treaty is the managerial mechanism for the region south of latitude 60° S, which includes all of Antarctica. The treaty reserves the area for peaceful purposes, encourages cooperation in science, prescribes environmental protection, allows inspections to verify adherence, and defers the issue of territorial sovereignty.

At the 32nd Antarctic Treaty Consultative Meeting (ATCM), held in Baltimore, Md., on April 6–17, 2009, more than 400 diplomats, Antarctic program managers, logistics experts, and polar scientists from 47 countries—including the 28 consultative parties with a scientific presence in the Antarctic—gathered to discuss issues ranging from protecting the environment to advancing science and managing tourism. The representatives agreed to rules related to tourism that included a prohibition on landings by tourists from ships carrying more than 500 passengers and a requirement that ships land no more than 100 passengers at a time. They also agreed to support the International Maritime Organization's (IMO's) efforts to ensure the safety of Antarctic shipping and to petition the IMO to extend the boundary of the organization's Antarctic Special Area northward to the

Antarctic Convergence in order to protect the region's marine ecosystem.

At the meeting the representatives also recognized the 50th anniversary of the signing of the Antarctic Treaty in December 1959. In a declaration they acknowledged the treaty's contribution to promoting peace and international cooperation in the Antarctic region and reaffirmed their commitment to the objectives and purposes of the treaty. In a second declaration they recognized the role of polar science in understanding climate change and encouraged participants in the most recent International Polar Year program (which ran from March 2007 to March 2009) to continue their cooperation and scientific research.

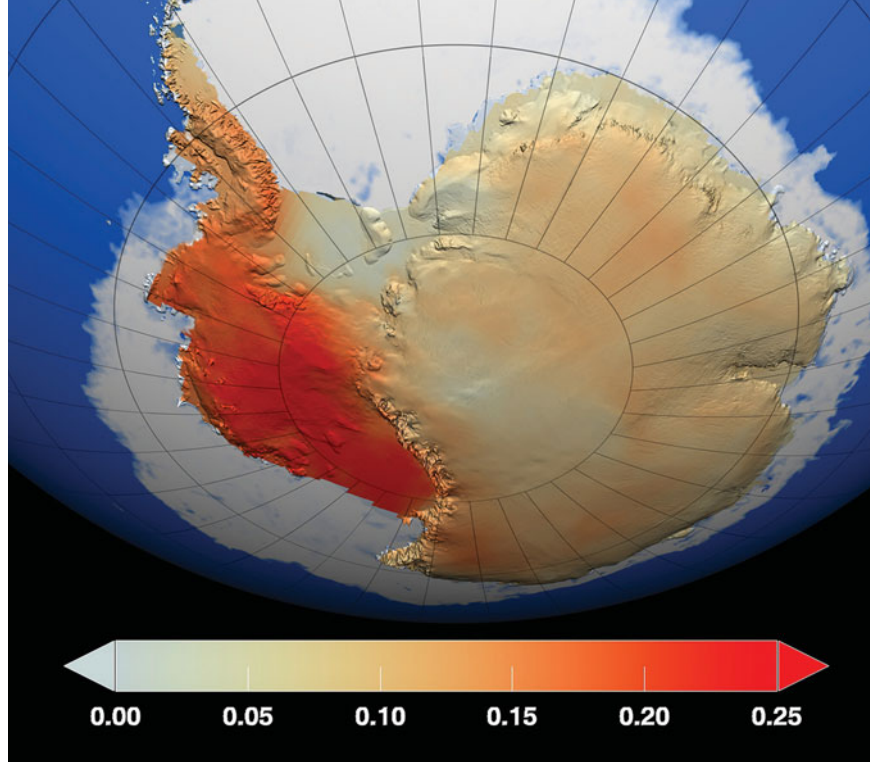
During the ATCM the Committee for Environmental Protection discussed or proposed for discussion 2 new and 11 revised management plans for Antarctic Specially Protected Areas. The committee also discussed the impact of nonnative species in the region and new guidelines for managing historic sites and monuments and agreed to study the environmental impacts of tourism and nongovernmental activities in Antarctica.

During the 2008–09 austral summer, 37,858 tourists visited the continent, with some 37,585 arriving by ship. Of these, 26,933 landed in the Antarctic Treaty area. About 275 participated in multiday land-based expeditions to the continental interior; 285 made day visits by air to King George Island near the coast of the Antarctic Peninsula;

Tourists on Antarctica's Petermann Island observe a group of gentoo penguins in February.



Ryan T. Pierce/Getty Images



An image produced by NASA shows locations on Antarctica where temperatures increased between 1959 and 2009. The red represents areas where temperatures (measured in degrees Celsius) increased the most over the period, and the dark blue represents areas with a lesser degree of warming.

GSFC Scientific Visualization Studio/NASA

and 174 visitors traveled by yachts (each vessel carrying 12 or fewer passengers) to the Antarctic Peninsula. The Russian icebreaker cruise ship *Kapitan Khlebnikov*, operated by Quark Expeditions, became trapped in sea ice in the Weddell Sea for three days in November with 101 passengers on-board the vessel.

In late 2008 the U.S. and New Zealand began building Antarctica's first wind farm with three 330-kW wind turbines on a site overlooking New Zealand's Scott Base on Ross Island. Antarctica New Zealand was to lead the estimated \$6 million project and cover most of the cost as part of its contribution to the shared logistics pool with the U.S. Antarctic Program, which transported most fuel, personnel, and materials to the continent for both national programs. The project would cut fuel consumption by about 463,000 litres (122,312 gal) every year, and wind-generated electricity would reduce greenhouse gas production by 1,242 tons of carbon dioxide annually. The wind-generated electricity, which would flow into the U.S. distribution system at McMurdo Station, would supply about 15% of McMurdo's annual demand; the smaller New Zealand station would draw about 87% of its electricity requirements from the U.S. distribution system. The two countries

expected the wind farm to be operational in February 2010.

The U.S. Antarctic Program was to complete the modernization of the Amundsen-Scott South Pole Station during the 2009–10 austral summer. The final phase would be the demolition and removal of the South Pole geodesic dome.

Early in the 2008–09 austral summer, a fire destroyed a building, killed one person, and injured two others at the Russian station Progress, located in East Antarctica. The injured, who were part of a 10-person construction team, were taken to China's nearby Zhongshan station. China officially opened its first inland station on Feb. 2, 2009. Kunlun station, which was China's third Antarctic station, was located in East Antarctica at Dome A, about 4,093 m (13,429 ft) above sea level. Scientific activity at the station would focus on ice core drilling.

Researchers who had participated in the five-nation Antarctic Geological Drilling Program announced in October that they had found unexpected evidence of a remarkably warm period in Antarctica 15.7 million years ago. The evidence found in a sedimentary core, drilled from the seafloor underneath the Ross Ice Shelf, indicated that even a slight rise in atmospheric concentrations of carbon dioxide affected the sta-

bility of the West Antarctic Ice Sheet. Because the dynamics of ice sheets were not well understood, discoveries such as this one improved scientific understanding of the mechanisms that controlled the growth, melting, and movements of ice.

In May, British scientists published an analysis suggesting that if the West Antarctic Ice Sheet were to collapse, the sea level rise would be only half as much as had been estimated—3 m (10 ft) rather than 6 m (20 ft). The authors predicted that seas would rise unevenly because the shift in a huge mass of ice away from the South Pole would subtly change the strength of gravity locally and the rotation of the Earth.

In October, NASA scientists reported in the journal *Science* that satellite observations showed that over the past seven years ice sheets in Greenland and Antarctica appeared to be shrinking faster than originally thought. In Antarctica the loss rate had more than doubled.

(WINIFRED REUNING)

ARCTIC REGIONS

The Arctic regions may be defined in physical terms (astronomical [north of the Arctic Circle, latitude 66° 30' N], climatic [above the 10 °C (50 °F) July isotherm], or vegetational [above the northern limit of the tree line]) or in human terms (the territory inhabited by the circumpolar cultures—Inuit [Eskimo] and Aleut in North America and Russia, Sami [Lapp] in northern Scandinavia and Russia, and 29 other peoples of the Russian North, Siberia, and East Asia). No single national sovereignty or treaty regime governs the region, which includes portions of eight countries: Canada, the United States, Russia, Finland, Sweden, Norway, Iceland, and Greenland (part of Denmark). The Arctic Ocean, 14.09 million sq km (5.44 million sq mi) in area, constitutes about two-thirds of the region. The land area consists of permanent ice cap, tundra, or taiga. The population (2009 est.) of peoples belonging to the circumpolar cultures is about 535,000 (Aleuts [in Russia and Alaska], more than 4,000; Athabascans [North America], 40,000; Inuits [or Eskimos, in Russian Chukotka, North America, and Greenland], 155,000; Sami [Northern Europe], 85,000; and 41 indigenous peoples of the Russian North, totaling about 250,000). International organizations concerned with the Arctic include the Arctic Council, the Barents Euro-Arctic Council, the Inuit Circumpolar Council, and the Indigenous Peoples' Secretariat. International scientific cooperation in the Arctic is the focus of the International Arctic Research Center of the University of Alaska at Fairbanks and the University of the Arctic, a circumpolar network of member institutions.

Arctic summer sea ice hit its 2009 annual minimum on September 12. At 5.1 million sq km (1.97 million sq mi) of coverage, the 2009 minimum was the third lowest on record, 24% below the 1979 to 2000 average. The countries bordering the Arctic region (the U.S., Canada, Denmark [Greenland], Norway, and Russia) continued their interest in the more open and accessible Arctic Ocean. Much of the ongoing undersea mapping work carried out in 2009 was done jointly by pairs of countries. Russia and the U.S. conducted collaborative research in the Chukchi Sea; the U.S. and Canada worked together in the Beaufort Sea; and Canada and Denmark worked cooperatively in the high Arctic.

During the year the countries bordering the Arctic continued the process of establishing rights to territory and undersea resources under the aegis of the UN Convention on the Law of the Sea. In April the UN confirmed Norway's claim to extend the boundary of its continental shelf, based on undersea mapping submitted in 2006. The decision added some 235,000 sq km (91,000 sq mi) to Norway's continental shelf area. Russia's claim for Arctic undersea rights was submitted in 2007, and the country continued to carry out research to support its claim. Canada was expected to submit a claim by 2013, and Denmark was to make its proposal by 2014. The U.S. had yet to ratify the convention, although Pres. Barack Obama had signaled support for it.

In August the U.S. introduced a moratorium on commercial fishing in its exclusive economic zone off the Arctic coast of Alaska. The moratorium was announced to provide time to determine the level of fish stocks, the role of Arctic fish in the ecosystem, and their response to the changing sea ice conditions. Fishing fleets worldwide had expressed interest in expanding their operations into the newly opening waters of the Arctic.

The Arctic Council released a major report on Arctic marine traffic in spring 2009. Transport activity was expected to increase from fishing, resource development, tourism, research, and commercial shipping. The report made recommendations for search-and-rescue capabilities in the event of accidents and spills. Just weeks before the report was released, a Russian nuclear-powered ice breaker collided with an unladen oil tanker in the Kara Sea. The tanker was damaged, but there was no

impact on the environment. Russia continued to promote and commercialize summertime shipping along its Northeast Passage in Eurasia, which reduces travel distances between Europe and the Pacific coast by some 5,000 km (3,100 mi). Two German cargo ships successfully completed the transit in September 2009. The new Russian ice breakers *50 Let Pobedy* and *Rossia* accompanied the ships along the most northerly section of the passage. In July the U.S. introduced bills to build two new ice breakers for use in polar waters and to coordinate shipping infrastructure with other Arctic countries. Russia also had plans to add another six nuclear-powered ice breakers by 2020.

In May Russia began construction on the world's first nuclear power plant on an offshore platform. An additional three offshore nuclear plants were in the plans for coming years. The platforms were intended to have multiple uses, one of which was to supply power for exploration for and development of petroleum and natural-gas reserves. Earlier in the spring, Norway had launched two new offshore semi-submersible rigs designed for harsh environmental conditions and ultra-deepwater drilling. Interest in Arctic oil and gas continued to grow in 2009. In 2008 the U.S. Geological Survey had determined that the Arctic contained 13% of the global oil reserves and that it contained 30% of the global gas reserves, with the majority of these reserves located along the Russian continental shelf.

Progress was modest in 2009 on two major pipeline projects in North America to connect hydrocarbon reserves in the Arctic to U.S. and Canadian markets. There was some assessment and planning work for the two gas pipeline routes—one in the MacKenzie Valley project in Canada (estimated at \$15 billion) and two competing proposals in Alaska (with construction costs having increased to an estimated \$30 billion). Interest in northern gas, however, had diminished as a result of technological innovations in drilling. Improvements in steam-extraction technology, known as hydraulic fracturing, were revitalizing natural gas reserves that were closer to markets.

It had been known that methane, the principle component of natural gas, also exists in the Arctic permafrost, both in the tundra and in the undersea frozen layer of the continental shelf. New studies in 2009 focused on

determining how much methane and carbon dioxide was stored in the Arctic and what quantity of these greenhouse gases might be released as the Arctic warms. The concern was that the addition of large amounts of the two gases could create a feedback loop that would accelerate climate change. One of these studies, coauthored by the executive director of the Global Carbon Project by the Commonwealth Scientific and Industrial Research Organization, estimated that some 1.5 trillion tons of carbon dioxide were stored in frozen soils, twice what had been previously estimated. Studies in the Arctic and elsewhere were also conducted into developing technologies that could harvest methane hydrates to use as a fuel rather than allowing the methane to escape into the atmosphere. The result from such harvesting could be significant, since methane is 20 to 25 times more potent than carbon dioxide as a greenhouse gas.

Research of the circumpolar biodiversity also continued in 2009. A Canadian study revealed that caribou and reindeer herds across the Arctic had declined by some 60% over the previous 30 years. Caribou and reindeer were considered a cornerstone species for the subsistence economy of the Arctic's indigenous peoples. Polar bears, also critical to the economy and culture of indigenous peoples, had been under threat from climate change as well, and in 2008 the U.S. government had listed them as a threatened species. These and other issues were discussed at the Indigenous Peoples' Global Summit on Climate Change hosted by the Inuit Circumpolar Council in Anchorage, Alaska, in April 2009.

Late in the summer, UN Secretary-General Ban Ki-Moon traveled to the Arctic before attending the World Climate Conference in Geneva in September. "The Arctic is warming faster than anywhere else on Earth," said Ban, describing the relationship that the Arctic has on world climate, "Changes in the Arctic are accelerating global climate change." His pronouncements added urgency to the UN Climate Change Conference that convened in December in Copenhagen to negotiate the treaty that would succeed the Kyoto Protocol. Leaders at the conference, however, were unable to arrive at a treaty to succeed the Kyoto Protocol, but they did reach agreement on an accord that would see negotiations continue in 2010. (JOHN STREICKER)

AFGHANISTAN



Area: 645,807 sq km (249,347 sq mi)
Population (2009 est.): 28,150,000 (including Afghan refugees in Pakistan and Iran)
Capital: Kabul
Chief of state and head of government:
 President Hamid Karzai

The war in Afghanistan assumed a higher global profile in 2009 as Taliban attacks inside Pakistan demonstrated the international character of the Islamist insurgency in both countries. U.S. and NATO troop levels in Afghanistan rose above 100,000, most of them American.

It was a year of reassessment by Afghanistan's Western allies. After taking office in January, U.S. Pres. Barack Obama began framing new policies to counter Taliban attacks. He authorized higher troop levels and replaced NATO's commander in Afghanistan. Economic reconstruction and the training of Afghan forces became high priorities. In recognition of the regional nature of the opposition, U.S. policy would view Taliban activity on both sides of the Afghanistan-Pakistan frontier as a whole.

There was a new willingness on the part of the U.S. to reach out to moderate Taliban, especially to those fighting for money rather than ideology. Many Western policy makers saw the insurgency in Afghanistan as composed of three groups. The first, the Taliban group led by Mullah Mohammad Omar, was loosely organized and active mostly inside Afghanistan. Many of this group's members were Pashtuns who fought for local or tribal issues and might respond to programs addressing their concerns. A second Taliban group, led by members of the Haqqani family, was credited with having introduced suicide attacks and bombings of public buildings to Afghanistan and was said to be connected with both al-Qaeda and elements of Pakistan's military. Finally, the group led by the warlord Gulbuddin Hekmatyar remained independent of the Taliban while sharing their Islamist orientation. It was not known whether Hekmatyar might find common ground with the government of Pres. Hamid Karzai.

Throughout the year interest focused on Afghanistan's second presidential election, in which Karzai stood for re-election. Registration was under way in the winter for a vote anticipated in the spring. According to Afghanistan's constitution, Karzai's term would end on May 22. In January, however, the Independent Election Commission, appointed by Karzai, announced that the election would be delayed until August 20 because of security and weather concerns. Although it was backed by the UN, the U.S., and other international leaders, this decision was rejected by many Afghan politicians, who argued that it was illegal. The controversy continued until the end of March, when the Supreme Court announced that Karzai could hold office until the August election.

The summer saw a spirited campaign with a broad field of candidates. An Electoral Complaints Commission, which included UN observers as well as Afghans, was charged with investigating and ruling on reported irregularities. The election provoked thousands of complaints of ballot fraud, and counting continued for two months. The first count gave Karzai enough votes to avoid a runoff, but several hundred thousand ballots in his favour were eliminated when convincing evidence of mass fraud was brought to light. A runoff between Karzai and former foreign minister Abdullah Abdullah was ruled necessary. Abdullah demanded that officials overseeing the election be replaced to prevent further fraud, but he was ignored. On November 1 he withdrew his participation, and Karzai was declared the winner without the need for a second vote. The president immediately pledged to remove the taint of corruption from his government.

New strategies could not disguise growing tensions between the Afghan government and its international defenders. Despite NATO's revised rules of engagement, its air strikes continued to cause civilian casualties. Many Afghans, including Karzai, openly criticized the foreign troops for not protecting the population. International leaders, whose own populations were becoming discouraged by so few signs of success, pointed to the corruption and inefficiency in Afghanistan's government and demanded reform.

In March the parliament passed, and Karzai signed, a bill legalizing the traditional family law of the Hazara, a law that was to apply only to this Shi'ite mi-

David Goldman/AP



U.S. Army soldiers wait to be evacuated by helicopter after their armoured vehicle struck an improvised explosive device in Afghanistan's Vardak province in August.

nority. Shi'ite parliamentarians argued that it was legal recognition of Hazara culture, but many inside and outside Afghanistan denounced the law for infringing on women's rights. Under pressure, Karzai promised to review the measure. He later signed a separate law making violence against women illegal. In July, however, Karzai enacted a revised version of the Hazara family law, which, among other provisions, forbade a woman to work outside the home without her husband's permission and allowed a man to withhold food from his wife if she refused to have sex with him.

The year saw a shift in Russian and Central Asian attitudes toward NATO shipments to Afghanistan, from allowing only nonlethal supplies to cross their countries to opening routes to arms shipments. Several Asian countries voiced new warmth and friendship toward Afghanistan's government. China offered expanded economic cooperation but remained noncommittal on requests to open the border of Afghanistan's Vakhn region to trade. India too was eager to participate in Afghanistan's development, and even Japan offered extensive financial aid to the country. On another bright note, in April Afghanistan established its first national park, Band-e-Amir, in a region renowned for the intense, clear blue of its mountain lakes. (STEPHEN SEGO)

ALBANIA



Area: 28,703 sq km (11,082 sq mi)
Population (2009 est.): 3,191,000
Capital: Tirana
Chief of state: President Bamir Topi
Head of government: Prime Minister Sali Berisha

Albania was admitted to NATO at the alliance's summit in Strasbourg, France, on April 4, 2009, and formally applied for full EU membership on April 28. The EU considered the general elections held on June 28 to be a litmus test of the country's progress. By having introduced a new electoral system in which seats were allocated proportionally by districts, legislators had significantly diminished the chances of small parties to win seats. The centre-right alliance led by Prime Minister Sali Berisha's Democratic Party of Albania (PD) won 47.5% of the vote, compared with 38.8% for the bloc led by the Socialist Party of Albania (PS). The conservatives secured 70 of the 140 parliamentary seats and formed a coalition with the Socialist Movement for Integration (LSI), which won 4 seats. This marked a turning point in postcommunist Albania's polarized political culture; it was the first coalition government that included parties from both the left and the right. In Berisha's new cabinet, which took office on September 17, LSI leader Ilir Meta became foreign minister. Meta, who had served as prime minister from 1999 to 2002, had broken away from the PS in 2004 to help found the LSI. Former defense minister Fatmir Mediu of the Albanian Republican Party (PR) returned to the cabinet as environment minister after Albania's Supreme Court dismissed a case against him (owing to his parliamentary immunity) in connection with a deadly blast at a military depot in 2008. A trial opened on October 29 of 29 persons accused of negligence and murder in connection with the blast. They included former army chief of staff Luan Hoxha and four senior executives of the Alba-Demil Co., which operated the facility in Gerdec. By year's end no new investigations had started against Mediu.

The opposition PS, led by Tirana Mayor Edi Rama, boycotted the constitutive session of the parliament on September 7, arguing that there had

been irregularities in the electoral process. The EU stated that although Albania had made progress in its voting system, its political parties should end the "politicization" of the electoral process. It referred to a report of the Organization for Security and Co-operation in Europe (OSCE) that criticized delays in the vote count and the "high levels of mistrust among political parties and their representatives at all levels of the election administration." OSCE monitors also noted procedural violations.

In one such case, just three days before the elections, Berisha and his Turkish counterpart, Recep Tayyip Erdogan, held a ceremony to inaugurate a central stretch of highway linking the Kosovo-Albania border with Albania's main road system. The entire highway, which was expected to be finished in the spring of 2010, would reduce the travel time between Kosovo and the Albanian capital from up to eight hours to only about three. The event highlighted the importance that Berisha placed on developing ties with Kosovo. On October 6 he made a highly symbolic visit to its capital, Pristina, where he signed a series of cooperation protocols and received an honorary doctorate from the University of Pristina. On September 18 in Podgorica, Montenegro, Pres. Bamir Topi and his Montenegrin counterpart, Filip Vujanovic, pledged to strengthen ties between their countries and to build a highway along the Adriatic coast. Other key development projects included the construction of a new terminal at Tirana's international airport that increased passenger capacity by 40%.

The new government maintained a centre-right platform. Berisha proposed to legalize same-sex marriage and to adopt the euro as Albania's currency. In the second quarter of 2009, the unemployment rate was 12.7%, and GDP growth was estimated at 5.3% year-on-year. (FABIAN SCHMIDT)

ALGERIA



Area: 2,381,741 sq km (919,595 sq mi)
Population (2009 est.): 35,369,000
Capital: Algiers
Chief of state: President Abdelaziz Bouteflika
Head of government: Prime Minister Ahmed Ouyahia

The dominant event in Algeria in 2009 was the presidential election held on April 9. The ground had been well prepared; constitutional amendments that favoured the incumbent had been promulgated by presidential decree on Oct. 29, 2008, and approved overwhelmingly by the parliament on Nov. 12, 2008. The amendments removed the bar on a president's serving more than two consecutive terms and made the government answerable to the president rather than Algeria's bicameral parliament, although the parliament reserved the formal right to reject the prime minister's program. In February 2009 Pres. Abdelaziz Bouteflika (*see* BIOGRAPHIES) announced that he would stand for reelection.

In an election almost universally considered fraudulent, Bouteflika won, officially gaining 90.2% of the vote with a reported turnout of 74.5%. Observers believed that the actual turnout was probably about 30%, with the president receiving about half of the vote. Bouteflika was believed to be grooming his younger brother, Said, as his successor. A new political party loyal to the president was being formed, and Said was expected to lead it.

The February announcement that Bouteflika would seek a third term was greeted by a wave of violence, normally suppressed in winter because of the severe weather. An attack near Jijel killed nine security guards and injured two others. Near Tébéssa, seven died in two bombings. Then, in June, eight policemen and two civilians died in a bombing in Boumerdes province, followed by the deaths of 19 gendarmes in an attack on a Chinese construction project near Bordj Bou Arreridj. At the end of the month, five communal guards were killed and two others kidnapped in Khenchela province.

In late July the security services killed a would-be suicide bomber in Dellys. Clashes occurred in Algiers at the start of August between Chinese and Algerian traders in the capital's "Chinatown." In mid-August three militants were killed at Bordj Bou Arreridj. Five more people died in an attack in Jijel province at the end of the month, and three soldiers were killed in September in a shootout between security forces and a terrorist group in the town of Boumerdes. Although the number of violent deaths had diminished slightly, the geographic range of the attacks widened over northern Algeria in 2009.

The group calling itself al-Qaeda in the Islamic Maghrib (formerly the

Salafist Group for Preaching and Combat) continued to be a cause for concern in Algeria. At the start of June, the group killed a British hostage in neighbouring Mali, although it later released a Swiss hostage it had held in Mali for a \$4 million ransom. Because of such violence, Algeria joined a new 25,000-strong security force initiative with Sahel countries and the United States.

Algeria canceled the purchase from France of four frigates for its navy, looking to Italy and Britain instead for major arms purchases. Measures introduced by Algeria to increase control over foreign investment, including a demand that Algeria serve as the majority stakeholder in joint ventures, were beginning to scare off investors in 2009. The new policy was the result of the president's personal resentment of the failure of foreign investors, particularly oil companies, to reinvest profits.

(GEORGE JOFFÉ)

ANDORRA



Area: 464 sq km (179 sq mi)

Population (2009 est.): 85,200

Capital: Andorra la Vella

Chiefs of state: Co-princes of Andorra, the president of France and the bishop of Urgell, Spain

Head of government: Chief Executives
Albert Pintat Santolària and, from June 5,
Jaume Bartumeu Cassany

On June 5, 2009, Jaume Bartumeu Cassany of the Social Democratic Party (PS) was sworn in as Andorra's new head of government. This marked the first time in 15 years for the Andorran government to be run by any party other than the Liberal Party. In parliamentary elections held on April 26, the PS claimed 45.03% of the vote and 14 of the 28 seats in the General Council. The Liberal Party-led Reformist Coalition garnered 32.34% of the vote and 11 seats, while Andorra for Change collected 18.8% and 3 seats.

Bartumeu was a founding member of the PS and had been a leader of the opposition in the General Council since 2005. As head of the government, he vowed to improve fiscal and banking transparency, and toward that end Andorra and France signed an agreement

in September aimed at facilitating the exchange of tax information. Andorra was reported to be discussing similar agreements with a number of other countries. Tourism remained the driving force of the Andorran economy, continuing to account for more than 80% of GDP. Andorra's unemployment rate stood officially at 0%. (ANNE ROBY)

ANGOLA



Area: 1,246,700 sq km (481,354 sq mi)

Population (2009 est.): 18,498,000

Capital: Luanda

Chief of state and head of government:

President José Eduardo dos Santos, assisted
by Prime Minister António Paulo Kassoma

The decline in oil prices slowed Angola's economic growth from 25% in 2008 to about 3% in 2009. Aiming to maintain Angola's place as one of the world's 10 fastest-growing economies, despite the global recession, the government pledged to implement plans for national reconstruction, macroeconomic stability, poverty reduction, and the revival of agricultural production. Angola had become sub-Saharan Africa's largest oil producer, ahead of Nigeria and Libya, and was China's largest oil supplier; however, the non-oil sector of the economy had grown even more rapidly than oil, a positive step toward diversification. Angola's role in the African Union, the Southern African Development Community, and the UN Human Rights Council became increasingly important, underscored by Italy's invitation to Angola to participate in the Group of Eight summit on the world economy.

Angola's continued economic success, political stability, and importance in southern African power relations attracted significant investment overtures from China, the U.S., and Europe. President dos Santos's 30 years of experience as head of state accounted for his administration's skilled and tough negotiation with international financial agencies, multinational firms, and governments. Angola secured at least \$13 billion in oil-backed loans from China, a key participant in reconstructing Angola after its prolonged civil war. Bilateral trade volume between China and

Gianluigi Guercia—AFP/Getty Images



During his trip to Angola in March, Pope Benedict XVI waves to the crowd gathered at a stadium in Luanda.

Angola had reached \$25.3 billion by January. China also pledged to help devise and implement agricultural-development programs in Huíla and Uíge provinces. In September Angola and the IMF settled their differences and resumed talks about loans.

The parliament, led by the majority Popular Movement for the Liberation of Angola (MPLA) party, which controlled 191 seats of the 220-member parliament, set up a commission to draft a new constitution. Work on the new constitution took longer than expected. By year's end the constitution remained unfinished, and a presidential election that should have occurred in 2009 had not been scheduled.

In March heavy rains caused devastating floods in Luanda, Cunene province, and elsewhere; 220,000 farmers were displaced. Aid agencies warned that the damage of 130,000 ha (321,000 ac) of farmland, especially in Cunene province, might result in serious food shortages. Demining operations in 18 provinces continued along the railways, telephone networks, and electricity lines, making train travel more secure and expansion of the infrastructure possible.

The year was punctuated by an unusual number of high-profile official visits by international leaders, testimony to Angola's emergence as a continental power. They included Chinese Minister of Commerce Chen Deming (January), Pope Benedict XVI (March), Russian Pres. Dmitry Medvedev (June), U.K. Minister of State, Foreign and Commonwealth Office, Lord Malloch-Brown (June), Cuban head of state

Raúl Castro (July), and U.S. Secretary of State Hillary Clinton (August). Echoes of 1970s Cold War diplomacy abounded. While Medvedev and Castro reinforced their countries' historic ties with Angola's liberation movement and postindependence development, Malloch-Brown and Clinton were intent on securing favourable trade positions in the face of growing competition from China. (LARAY DENZER)

ANTIGUA AND BARBUDA



Area: 442 sq km (171 sq mi)
Population (2009 est.): 85,600
Capital: Saint John's
Chief of state: Queen Elizabeth II, represented by Governor-General Dame Louise Lake-Tack
Head of government: Prime Minister Baldwin Spencer

Antigua and Barbuda was rocked to its foundations when in February 2009 the U.S. Securities and Exchange Commission filed civil charges against Sir Robert Allen Stanford (who held dual U.S. and Antiguan citizenship) for having allegedly orchestrated a fraudulent multibillion-dollar investment scheme. One of the main charges involved the sale of about \$8 billion in certificates of deposit that were issued with the promise of improbably high interest rates. Antigua-based Stanford International Bank was Antigua and Barbuda's second biggest employer, after the government.

Prime Minister Baldwin Spencer described the situation as having "profound implications" for the country. Stanford's impact on Antigua and Barbuda and the Caribbean as a whole also extended to the region's most popular game, cricket, into which he had poured millions of dollars in the past few years. The Stanford debacle was expected to have repercussions for the country's reputation as an offshore financial centre, especially in light of the Group of 20 decision at its summit in April to impose sanctions on financial centres that failed to comply with internationally agreed-upon standards.

The United Progressive Party (UPP) retained its hold on government in the March general election, winning 9 of the 17 seats in the House of Represen-

tatives. The Antigua Labour Party (ALP) obtained 7. The Barbuda People's Movement (BPM) captured the Barbuda seat. (DAVID RENWICK)

ARGENTINA



Area: 2,780,403 sq km (1,073,520 sq mi)
Population (2009 est.): 40,276,000
Capital: Buenos Aires
Head of state: President Cristina Fernández de Kirchner

Argentine Pres. Cristina Fernández de Kirchner began 2009 with low public approval ratings, rising dissent within her governing Peronist movement, and serious economic difficulties stemming from a combination of the global recession and her government's mismanagement of economic policy. In the face of this growing crisis, in March Fernández de Kirchner unexpectedly reformed the electoral law in order to set June 28 as the date for midterm congressional elections (previously scheduled for October) in which one-half of the seats in the Chamber of Deputies (127 of 257) and one-third of the seats in the Senate (24 of 72) were to be elected.

The marquee battle on June 28 was in the province of Buenos Aires. Fernández de Kirchner's spouse, former president Néstor Kirchner (who after leaving office in 2007 continued to be the country's de facto political leader), squared off against dissident Peronist Francisco de Narváez as well as a non-Peronist opposition alliance led by Margarita Stolbizer. The Chamber list headed by Kirchner utilized copious amounts of government resources to support its campaign. The independently wealthy de Narváez matched Kirchner's campaign spending to a considerable extent, while Stolbizer's impoverished campaign struggled to gain traction among voters.

On June 28 the Kirchners suffered a severe rebuke at the polls. In the province of Buenos Aires, the government's list, headed by Néstor Kirchner, finished second to that of de Narváez (32% to 35%). In the federal capital district, the Kirchners' list placed fourth (12% of the vote), while in Santa Fe and Córdoba, the country's two other large provinces, the Kirchners' Cham-

ber lists came in third (10%) and fourth (9%), respectively, behind dissident Peronist lists. These four districts jointly accounted for 62% of the population, and the Kirchners failed to achieve victory in a single one.

Overall, government supporters won 47 and 8 seats in the Chamber and Senate, respectively. When the renewed Chamber and Senate were constituted on December 10, the Kirchners possessed a Chamber delegation of only 87 members (plus approximately 20 allies) and a Senate delegation of 32 members (plus approximately 5 allies). The days in which the Kirchners could rely on a disciplined legislative majority to obediently approve their legislative initiatives were clearly in the past.

While many hoped that the Kirchners' electoral defeat would lead them to adopt a more consensual governance style, to the contrary the Kirchners ratcheted up their level of conflict and antagonism with a host of groups, including the principal agricultural organizations, the major media companies, the non-Peronist opposition, and dissident Peronists. In addition, immediately following the election, Health Minister Graciela Ocaña resigned, and several Cabinet moderates, in particular Cabinet Chief Sergio Massa, were replaced.

After experiencing six straight years of robust economic growth, in 2009 the Argentine economy shrank by 3%. While the government's continued intervention of the national statistics agency and fraudulent manipulation of economic indicators rendered the official inflation rate unreliable, private estimates suggested that inflation in 2009 was a comparatively high 15%. (MARK P. JONES)

ARMENIA



Area: 29,743 sq km (11,484 sq mi). About 13% of neighbouring Azerbaijan (including the 4,400-sq-km [1,700-sq-mi] disputed region of Nagorno-Karabakh [Armenian: Artsakh]) has been under Armenian control since 1993.

Population (2009 est.): 3,083,000 (plus 138,000 in Nagorno-Karabakh)
Capital: Yerevan
Chief of state: President Serzh Sarkisyan
Head of government: Prime Minister Tigran Sarkisyan

In 2009 new initiatives to resolve the Nagorno-Karabakh conflict and establish diplomatic relations between Armenia and Turkey exacerbated existing political tensions that had been triggered by the disputed February 2008 presidential election. An independent fact-finding group—established by Pres. Serzh Sarkisyan in June 2008 to assess the findings of the ad hoc parliamentary commission that was investigating Yerevan's postelection clashes—suspended its activities in early May 2009 owing to friction between government-appointed and opposition members. Sarkisyan formally dissolved the group one month later. On September 16 the ad hoc parliamentary commission ruled that the police had acted correctly in using force against opposition demonstrators. Under pressure from the Parliamentary Assembly of the Council of Europe, on June 19 the Armenian parliament declared an amnesty for dozens of opposition supporters jailed for their imputed role in the postelection violence.

Sarkisyan's Republican Party of Armenia won 47.3% of the vote in the May 31 Yerevan municipal elections and thereby earned the right to name the city mayor. The Armenian National Congress (HAK), headed by former president Levon Ter-Petrosyan, finished third with 17.4%. The HAK protested that the voting was marred by large-scale fraud, and its members collectively rejected their municipal council mandates. The Armenian Revolutionary Federation–Dashnaksutyun (HHD) and the opposition Heritage Party declined Ter-Petrosyan's call for closer cooperation.

The country's GDP plummeted by 18.5% during the first seven months of 2009 but began to stabilize after Armenia received emergency loans from international financial institutions. In June the U.S. cut aid to Armenia by one-third owing to concern over the handling of the 2008 presidential elections and subsequent protests.

On April 22 the Turkish and Armenian gov-

ernments announced that they had reached an agreement on a framework for normalizing relations. Shortly thereafter the HHD formally quit the four-party governing coalition to protest what it termed Sarkisyan's overly conciliatory Turkish policy. On August 31 Armenia and Turkey made public two protocols on establishing diplomatic relations and opening their mutual border. The Armenian and Turkish foreign ministers signed those protocols on October 10, but neither country's parliament immediately ratified them. Shortly thereafter President Sarkisyan visited Turkey to attend an association football (soccer) match between the two countries' teams, responding in kind to a similar visit to Armenia by Turkish Pres. Abdullah Gül in September 2008.

(ELIZABETH FULLER)

AUSTRALIA



Area: 7,692,208 sq km (2,969,978 sq mi)

Population (2009 est.): 21,829,000

Capital: Canberra

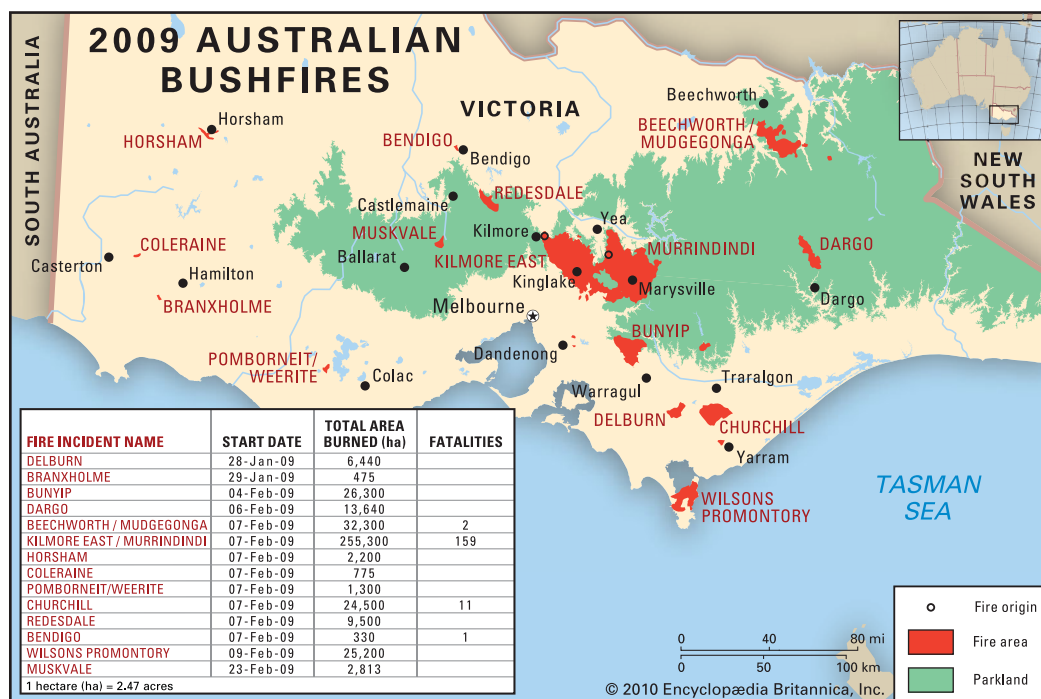
Chief of state: Queen Elizabeth II, represented by Governor-General Quentin Bryce

Head of government: Prime Minister Kevin Rudd

Domestic Affairs. In early 2009 Australia was devastated by bushfires, with many homes in the state of Victoria razed to the ground, and some homeowners were burned alive in their houses. (See Sidebar.) The general public rallied behind the survivors; appeals for donations were successful; and these funds combined with major government assistance to speed up the rebuilding process, which began as soon as it was safe to reenter the burned-out zones.

Although coal was the country's biggest export and Australia had the highest per capita carbon emissions in the developed world, Prime Minister Kevin Rudd's government introduced legislation to launch a carbon-trading scheme to tackle global warming. In August Parliament rejected the plan to introduce carbon permits costing \$A 10 (about U.S.\$8.40) per ton from July 2011, with opposition senators defeating the bill by 42 votes to 30. The legislation was defeated a second time in December when it was reintroduced. Rudd was forced to reshuffle his front bench in June after Joel Fitzgibbon resigned as minister of defense amid allegations of misconduct.

The plight of Aboriginal Australians was in the news in August when James Anaya, a UN special rapporteur on indigenous rights, criticized Northern Territory intervention. Anaya declared that income management and bans on



The Australian "Black Saturday" Bushfires

On Feb. 7, 2009, a day that was dubbed "Black Saturday" in Australia, deadly bushfires swept through the southern state of Victoria, leaving 173 people dead and 500 injured. In addition, more than 2,000 homes were destroyed, and experts estimated that the number of affected wildlife (killed or injured) could climb well into the millions.

With its abundant forests and hot dry climate, Australia had often suffered from deadly bushfires, most notably the 1939 "Black Friday" blaze in Victoria, in which 71 people were killed, and the 1983 "Ash Wednesday" fires in Victoria and South Australia, where 75 people perished. The scale of the recent fires—attributed to extreme weather conditions coupled with a severe and protracted drought that had created tinder-dry vegetation across the state—was unprecedented and left the country in a state of shock.

On February 7, Victorians were told to brace for the "worst day" in the state's history; weather forecasters warned of a record heat wave with temperatures soaring to 46.4 °C (115.5 °F), combined with gale-force winds of up to 90 km/hr (56 mph). That day more than 47 major fires erupted across the state, 14 of them claiming lives or causing significant damage. The most deadly conflagration, known as the Kilmore East fire, which claimed 121 lives, was sparked by a faulty power pole near the township of Kilmore East, 60 km (37 mi) north of Melbourne. The flames quickly jumped a major highway and roared into a forest where they turned into a giant fireball, dwarfing the resources of local firefighters who could only flee in its path. Aided by steep slopes and powerful winds, this fire raced through a series of townships, including Kinglake (where 38 people died), Strathewen (27 perished), and St. Andrews (12 were killed), catching residents by surprise and trapping many in their homes. Some sought to escape by car as the fires approached, but dozens died on the roads as they were overtaken by the fire.

Late in the afternoon a sudden change in wind direction pushed the fire to the northeast, bringing new towns into its path. A parallel fire, known as the Murrindindi fire, also blew to the northeast,

swallowing the unsuspecting tourist town of Marysville, where 34 people lost their lives. Fire experts said that these two fires alone released energy equivalent to 1,500 Hiroshima-sized atomic bombs.

Fires also ravaged other parts of the state, including the eastern region of Gippsland, where 11 people were killed. In some townships there was no more than a handful of survivors after the fires swept through. The township of Flowerdale, 65 km (40 mi) north of Melbourne, was razed to the ground.

The government immediately announced that a Royal Commission would be formed to look into the disaster but declared that the emergency services had done the best that they could in the face of an unprecedented natural phenomenon. When in August the Royal Commission released its 360-page interim report on the tragedy, however, it was highly critical of many aspects of Victoria's emergency service agencies. In particular, the report disclosed that the public warnings given by the Country Fire Authority (CFA) to the communities in the fire's path were inadequate and in some cases nonexistent. It revealed that the CFA personnel in charge of managing the fires failed to issue timely warnings, with the result that many people did not know that they were in danger until the fire was upon them. In addition, serious deficiencies were pinpointed in the command and control systems of the emergency services agencies, a problem that led to confusion, inertia, and poor decision making at crucial times. Among the 51 recommendations included in the report were changes to the "stay or go" policy that, before February 7, had advised residents to choose between remaining and defending their property against a fire or leaving the property early.

The report concluded that since 113 people died in their homes on Black Saturday, many homes could not be defended against a major bushfire, and it recommended that in future fires residents evacuate their homes rather than try to save them. The Victorian government pledged to implement all of the Royal Commission's interim recommendations in time for the beginning of the 2009–10 fire season. The Commission's final report was expected in July 2010.

(CAMERON STEWART)

alcohol were discriminatory and breached Australia's treaty obligations. Rudd authorized ministerial priority to find ways to reduce the numbers of Aborigines in prison and to improve Aboriginal life expectancy.

The Economy. At the beginning of 2009, Australia's national accounts were in a relatively healthy condition, largely because of mineral exports to China. By Easter, however, unemployment had risen to 5.7%. In April the national airline Qantas announced that 1,750 jobs were to be eliminated and deferred new aircraft delivery. Other industries took similar steps.

In the May budget the government followed up its previous policies of cutting interest rates and giving handouts to appropriate sectors of the popula-

tion, including pensioners, the unemployed, and Aborigines. Treasurer Wayne Swan expected growth to fall by 0.5% and unemployment to rise to 8.25%, low by international standards but unacceptably high in Australia. In his budget speech Swan announced a massive infrastructure program. As a result, fiscal 2009 saw a record deficit and unprecedented revenue losses. The stunning rebound of Chinese industrial production helped Australia shrug off the global financial crisis better than anyone expected, however, and on October 6 Australia became the first major world economy to raise interest rates (by 25 basis points to 3.25%) since the crisis began.

Foreign Affairs. In a series of disputes with China, the Rudd government

faced its most serious foreign crisis since it took office in 2007. Aluminum Corp. of China (Chinalco) failed in a bid to obtain a \$A 25 billion (about U.S.\$19.5 billion) stake in Anglo-Australian mining giant Rio Tinto. Shortly afterward, Stern Hu, a Chinese-born Australian citizen and head of Rio Tinto's iron ore operations in China, was arrested for industrial espionage and bribery, together with three senior Chinese employees of Rio. Relations remained frosty, as Canberra declined to refuse a visa to the exiled Uighur leader Rebiya Kadeer (*see* BIOGRAPHIES), even when asked to do so by Chinese Foreign Minister Yang Jiechi, and Beijing canceled a scheduled visit to Australia by Vice Minister He Yafei.

(A.R.G. GRIFFITHS)

AUSTRIA



Area: 83,879 sq km (32,386 sq mi)

Population (2009 est.): 8,378,000

Capital: Vienna

Chief of state: President Heinz Fischer

Head of government: Chancellor Werner Faymann

In 2009 Austria's new "grand" coalition between the Social Democratic Party of Austria (SPÖ) and the Austrian People's Party (ÖVP) was characterized as more cooperative than the previous government, in part because several of the new ministers were previously representatives of social partners. The coalition was sworn in on Dec. 2, 2008, following a snap election on September 28 in which the SPÖ had emerged as the largest party, with 29.3% of the vote, compared with 26% for the ÖVP, 17.5% for the Freedom Party of Austria (FPÖ), 10.7% for the Alliance for the Future of Austria (BZÖ), and 10.4% for the Greens.

The SPÖ had a spate of poor electoral outcomes in 2009, performing relatively poorly in the Salzburg and Carinthian provincial elections in March and placing behind the ÖVP in the European Parliament elections in June with 23.7% of the vote, compared with 30% for the ÖVP. According to

The leader of the far-right Freedom Party of Austria, Heinz-Christian Strache, speaks at a campaign rally ahead of the European Parliament elections in June.



Dieter Nagl—AFP/Getty Images

public-opinion polls, the SPÖ and ÖVP both had about 31% support in August. Support for the FPÖ rose to 21%, and the party seemed poised to remain one of the largest forces in Austrian politics. The FPÖ campaign in the European Parliament elections was highly provocative, however, as a result of its anti-Muslim and anti-Jewish statements. This made it difficult for the ÖVP to find domestic or international acceptance for a possible partnership with the FPÖ, and, for the time being, left no viable alternative to an SPÖ-ÖVP grand coalition. While the BZÖ remained popular in Carinthia, its support dwindled elsewhere in Austria following the sudden death in October 2008 of its popular leader, Jörg Haider. Support for the Greens remained relatively constant at about 10%.

Austria's economy contracted sharply in 2009, largely owing to a significant fall in investment and exports. In the first half of the year, investment was severely restrained by a dramatic drop in manufacturing output, which stabilized midyear and began to recover very slowly thereafter. Investment also contracted owing to low business consumer confidence and tight credit conditions. Exports declined drastically in 2009, largely as a result of a contraction in GDP growth in Germany (Austria's main trading partner), the rest of the euro area, Russia, and Central and Eastern Europe.

In response to these ongoing problems, Chancellor Werner Faymann's SPÖ-led government accelerated the tax cuts originally planned for 2010 to take effect in 2009 and introduced an economic-recovery program to ameliorate the impact of the global economic recession on consumers and businesses. Other measures that were implemented to boost domestic demand included abolishing student fees, extending family allowances, increasing care subsidies, allowing for accelerated investment into infrastructure, promoting research and development, providing special loan guarantees to facilitate lending to medium and large companies, and enabling companies to employ people on short working hours for up to two years. Unemployment reached 6.5% in September, a 27.9% year-on-year increase.

Finance Minister Josef Pröll of the ÖVP reported that the government expected the deficit to reach 3.5% of GDP in 2009 (later revised to 3.9%) and 4.7% of GDP in 2010. As a result, the European Commission announced in late

June that before the end of the year it would initiate procedures against Austria for having exceeded the 3% of GDP threshold established in the EU's Stability and Growth Pact. Meanwhile, the government focused on shoring up the banking sector, particularly given Austrian banks' high degree of exposure to the rapidly deteriorating economies in Central and Eastern Europe, which amounted to up to 80% of Austria's GDP. By mid-2009 most of the country's largest banks had received state aid.

(MEGAN GREENE)

AZERBAIJAN



Area: 86,600 sq km (33,436 sq mi), including the 5,500-sq-km (2,100-sq-mi) exclave of Nakhichevan and the 4,400-sq-km (1,700-sq-mi) disputed region (with Armenia) of Nagorno-Karabakh

Population (2009 est.): 8,832,000

Capital: Baku

Head of state and government: President Ilham Aliyev, assisted by Prime Minister Artur Rasizade

Developments in Azerbaijan in 2009 caused some to cast further doubt on the country's commitment to democracy. On March 18 voters approved sweeping amendments to the constitution, one of which empowered Pres. Ilham Aliyev to seek additional terms as president after the expiration of his current term in 2013. Opposition parties, which had called for a boycott of the vote, questioned the official turnout figure of 71%. The opposition ignored a subsequent invitation to embark on an extraparlimentary dialogue with the ruling Yeni Azerbaijan Party (YAP). In August draft amendments to the law on political parties were announced that, if voted into law, would impose new restrictions on party registration and funding.

Various curbs on media freedom took place in Azerbaijan in 2009. On January 1 a radio ban took effect that barred international broadcasts from being featured on national frequencies. Observers also expressed regret over the July arrest of two young bloggers, Emin Milli and Adnan Hadji Zadeh, who were later convicted on charges of hooliganism and sentenced to two and

a half and two years' imprisonment, respectively. Journalists and nongovernmental organization workers were denied entry to the hearing proceedings, and individuals who appeared outside the courthouse in a show of support were arrested. In mid-August Azerbaijani security services summoned for interrogation several of the 43 people who voted for Armenia in the Eurovision Song Contest.

In early November, after a four-month trial, 26 men accused of having engineered an August 2008 explosion in Baku's Abu-Bakr mosque were sentenced to between 2 and 15 years' imprisonment. On October 5 four Azerbaijanis and two Lebanese citizens were jailed for planning a terror attack on the Israeli embassy in Baku.

The economy—in particular, the financial, construction, and petrochemical sectors—was badly affected by the global financial crisis. GDP growth slowed dramatically, reaching only 2.7% during the first seven months of the year.

In 2009 President Aliyev met several times with his Armenian counterpart, Pres. Serzh Sarkisyan, to discuss the Nagorno-Karabakh conflict, but the two failed to reach a formal settlement. In April the announcement of the incipient Armenian-Turkish rapprochement—and the subsequent commitment by those two countries in October to establish diplomatic relations—occasioned official protests from the Azerbaijani government. President Aliyev, who declined to attend a UN-sponsored conference in Istanbul in early April, hinted in October that Azerbaijan could choose Russia, rather than Turkey, as the route for future gas exports. On June 29 Azerbaijan had signed a deal that gave Russia's Gazprom the right to purchase gas from the Shah Deniz field beginning in 2014–15. (ELIZABETH FULLER)

BAHAMAS, THE



Area: 13,939 sq km (5,382 sq mi)

Population (2009 est.): 342,000

Capital: Nassau

Chief of state: Queen Elizabeth II, represented by Governor-General Arthur Dion Hanna

Head of government: Prime Minister Hubert Ingraham

In May 2009 The Bahamas submitted a claim to the United Nations for formal delineation of its maritime boundaries under the Law of the Sea regime, proposing to extend the limits of its continental shelf beyond the 200-nautical-mile exclusive economic zone it had claimed in 2008. In December 2008 The Bahamas had submitted the formal claim to the United Nations proposing a 12-nautical-mile territorial sea limit and a 200-nautical-mile exclusive economic zone. Negotiations on the proposal with other countries would be required; the area claimed overlapped into U.S., Haitian, Cuban, and Turks and Caicos waters. Cuba reportedly was preparing to drill in the Cay Sal Bank area that The Bahamas regarded as its own, moreover adding urgency to the need to settle maritime boundaries on a permanent basis.

Like elsewhere in the Caribbean Community (Caricom) region, The Bahamas was moving ahead as fast as it could to expand the role of renewable energy in its energy matrix. By midyear the Bahamas Electricity Corporation had short-listed as many as 13 proposals for various types of renewable-energy projects (including solar, wind, biomass, and ocean wave), and in December it was still considering renewable-energy bids by six companies.

Privatization of government-owned assets was still on the agenda in the Caribbean, and The Bahamas proved no exception. In July it launched the process to sell 51% of the Bahamas Telecommunications Co. (BTC).

(DAVID RENWICK)

Bahrainis celebrate in April after King Hamad ibn Isa al-Khalifah pardoned 178 Shi'ite political prisoners.



Hamad I. Mohammed—Reuters/Landov

BAHRAIN



Area: 750 sq km (290 sq mi)

Population (2009 est.): 1,168,000

Capital: Manama

Chief of state: King Hamad ibn Isa al-Khalifah

Head of government: Prime Minister Khalifah ibn Sulman al-Khalifah

On May 5, 2009, Bahrain announced that it would abolish its sponsorship system for foreign workers. The move was the first of its kind in the Gulf Arab states, where some 12–14 million foreigners worked (an estimated 512,000 of them in Bahrain). The action meant that the workers, mainly poorly paid Asians, would be able to change jobs and eventually get better pay without having to secure the approval of their sponsor (*kafeel*). The labour sponsorship system, which was riddled with corruption, had been criticized by international human rights groups as operating in a mode little short of slavery. Most of the remaining Gulf countries subsequently indicated that they would revise their own sponsorship laws.

In April, in a move designed to ease tensions with the opposition, King Hamad ibn Isa al-Khalifah ordered the pardon and release of 178 Shi'ite political prisoners. The detainees had been accused of having committed security offenses.

Under pressure from conservative Islamic groups, both Sunni and Shi'ite,

the Bahraini government imposed severe restrictions on live entertainment and the consumption of alcohol in most of its hotels. Bahrain, which had traditionally been known as an oasis of tolerance surrounded by mostly conservative Islamic countries, faced a possible impact on its tourism industry.

The construction of the long-awaited 40-km (about 25-mi)-long "Friendship Causeway" linking the island of Bahrain to Qatar was scheduled to begin in 2010. The estimated \$2.7 billion project was expected to take four years to complete. (LOUAY BAHRY)

BANGLADESH



Area: 147,570 sq km (56,977 sq mi)

Population (2009 est.): 156,051,000

Capital: Dhaka

Chief of state: Presidents Iajuddin Ahmed and, from February 12, Zillur Rahman

Head of government: Chief Adviser Fakhruddin Ahmed and, from January 6, Prime Minister Sheikh Hasina Wazed

A new government came into power in Bangladesh as the year 2009 began. The election that had taken place on Dec. 29, 2008, was important for many reasons. First, it marked the end of the two-year rule of an unelected military-backed interim government; the parliament had been suspended during this time, and many political leaders were jailed on charges ranging from graft to the illegal possession of liquor. More significant, however, was the fact that the election witnessed the overwhelming defeat of the pro-Islamist right-wing alliance that had ruled for five years prior to the interim government. Emerging victorious at the polls was instead Sheikh Hasina Wazed's secular centre-left Awami League, which claimed 230 of the 299 contested parliamentary seats. Prior to the election, a number of detained politicians were released on bail, and charges against many of them—including Hasina—were eventually dropped. Hasina took office as prime minister on January 6.

Perhaps even more jolting to the country than the election was a deadly mutiny on February 25–26 by border guards in the Bangladesh Rifles, a paramilitary security force. During the in-

surrection at least 74 persons, including 57 senior military officers, were killed by the guards, who reportedly had been upset over their pay and living conditions. The mutiny ended after the government offered the mutineers an amnesty deal, though Hasina later rescinded amnesty for those directly responsible for the killings. The government seemed to be teetering on the edge of collapse in the wake of the mutiny as the army accused it of having failed to protect the lives of military personnel. Though the army wanted the suspects in the killings to be tried under military law, the government decided to create a special civil tribunal to handle the prosecutions.

The year also saw a sudden increase in extrajudicial killings carried out by police and the Rapid Action Battalion, the country's elite anticrime and antiterrorism force. In the first nine months of the year, 97 such killings took place, which prompted criticism of the battalion by human rights organizations. In April the government announced plans to investigate and prosecute persons for war crimes committed during Bangladesh's 1971 liberation struggle. Bringing war criminals to trial was a popular campaign pledge made by the Awami League, but the move was strongly opposed by the country's pro-Islamist parties, several of which had allegedly collaborated with Pakistani forces in 1971.

On the economic front, imports declined by 20% and exports by about 3% in July–August compared with the same period a year earlier. Despite these drops, the country fared relatively well during the global recession, with GDP growth estimated at 5.9% for 2009, down only slightly from its 2008 rate of 6.2%. Agricultural output growth reached 4.6%, and the ready-made-garment sector remained strong, with export growth of more than 20% during the first half of the year.

(INAM AHMED)

BARBADOS



Area: 430 sq km (166 sq mi)

Population (2009 est.): 276,000

Capital: Bridgetown

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Clifford Husbands

Head of government: Prime Minister David Thompson

In January 2009 Barbados launched an economic diversification plan that included the development of pharmaceutical and biotechnology industries and placed a new emphasis on creative activities, such as art, fashion, music, and film. The expansion of renewable and alternative energy would also be a key part of the program.

In May Barbados removed the death penalty as the mandatory sentence for murder, applicable since colonial times. Henceforth, judges would be able to determine the type of sentence to be imposed on convicted murderers, taking into account the circumstances of each case.

Barbados's "get-tough" immigration policy (which was instituted in June) upset many of its fellow Caribbean Community (Caricom) member states, which regarded it as inconsistent with regional principles. Nevertheless, in July, Prime Minister David Thompson announced that the policy would remain in place. Thompson repeatedly asserted that Barbados's economy had weathered the economic storm better than most Caribbean countries and was experiencing an "unacceptably high" level of immigration. In May, Thompson decreed that Caricom nationals living illegally in Barbados had six months to prove that they had resided in the country for at least eight years prior to Dec. 31, 2005, and needed to pass a security background check and provide evidence of employment. Those who did not regularize their status would be deported when identified. (DAVID RENWICK)

BELARUS



Area: 207,595 sq km (80,153 sq mi)

Population (2009 est.): 9,658,000

Capital: Minsk

Head of state and government: President Alyaksandr Lukashenka, assisted by Prime Minister Syarhey Sidorski

In 2009 Belarus achieved mixed economic results as it struggled to deal with the world recession. On January 2 the official currency, the Belarusian ruble (zaichik), was devalued by 20.5% against the U.S. dollar. Inflation hovered around 9–11%, and GDP dropped by 0.5% over the first nine months of

the year. Export of heavy transport vehicles to Russia fell by 55.3% between January and August, and trade with Russia declined by more than 40% overall. On October 28 the government abandoned its regulation of retail prices other than for “socially important products” such as milk, meat, salt, and sugar.

The country's complex relationship with Russia overshadowed other events. In May Russia refused to provide Belarus with the remaining \$500 million of a \$2 billion loan that had been negotiated in 2008. On June 6, after Belarus had held talks with the EU on dairy exports, Russia instituted a ban on all Belarusian milk products—a move that had a deep impact on Belarus, which sells 95% of its dairy exports to Russia. The ban was eventually lifted on June 17, but not before Belarus had expressed its anger by skipping a meeting of the Collective Security Treaty Organization (CSTO) in Moscow, at which it was scheduled to take up the rotating chairmanship. Belarusian Pres. Alyaksandr Lukashenka also maintained that his country would not be pressured by Russia into recognizing the breakaway Georgian republics of South Ossetia and Abkhazia.

On July 31 Lukashenka did participate in a CSTO meeting in Kyrgyzstan, but he refused to sign documents creating a collective rapid-response force to meet regional security threats. He eventually signed in October and committed 5,000 troops to the force. On September 18–29 a joint Russian-Belarusian military exercise called Zapad 2009 was held in Belarus that involved some 12,500 soldiers, about half of them Russian; the controversial exercise simulated a response to a NATO attack on Kaliningrad. Russia also provided funding and expertise for the construction of a nuclear plant at Astravets in Belarus's Hrodna region.

Belarus moved notably closer to the EU. On February 19 EU High Representative Javier Solana visited Minsk, and Lukashenka made his first European trip after the EU's lifting of a travel ban on him and other government officials when he traveled to Rome for a meeting on April 27 with Pope Benedict XVI. In mid-September Lukashenka made a highly publicized visit to Lithuania, where he declared that Europe's policy of isolating Belarus had failed.

On May 7 in Prague, Belarus was accepted as a member of the EU's Eastern Partnership project (along with

Georgia, Moldova, Armenia, Azerbaijan, and Ukraine), and Deputy Prime Minister Uladzimir Syamashka attended the inaugural meeting. The goal of the project was to promote economic integration and enhance political links between EU border countries.

A nationwide census was held on October 14–24. The results of the accounting were expected to be released in February 2010. (DAVID R. MARPLES)

BELGIUM



Area: 30,528 sq km (11,787 sq mi)

Population (2009 est.): 10,779,000

Capital: Brussels

Chief of state: King Albert II

Head of government: Prime Ministers

Herman Van Rompuy, and from
November 25, Yves Leterme

Belgium enjoyed some much-needed political stability in 2009 after having had three governments in the previous 18 months. On January 2 a new coalition under Herman Van Rompuy (see BIOGRAPHIES) of the Flemish Christian Democrats (CD&V) received a solid vote of confidence: 88 deputies voted in favour and 45 against. The government contained the same five political parties—both the French- and Dutch-speaking Liberals and Christian Democrats and the French-speaking Socialists—as its predecessor. That government had been forced to resign after ministers were accused of having intervened in the judiciary.

While the federal coalition held firm, after elections in June different combinations of political parties were formed to govern the three regions. A bitter row between Francophone Liberals and Socialists ruled out any partnership between them in French-speaking Wallonia and the bilingual Brussels-Capital Region. In the former, a ruling coalition was formed between the Socialist Party (PS), the Democratic Humanist Centre (CDH), and the Ecologists. In Brussels, Christian Democrats (CDH and CD&V) and environmentalists (the Ecologists and the Green Party) from both language communities, the French-speaking Socialist Party (PS), and the Dutch-speaking Liberals (Open VLD) joined forces.

Yves Logghe/AP



Museumgoers in Louvain-la-Neuve, Belg., trek toward the entrance to a newly opened museum devoted to the cartoonist Hergé, the creator of the comic-strip character Tintin.

In Flanders the CD&V remained at the head of a coalition that included the Socialist Party-Different (SPA). The success of the right-wing New Flemish Alliance (N-VA) enabled the party to join the government at the expense of the Open VLD.

Some of the country's leading politicians moved on to new posts. After having been forced to resign as prime minister in December 2008, Yves Leterme returned to the government in the summer of 2009 as foreign minister. He replaced Karel De Gucht, who became Belgium's European Commissioner after the holder of that office, Louis Michel, was elected to the European Parliament (EP). Former prime minister Guy Verhofstadt became the leader of the Alliance of Liberals and Democrats for Europe (ALDE) in the European Parliament. In November it was announced that Prime Minister Van Rompuy would become the first-ever president of the EU. King Albert gave Leterme a second chance at the prime ministership, appointing him to succeed Van Rompuy as Belgium's head of government.

Meanwhile, in March the government had been presented with a bleak economic forecast by the High Council of Finance, which projected that savings of at least \$5 billion would be neces-

sary in each of the next four years if the annual budget was to be balanced by 2013. In the first quarter of the year, there were a record number (2,570) of bankruptcies, and in April the IMF predicted that the country's economy would shrink by 3.8% in 2009—the biggest decline since 1939.

The Belgian banking sector continued to be fraught. In February angry Fortis shareholders narrowly rejected a government-backed plan to sell 75% of the Belgian bank to France's BNP Paribas. After further negotiations between the Belgian government and the prospective French purchaser, the sale was ultimately approved in April. Two weeks later the federal government provided the Flanders-based banking and insurance group KBC with an initial loan guarantee of about \$31.5 billion, after the company had reported first-quarter losses of about \$5 billion.

In foreign affairs, a 2005 agreement between Belgium and The Netherlands (see below) about a Dutch estuary continued to remain controversial. The Dutch had promised to widen the estuary, which provided Antwerp with access to the North Sea, but the work had not yet begun.

Museums dedicated to two of Belgium's most famous citizens debuted in 2009. In June a museum devoted to Hergé, the pen name of Georges Rémi, opened in Louvain-la-Neuve to honour the 80th year of his creation of the comic-strip character Tintin. The museum was designed by French architect Christian de Portzamparc. Also in June, the Magritte Museum, featuring more than 200 of the Surrealist painter's works, opened in Brussels. In other news, Belgian tennis fans were given a major treat when the country's two leading women players, Kim Clijsters and Justine Henin, decided to come out of retirement. (RORY WATSON)

BELIZE



Area: 22,965 sq km (8,867 sq mi)

Population (2009 est.): 334,000

Capital: Belmopan

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Colville Young

Head of government: Prime Minister Dean Barrow

On March 4, 2009, the administration of Prime Minister Dean Barrow won a landslide victory in Belize's municipal elections. The government, however, was engaged in many litigations, including some with groups challenging its constitutional amendments and others with Mayan leaders who sought to prevent the granting of lands in their villages, but most of them involved billionaire Michael Ashcroft. The new government rejected the terms of a 2005 secret Accommodation Agreement (signed with the former administration of Said Musa) that guaranteed the telecommunications company Belize Telemedia Ltd. a 15% rate of return or a tax holiday. To end the legal struggles, the government nationalized the Ashcroft-owned Telemedia on Aug. 25, 2009. Despite the government's \$200 million economic stimulus package, by the end of the first quarter of the fiscal year, the economy was feeling the effects of high inflation (9.6%), a decline in merchandise imports (15.1%), and a drop in domestic exports (2.6%). The fall in the price of petroleum, the loss of tourists' dollars, and debt servicing added to the downturn. Meanwhile, the Belizean government remained committed to pursuing the process of resolving a territorial dispute with Guatemala. In 2008 Belize had signed a special agreement with Guatemala, subject to simultaneous referenda, to refer the latter's claim to the International Court of Justice.

In early August cheering citizens welcomed home the men's national basketball team. It had placed second in the COCABA Championship games in Cancún, Mex. (HERMAN J. BYRD)

BENIN



Area: 112,622 sq km (43,484 sq mi)

Population (2009 est.): 8,792,000

Capital: Porto-Novo (executive and ministerial offices remain in Cotonou)

Head of state and government: President Thomas Yayi Boni

The year 2009 opened with charges of widespread corruption leveled against local agencies participating in the Beninese government's microfinance program. Aboubacar Aboudou, former

director of the program, blamed inadequate controls that allowed unscrupulous intermediaries to take advantage of borrowers. Since its inception in 2007, the scheme had made more than 500,000 loans.

In February the Ministry of Energy and Water blamed corrupt public officials for the slow progress in implementing multinational donor projects designed to bring safe water to the people. On July 13, Pres. Thomas Yayi Boni suspended Minister for Urban Affairs François Noudégbessi, pending an investigation into the disappearance of €9.7 million (about \$13.5 million) that had been allocated to finance the summit of the Community of Sahel-Saharan States held in 2008 in Cotonou.

The government announced on February 3 that substantial offshore oil reserves, estimated at 14,000 bbl a day, had been found. On February 7 the World Bank granted Benin \$30 million for the creation of small businesses and the provision of electricity to less-developed parts of the country. On May 31 Germany awarded Benin €50 million (about \$71 million) for improvements in infrastructure.

The hospital ship *Africa Mercy* docked in Cotonou in February for a 10-month stay to provide free surgery and other essential medical care. In July, following massive flooding that displaced more than 20,000 people throughout the country, various UN agencies stepped up efforts to assist the cash-strapped government.

The European Union on April 8 added Benin's air carriers to its aviation blacklist. Airlines considered unsafe were forbidden to fly to any EU member country. (NANCY ELLEN LAWLER)

BHUTAN



Area: 38,394 sq km (14,824 sq mi)

Population (2009 est.): 691,000

Capital: Thimphu

Head of state: Druk Gyalpo (King) Jigme Khesar Namgyal Wangchuk

Head of government: Prime Minister Lyonchen Jigme Thinley

Bhutan remained peaceful and tranquil in 2009, following the country's first democratic elections and its transfor-

Aizar Raldes—AFP/Getty Images

mation in 2008 from an absolute to a constitutional monarchy, but reports of outlawed Indian insurgent groups reforming inside Bhutan (near the border of the Indian state of Assam) raised alarms. Following the official visit in June of Bhutanese Prime Minister Lyonchen Jigmi Thinley to India—where discussions focused on the exportation of hydropower to India and the final list of 10 hydropower projects to be constructed in Bhutan—Indian Home Minister P. Chidambaram paid a three-day visit to Thimphu. Discussions focused on security issues along the border and the activities of militants in the northeast.

Though Bhutan enjoyed robust economic growth of more than 8%, according to the country's Labour Ministry, the unemployment rate jumped to 4% in 2009, from 3.7% in 2007. An important milestone occurred in Bhutan; all 20 of its districts became connected to the rest of the world through broadband Internet access.

In an effort to attract foreign aid and investment, Prime Minister Thinley visited Japan in September. Bhutan also liberalized its foreign-direct-investment laws to attract Indian investors. On September 21 a magnitude-6.3 earthquake shook the country. The temblor damaged nearly 200 structures and killed at least 12 people in a little-populated eastern region of the country.

(KESHAB POUDEL)

BOLIVIA



Area: 1,098,581 sq km (424,164 sq mi)

Population (2009 est.): 9,775,000

Capitals: La Paz (administrative); Sucre (constitutional)

Head of state and government: President Evo Morales Ayma

Bolivian Pres. Evo Morales was re-elected to a five-year term in December 2009, and his Movement Toward Socialism party made major gains in legislative elections, capping a year of major political and institutional reform. The stage for Morales's victory had been set in January when Bolivians approved a new constitution. The charter, drafted with the help of Spanish legal scholars, gave sweeping rights to Bo-



Demonstrators in La Paz, Bol., display signs condemning Leopoldo Fernández outside the jail where the former governor of Pando province was being held on charges of having orchestrated the killings of several supporters of Bolivian Pres. Evo Morales.

livia's Indian majority, including guaranteed political representation, recognition of communal forms of property, and the right to employ indigenous justice systems. The charter won 62% voter approval in a nationwide referendum, but four provinces in the eastern lowlands rejected it, underscoring the division between the economically rich eastern region and the impoverished Indian-dominated highlands.

The referendum result reaffirmed Morales's popularity and strengthened his hand in Bolivia's internal political battles. The extent of these battles was underscored when in April police burst into a hotel in Santa Cruz, shot three men dead, and arrested two others; the police claimed that they had thwarted a plot by allies of powerful separatist businessmen in the eastern region to kill Morales. The businessmen denied the allegation, saying that the affair was a ruse by Morales to boost his chances of reelection. One of those killed was a Bolivian Hungarian who had fought in the Balkan wars of the 1990s; the victim had told an interviewer that he was returning to Bolivia to fight for a breakaway state. Meanwhile, Leopoldo Fernández, former governor of Pando province, remained in jail, accused of having been involved in the killings of several Morales supporters during opposition protests that had occurred in 2008.

Relations with Washington, strained under the administration of Pres. George W. Bush, remained tense after the inauguration of Pres. Barack Obama. The U.S. maintained its suspension of tariff exemptions, saying that Bolivia had failed to cooperate sufficiently with antinarcotics efforts. The last of some 38 agents of the Drug Enforcement Agency who had been ordered out of Bolivia left in January, and a U.S. diplomat was expelled in March, the second in six months. President Morales drew a sharp distinction between the growing of coca leaf, a legal crop traditionally chewed to ward off hunger and altitude sickness, and the illegal production of cocaine. Annual cocaine seizures had doubled between 2006 and 2008, and police raided several clandestine drug laboratories, which they said were among the largest ever discovered. Morales strengthened Bolivia's ties with Russia by signing agreements on drug eradication and military cooperation, including the acquisition of a presidential jet and of helicopters.

A number of global issues affected Bolivia during the year. Rising temperatures wiped out the Chacaltaya glacier near La Paz, which threatened the city's water supply. Though the world economic downturn dampened demand for Bolivia's natural gas, fears that the nationalization of resource industries would sour relations with foreign in-

vestors proved largely unfounded. The most exciting development in natural resources concerned lithium, which is used in the batteries that power electric automobiles. About half of the world's known lithium deposits were located in the Salar de Uyuni, a salt desert in southwestern Bolivia. The government continued construction of a pilot plant to process the mineral and held talks with French, Japanese, and South Korean firms on development. (PAUL KNOX)

BOSNIA AND HERZEGOVINA



Area: 51,209 sq km (19,772 sq mi)

Population (2009 est.): 3,835,000

Capital: Sarajevo

Heads of state: Nominally a tripartite (Serb, Croat, Muslim) presidency with a chair that rotates every eight months; members in 2009 were Nebojsa Radmanovic (Serb; chairman until July 6), Zeljko Komsic (Croat; chairman from July 6), and Haris Silajdzic (Muslim). Final authority resides in the Office of the High Representative and EU Special Representative, Miroslav Lajcak (Slovakia) and, from March 26, Valentin Inzko (Austria)

Head of government: Prime Minister Nikola Spiric

Threats of secession and political infighting between the three main ethnic groups in Bosnia and Herzegovina renewed speculation among observers in 2009 about a fresh round of violence prior to the September 2010 general election. The EU and the U.S. described the situation in both entities of Bosnia and Herzegovina as "dysfunctional in nature." The Muslim-Croat Federation was criticized for having lacked a consensus, and the Republika Srpska (RS; Bosnian Serb Republic) for having resisted the international community's efforts to strengthen federal institutions. Paddy Ashdown, who served (2002–06) in the UN-appointed post of high representative in Bosnia and Herzegovina, stated that he had seen a dramatic reversal of progress in the entities.

RS Prime Minister Milorad Dodik challenged the international community, calling for an end to the 14-year-old EU-run Office of the High Representative (OHR). On October 1 the RS parliament voted to withdraw from participation in all state institutions



A Bosnian Muslim woman from Srebrenica watches a television broadcast of the genocide trial of former Bosnian Serb leader Radovan Karadzic that began in late October in The Hague; on the wall behind her are photographs of victims of the 1995 Srebrenica massacre, which Karadzic was accused of overseeing.

Amel Emric/AP

unless the OHR reversed a decision concerning control of the national electric company. High Representative Valentin Inzko, who replaced Miroslav Lajcak in March, wanted to keep the energy grid operational under a power-sharing agreement, but Bosnian Serbs wished to keep electric power distribution locally controlled.

Worsening economic conditions unleashed an unprecedented wave of labour and social discontent. During the first 10 months of 2009, more than 50,000 Bosnians lost their jobs, and remittances sent from workers abroad declined because of the downturn in the global economy.

In an attempt to jump-start the economy and curb growing discontent, the governments of both entities negotiated a €1.1 billion (about \$1.6 billion) stand-by arrangement with the IMF. Two-thirds of the funds were earmarked for the Muslim-Croat Federation and one-third for RS. The arrangement called for a 10% cut to the Federation and RS budgets—some €207 million (about \$292 million) and €73 million (about \$103 million), respectively.

Muslim-Croat Federation Prime Minister Mustafa Mujezinovic faced public protests as the budget cuts called for the lowering of public-sector salaries and wages by 10% as well as reduced payments to social-entitlement programs. After the IMF approved the 36-month stand-by arrangement in July, nearly all unions and veterans' associations staged daily two-hour strikes over a two-week period.

According to IMF data, Bosnia and Herzegovina's GDP was expected to drop 3% in 2009. The World Bank de-

scribed the economies of both entities as "gloomy," owing to rising joblessness, shrinking exports, and a reduction in remittances, which in 2007 accounted for 23% of GDP (some \$2.4 billion). Most of the unemployed (more than 22% of workers) lived in rural areas and received up to six months of assistance (about \$133 per month). The average monthly wage was \$450.

In October, Bosnia and Herzegovina submitted an official application for the NATO Membership Action Plan, which prepares candidates for full NATO membership. Although NATO foreign ministers did not offer Bosnia a formal plan in December to join the alliance, the country still expected to join NATO by 2015. (MILAN ANDREJEVICH)

BOTSWANA



Area: 582,356 sq km (224,848 sq mi)

Population (2009 est.): 1,991,000

Capital: Gaborone

Head of state and government: President Ian Khama

In Botswana in 2009 diamond production fell to 20 million carats from 33 million in 2008. After temporary mine closures, however, the production of base metals for East Asian markets surged ahead, as did plans for the massive expansion of coal mining at Mmamabula and the construction of an

electrical power plant there. The government responded to the recession by making drastic cuts in its recurrent expenditures while boosting capital spending on infrastructure projects—leading to an unprecedented budget deficit covered by a \$1.5 billion loan from the African Development Bank.

Pres. Ian Khama came under fire from privately owned media outlets for his alleged authoritarianism and “militarization” of the state. He presented himself, however, in a more flattering light in consulting rural masses over urban elites and in issuing directives to negligent government officials. The issue that generated the most controversy was the killing by state security agents of reputed master-crook John Kalafatis, who was shot eight times while sitting unarmed in his limousine.

Both the ruling Botswana Democratic Party (BDP) and the main opposition Botswana National Front (BNF) were rent by internal dissent, but the BDP factions led by President Khama and top party official Daniel Kwelagobe called a truce six weeks prior to the general election held on October 16. The political debate stimulated high voter registration and a 74% turnout; young people aged 18 to 29 voted in notably high numbers. The BDP was returned to power again, gaining one more seat in the National Assembly over its 2004 total of 44. The BNF, which was still divided internally, lost half of its dozen seats, while its splinter party, the Botswana Congress Party, upped its seat count from one to four.

Relations with Zimbabwe improved in 2009. Botswana pledged \$75 million toward that country's economic reconstruction, starting with the restoration of the Bulawayo city power station.

(NEIL PARSONS)

BRAZIL



Area: 8,514,877 sq km (3,287,612 sq mi)

Population (2009 est.): 191,481,000

Capital: Brasília

Head of state and government: President
Luiz Inácio Lula da Silva

Anticipation of the October 2010 presidential and congressional elections dominated politics in Brazil in 2009. In

mid-April, Pres. Luiz Inácio Lula da Silva formally articulated his preference for Dilma Rousseff, his chief of staff, to be the presidential candidate of the ruling Workers' Party (PT). Among the opposition, Gov. José Serra of São Paulo state and Gov. Aécio Neves of Minas Gerais state spent the year positioning themselves to become the official candidate of the Brazilian Social Democratic Party. Another official believed to be planning a presidential run was Marina Silva, a former minister of the environment and current senator from the state of Acre, who defected from the PT in August to join the Green Party. Several other senators and more than two dozen federal deputies also changed political parties during the year as a means of improving their chances of holding on to office. In addition, a number of members of Lula's cabinet were expected to resign their posts by April 2010, a mandatory step for cabinet ministers who wished to run in the elections.

New oil discoveries continued to be made by the Brazilian state oil company, Petrobrás, and its partners in the ultra-deepwater subsalt areas of the Santos basin. Multiple discoveries over the previous three years of multibillion-barrel reserves raised Brazil's profile as a top future oil producer and gave impetus to increased investment in ports, shipyards, naval construction, refineries, and oil and gas exploration. On August 31 Lula unveiled the federal government's plan for a new regulatory regime to manage this new oil wealth. He proposed the creation of a new government enterprise, called Petrosal, to manage and oversee the contracts for subsalt exploration and production. Under this regime Petrobrás would be the only operator with a guaranteed stake of 30% in each concession. Moreover, current royalty distributions would be changed, and a social and environmental fund would be created to spread oil revenues to other states outside the production areas. These provisions caused fiery debate from the producer regions, which stood to lose revenues from royalties, as well as from those who viewed the new regulatory body as a redundant bureaucracy. The proposal was certain to become a major campaign issue in 2010.

Through its Growth Acceleration Program, which aimed to boost the country's economic growth to 5% annually, the federal government continued its funding of social and educational projects, rural-electrification efforts, housing initiatives, and infrastructure development. The Brazilian Congress,

however, was prevented from advancing on any meaningful reforms by a corruption scandal that embroiled the Senate for much of the year. Agaciel Maia, who had served as the director general of the Senate since 1995, resigned his post in early March after allegations emerged that he had hidden ownership of a mansion in Brasília from federal tax authorities. An ensuing investigation linked Maia to the operation of a secret Senate bank account and to the awarding of lucrative patronage jobs and pay raises via hundreds of secret acts that were passed by the Senate during Maia's tenure as director general. Also implicated in the scandal was the president of the Senate, José Sarney, who was accused of having approved the secret acts and of having secured jobs for a number of his family members and political allies.

As Sarney and others faced mounting evidence of corruption, many in Congress called for his ouster. On August 19, however, the Senate Ethics Committee absolved Sarney of all accusations. Also in August, Sarney's son, Fernando, who faced allegations of money laundering, won an injunction from Federal District Court Judge Dácio Vieira that prohibited any reporting of accusations against him by one of Brazil's leading daily newspapers, *O Estado de São Paulo*. The newspaper sought to overturn this injunction, but on December 10 Brazil's Supreme Court ruled against the newspaper's appeal of Vieira's decision.

By a vote of 10 to 1, the Supreme Court in March ruled in favour of a continuous demarcation of the Raposa Serra do Sol Indian reservation, located in northern Roraima state near the Venezuelan and Guyanese borders, and ordered all non-Indians to exit the reserve and end economic activities there by April 30. Brazil also moved forward with infrastructure investments in the country's Amazon region. Three major hydroelectric power plants were planned for the region; these included the Santo Antonio and Jirau projects in Rondônia state and the Belo Monte project in Pará state. The Brazilian Environmental Institute on June 3 approved an economic-impact study for the Jirau project, clearing the way for construction on the project to begin.

At its meeting in Copenhagen on October 2, the International Olympic Committee (IOC) chose Rio de Janeiro as the site of the 2016 Olympic Games; Rio was selected over three other finalists—Madrid, Tokyo, and Chicago—and

would become the first city in South America to host an Olympics. The IOC decision came just months after the May 31 selection by the Fédération Internationale de Football Association of 12 Brazilian cities to host World Cup matches in 2014. On October 17, however, Brazil was reminded of the major public safety challenge it faced ahead of these events as violence in Rio de Janeiro between drug gangs and police left at least 26 people dead. The country also faced infrastructure challenges. This was underscored by a nationwide blackout that occurred on November 10 as transmission problems at the Itaipú hydroelectric power plant spurred a prolonged power outage.

The year saw Brazil emerge relatively unscathed by the global economic crisis. For the 12-month period ended on September 30, GDP shrank just 1%. The central bank's Open Market Committee reduced the benchmark discount interest rate from 13.75% to 8.75% at year's end, affording Brazil an opportunity to cut barriers to credit and help stimulate domestic consumer spending. The Lula administration also extended and granted tax breaks on consumer purchases of automobiles, motorcycles, and appliances. Accumulated inflation as measured by the National Consumer Price Index was 3.93% through November. (JOHN CHARLES CUTTINO)

BRUNEI



Area: 5,765 sq km (2,226 sq mi)

Population (2009 est.): 400,000

Capital: Bandar Seri Begawan

Head of state and government: Sultan and Prime Minister Sir Haji Hassanal Bolkiah Mu'izzaddin Waddaulah

According to the Asian Development Bank, the Brunei economy was expected to shrink by 0.4% in 2009. This represented a slight improvement over 2008, when GDP fell by 1.9%, owing largely to the decline in the oil and gas sector's performance based on constant prices. The country's oil and gas sector had declined by 6.3% in 2008,

In January 2009 the worst floods and landslides in memory were witnessed in Brunei. As a result of the cutting off of electricity and water supplies, the

overflow from drains caused temporary havoc in some parts of Bandar Seri Begawan, the capital.

In March 2009 outgoing Malaysian prime minister Abdullah Ahmad Badawi announced that his country and Brunei had reached a landmark agreement in resolving their border disputes; a settlement could clear the way for exploration in potentially oil- and gas-rich waters shared by both countries. Nevertheless, one of the main and contentious issues—the long-standing border dispute over Limbang, Malay—remained unresolved. In August the new Malaysian prime minister, Najib Tun Razak, announced that Malaysia's national oil company, Petronas, would have a role in a joint oil-extraction venture with Brunei within the framework of the Malaysia-Brunei Letters of Exchange signed in March.

In 2009 it was disclosed that the much-touted "Visit Brunei" campaign in 2008—designed to attract visitors from abroad, especially from neighbouring Southeast Asian countries—had met with little success. Looking forward to 2010, however, Brunei would play host (for the second time) to the ASEAN Tourism Forum.

(B.A. HUSSAINMIYA)

BULGARIA



Area: 111,002 sq km (42,858 sq mi)

Population (2009 est.): 7,584,000

Capital: Sofia

Chief of state: President Georgi Parvanov

Head of government: Prime Ministers Sergey Stanishev and, from July 27, Boiko Borisov

Bulgaria began 2009 as one of the 17 countries affected by the Russian-Ukrainian gas dispute that led to the disruption of natural gas deliveries throughout eastern and southern Europe. During January, which was an extremely cold month, thousands of Bulgarians did not have electricity or heat, and production was halted in major enterprises across the country. The crisis highlighted the weakness of Prime Minister Sergey Stanishev's Socialist-led government, which was already struggling to deal with the effects of the global recession; the government also faced mounting allegations of corruption and

the misappropriation of EU funds and saw its approval ratings plummet to 20% in the months before the July parliamentary elections. In March, after the government's continued failure to fulfill the European Commission's corruption- and crime-reduction requirements for the unfreezing of Special Accession Programme for Agricultural and Rural Development (SAPARD) funds to Bulgaria, Stanishev requested that European diplomats be involved in the implementation of legal and structural changes in the country. This proposal, however—viewed by many observers as a final attempt by the Socialist party to gain some credibility with voters—was rejected by the European Commission.

In the parliamentary elections, the centre-right Citizens for European Development of Bulgaria (GERB), led by former Sofia mayor Boiko Borisov, emerged as the undisputed winner. GERB garnered 39.72% of the votes and secured 116 seats in the 240-seat National Assembly, while the Socialist-led Coalition for Bulgaria claimed 17.7% of the votes and 40 seats. Borisov took office as prime minister on July 27. In September the country's new minister of justice, Margarita Popova, presented the European Commission with a comprehensive plan for reforming the judicial system and for dealing with corruption. In response, the European Commission unblocked a portion of the SAPARD funds for Bulgaria that it had frozen a year earlier.

Although its long-term economic outlook improved over the year, Bulgaria dropped two spots, to 44th, on the World Bank's ranking of countries based on their attractiveness to foreign investment. Projected inflation for 2009 was 1.8%, owing in part to lower oil and raw-material prices. The country's current account deficit was estimated at \$4.1 billion, compared with \$7.3 billion a year earlier. Tourism revenues, which contributed 14% of GDP, declined 25% from 2008.

During the year Bulgarians were reminded once again of their ancient past when archaeologist Nikolay Ovcharov unearthed the remains of the original St. Peter and St. Paul Monastery and the St. Ivan of Rila Church; the discovery provided information about life in medieval Veliko Tarnovo, capital of the second Bulgarian empire (1185–1396 CE). Excavations offered evidence that the Bulgarian aristocracy was not destroyed by the Ottoman invasion in the 14th century. (IVA TEIXEIRA; BORIS YOVCHEV)

BURKINA FASO



Area: 267,950 sq km (103,456 sq mi)

Population (2009 est.): 15,757,000

Capital: Ouagadougou

Chief of state: President Blaise Compaoré

Head of government: Prime Minister
Tertius Zongo

Under a new government initiative announced in May 2009, more than 5 million Burkina Faso citizens would be issued birth certificates free of charge. This program was expected to be completed before the scheduled 2010 presidential elections.

A population growth rate of 3.1% threatened to offset strong increases in economic growth. Despite Burkina Faso's record harvests, food prices remained high. In February the UN World Food Programme (WFP) launched a food-voucher scheme designed to benefit 20,000 Ouagadougou households. On August 10 the WFP called for expansion of the emergency program, calling attention to the continued high prices and empty shelves in their warehouses. At least 30,000 more families in the capital alone were estimated to be in dire need of help. September floods left more than 150,000 residents homeless, most of them in Ouagadougou's suburbs.

Actors perform during the opening ceremony of the Pan-African Film and Television Festival in Ouagadougou, the capital of Burkina Faso, in February.



Ahmed Ouoba—Maxppp/Landov

On August 4 the first of 800 infantry troops arrived in The Sudan to join the African Union–UN peacekeeping force in Darfur. In February the U.S. had given Burkina Faso military equipment worth \$17 million in preparation for the deployment to that troubled region.

The 40th annual Ouagadougou Pan-African Film and Television Festival (FESPACO) was held in late February and early March. Despite some organizational and funding problems, FESPACO proved a great success with both the participants and the public in general. The Ethiopian film *Teza* was awarded the Golden Stallion of Yennenga, the festival's grand prize.

(NANCY ELLEN LAWLER)

BURUNDI



Area: 27,816 sq km (10,740 sq mi)

Population (2009 est.): 8,303,000

Capital: Bujumbura

Head of state and government: President
Pierre Nkurunziza

Following the civil war between the Tutsi and Hutu (which began in 1993) and many years of stalled peace accords, several hopeful signs appeared in 2009 to show that Burundi was solidly on the road to stability. A pact to officially activate the 2006 cease-fire agreement had been signed in December 2008 by the Burundian government and the last remaining rebel group, the National Liberation Forces (FNL). After the release by the government in early January 2009 of 247 former FNL prisoners and the freeing by the FNL in April of 136 child soldiers, the pact was implemented. (See Special Report on page 180.) Nearly 3,500 former FNL soldiers were demobilized in April and May and integrated into the national army and police force. Despite the progress made in honouring the peace agreement, some 16,000 former

rebels rejected the terms of demobilization, and several hundred crossed the border into the Democratic Republic of the Congo to be recruited by the Democratic Forces for the Liberation of Rwanda, an ethnic Hutu militia operating in the DRC.

By the end of 2008, most refugee camps in Tanzania had closed and about 63,000 Burundians had returned home in that year alone. In 2009 nearly 36,000 refugees continued to live in the one remaining camp. The United Nations High Commissioner for Refugees estimated that over the six-year-long repatriation effort, more than 470,000 refugees had returned to Burundi. In addition, about 165,000 refugees sought citizenship in Tanzania, under a special agreement between the two countries. While great strides in protecting human rights were made—in February the Burundian Senate passed draft legislation that abolished the death penalty and rejected a proposed amendment that would have outlawed homosexuality—in April the lower house voted for the abolition of the death penalty and pushed for the passage of the latter amendment. The bill was voted into law, making homosexuality a crime.

The International Monetary Fund and the World Bank canceled 92% of the country's debt, which totaled more than \$1.4 billion. The move freed up more than \$40 million annually over the next 20 years, funds that would be earmarked for social and development programs. In March the Paris Club of creditor nations canceled the entire \$134 million debt owed by Burundi.

(MARY EBELING)

CAMBODIA



Area: 181,035 sq km (69,898 sq mi)

Population (2009 est.): 14,494,000

Capital: Phnom Penh

Chief of state: King Norodom Sihamoni

Head of government: Prime Minister
Hun Sen

Tensions between Cambodia and Thailand continued into 2009, with both countries maintaining significant military presence on the border near disputed territory adjoining the ancient

temple of Preah Vihear. Diplomatic negotiations early in the year broke down, and a brief clash in April resulted in the death of at least one Thai soldier (Cambodians claimed to have killed four), several injuries, and the destruction of a Cambodian market. Tensions surged again in July, with further reported troop buildup around the date of the one-year anniversary of UNESCO's declaration of Preah Vihear as a World Heritage site. At the same time, partly for bureaucratic reasons, UNESCO ignored Thailand's petition that the declaration be reconsidered or that both countries jointly administer the site; Cambodian authorities proclaimed this a major victory. As in Thailand, the standoff figured in Cambodian nationalist discourse and was used politically. Iconography of Preah Vihear became widespread, appearing on T-shirts and in music videos and pictures in hotel lobbies. Schools and temples were asked to ring bells to celebrate the anniversary, and a massive concert was broadcast live. Further talks led to some troop withdrawals in August and optimism for a settlement.

Much international attention focused on the first public trial held by the Khmer Rouge Tribunal (officially the Extraordinary Chambers in the Courts of Cambodia [ECCC]). The trial of 67-year-old Kaing Guek Eav (better known as Duch), who headed the notorious S-21 prison during the 1975–79 Pol Pot regime, began on February 17 and drew to a close in November, but a verdict was not expected until 2010. Witnesses included scholars, S-21 prison staff, and the few surviving victims. Early in the trial Duch dramatically confessed his responsibility for the crimes. Proceedings were broadcast on television; observers complained of only moderate Cambodian public interest, although the numbers of courtroom spectators grew throughout the trial.

The four remaining defendants in ECCC custody were to be tried jointly. ECCC was considered a "hybrid" court in that it was within the Cambodian legal system but included international jurists. A call by the international jurists for indicting more Khmer Rouge leaders was initially resisted by the court's Cambodian judges—mirroring the position of Prime Minister Hun Sen, who said that such a move would cause unrest. In September, however, the court formally opened up the possibility of more indictments, and the prosecution submitted five names. The tribunal continued to be plagued, how-

ever, by a lack of funding and charges of corruption.

Human rights organizations complained about the increasing number of lawsuits being brought against the political opposition. One notable case involved a speech made by Hun Sen in April in which he allegedly attacked parliamentarian Mu Sochua, using phrases with sexual innuendo. Mu Sochua, a former minister of women's affairs, sued Hun Sen for defamation for a nominal amount, 500 riels (\$0.12), saying that she really wanted only an apology. Hun Sen countersued both Mu Sochua and her lawyer, who eventually abandoned the defamation suit. After being stripped of parliamentary immunity, Mu Sochua was fined 16.5 million riels (\$4,000) for defamation in August. She refused to pay and could face prison.

(JOHN A. MARSTON)

CAMEROON



Area: 476,350 sq km (183,920 sq mi), including the 700-sq-km (270-sq-mi) Bakassi Peninsula

Population (2009 est.): 19,522,000

Capital: Yaoundé

Chief of state: President Paul Biya

Head of government: Prime Ministers

Ephraïm Inoni and, from June 30,

Philemon Yang

In a long-anticipated move, Cameroonian Pres. Paul Biya reshuffled the government on June 30, 2009. He named lawyer Philemon Yang, a member of the ruling Democratic Rally of the Cameroon People, as prime minister.

Corruption in the public sector remained widespread, despite the government's efforts to eradicate it. On March 10, Paul Ngamo Hamani, former head of the bankrupt Cameroon Airlines, was imprisoned on charges of having embezzled €194 million (about \$245 million). On August 19, seven civil servants working for the city of Douala, the country's economic capital, were found guilty of having appropriated nearly €3 million (about \$4.2 million).

Concerns over Cameroon's human rights record continued to make headlines. On January 9, Reporters Without Borders strongly protested the three-year prison sentence given to Lewis

Medjo, managing editor of an opposition weekly journal. Incarcerated since September 2008, Medjo was convicted in January of "spreading false news." Amnesty International (AI) published a report on January 29 accusing the government of having committed severe human rights violations, especially in its efforts to crush political dissent. AI cited the use of extreme violence against prisoners. On August 12, the government's own human rights commission published a damning report on prison conditions. More than 23,000 prisoners, many of them awaiting trial, were in facilities designed for a maximum occupancy of 16,000.

On March 19, on his first stop of a weeklong African trip, Pope Benedict XVI celebrated mass before some 60,000 people in Yaoundé's football stadium. A charity football match between Cameroon and Côte d'Ivoire was held on June 13 in Abidjan, Côte d'Ivoire, where, on March 29, 19 people had been crushed to death in a stampede during a World Cup qualifying match between Côte d'Ivoire and Malawi.

(NANCY ELLEN LAWLER)

CANADA



Area: 9,984,670 sq km (3,855,103 sq mi)

Population (2009 est.): 33,687,000

Capital: Ottawa

Chief of state: Queen Elizabeth II, represented by Governor-General Michaëlle Jean

Head of government: Prime Minister Stephen Harper

Domestic Affairs. Canada entered 2009 still reeling from a constitutional crisis that had threatened the months-old Conservative minority government. Prime Minister Stephen Harper's newly reelected centre-right government had introduced a much-maligned economic update on Nov. 27, 2008, that projected a series of small budget surpluses in spite of the worldwide economic downturn. The budget update also contained new policies, including the suspension of programs to achieve pay equity between women and men, the temporary suspension of the federal public sector's right to strike, and the elimination of public financing for political parties. The three parliamentary opposition

parties, which combined held a majority of seats in the House of Commons, announced that they were prepared to bring down the government through a vote of no confidence in the fiscal legislation and proposed installing a centre-left Liberal-New Democratic Party (NDP) coalition government in its place. The new coalition would have had guaranteed support on confidence matters from the separatist Bloc Québécois for 18 months. Facing an imminent defeat, Harper asked Gov.-Gen. Michaëlle Jean to prorogue Parliament on Dec. 4, 2008, only weeks after the new session had begun, in an attempt to find time to introduce a revised budget that would win support from at least one of the opposition parties. Jean acceded to his request, and a new session of Parliament was scheduled to begin in late January 2009.

Parliament resumed on January 26 with a short new speech from the throne, in which the government briefly presented a six-point economic plan to stimulate the economy. The following day Finance Minister Jim Flaherty introduced the revised federal budget, which projected the first deficit since the 1997–98 fiscal year. The budget document also predicted that the federal government would remain in a deficit for at least four years before returning to balanced budgets. Projected future deficits included Can\$33.7 billion (Can\$1 = about U.S.\$0.87) for fiscal year 2009–10, Can\$29.8 billion for 2010–11, Can\$13 billion for 2011–12, and Can\$7.3 billion for 2012–13. Although falling corporate and personal tax revenue contributed to some of the shortfall, a massive fiscal stimulus plan aimed at helping the country weather the global recession accounted for the bulk of the red ink. New spending initiatives included public and private investment, an infrastructure program, enhanced benefits for low-income and unemployed Canadians, worker-retraining programs, new funding for aboriginal peoples, and support for the ailing forestry and auto sectors. Personal income tax cuts worth approximately Can\$4 billion over two years and an individual home-renovation tax credit of up to Can\$1,350 were also introduced as a part of the budget. The official opposition, the centrist Liberal Party, agreed to support the budget

Heinz Ruckemann—UPI/Landov



The new leader of the Liberal Party of Canada, Michael Ignatieff, speaks to delegates at the party's convention in Vancouver on May 2.

and the speech from the throne, both confidence matters, in exchange for three promised budget reports. These reports would be confidence matters before the House of Commons and an opportunity to bring down the government if progress was not seen. During a fiscal update held on September 11, Flaherty revised his forecast deficit for the 2009–10 fiscal year upward to an estimated Can\$55.9 billion. He suggested, however, that budget deficits could be eliminated without future tax increases.

Following the Liberal Party's disastrous showing in the October 2008 election, in which the party took its worst share of the popular vote since confederation in 1867, the Liberal leader, Stéphane Dion, announced that he would resign as soon as the party selected a new leader. When the surprise Liberal-NDP coalition emerged as a potential government, Dion said that he would become a caretaker prime minister until the Liberal leadership was decided; however, with Parliament prorogued and the possibility of a new election if the government's new budget was defeated, the Liberals sought to have a more permanent leader in place immediately. On Dec. 10, 2008, Michael Ignatieff was named interim Liberal leader. His leadership was confirmed by 97% of the delegates at a party convention on May 2, 2009. Two other expected candidates for the leadership, Bob Rae and Dominic LeBlanc, had announced earlier that they were withdrawing from the race to leave Ignatieff, a former academic, the presumptive

winner. The party also voted to adopt a one-member, one-vote policy for future leadership conventions. The Liberals had been the last national party to use a delegate system at leadership conventions.

Following the release of the second scheduled budget report, on June 11, the Liberals demanded the establishment of a bipartisan six-member panel to review the employment insurance program. The Liberals wanted to implement a national standard of eligibility in place of the existing complex system of regional considerations. When the panel failed to reach agreement on such a reform to the program, Ignatieff announced during a national caucus meeting (August 31–September 2) that his party

would put forth a vote of no confidence at the earliest possible date. A seemingly imminent election was averted when the Bloc Québécois and the NDP agreed to support the government temporarily in exchange for some modest concessions. On December 30, Parliament was again prorogued at Harper's request and was to remain shut down until early March 2010, following the Olympic Winter Games in Vancouver.

In the provinces the governing centre-right Liberals in British Columbia were reelected on May 12 to a third consecutive majority government under Premier Gordon Campbell. On June 9 Nova Scotia elected the province's first New Democratic government; the centre-left NDP won 31 of 52 seats as the incumbent centre-right Progressive Conservatives, who had governed for 10 years, fell to third place behind the centrist Liberals. Manitoba's Gary Doer, Canada's longest-serving premier, announced on August 27 that he would leave office once his centre-left New Democrats had selected a new leader; the following day he was designated Canada's next ambassador to the U.S. Former Manitoba finance minister Gary Selinger was selected as the new NDP leader and premier-designate. The unexpected shutdown of the nuclear reactor at Chalk River, Ont., on May 14 precipitated a crisis in the medical community, as well as political repercussions. (See Sidebar.)

The Economy. On October 20, Toronto-Dominion Bank released a report predicting a combined federal-provincial deficit of Can\$90 billion–Can\$100 bil-

Chalk River Reactor Shutdown

Canada's 52-year-old nuclear reactor at Chalk River, Ont., experienced a sudden and unexpected shutdown on May 14, 2009, owing to a local power outage, and in the early morning of May 15 a leak of heavy water was detected. Although the reactor was originally forecast to be offline for one month, by August officials had revealed that the reactor would not resume production of medical-quality isotopes until the spring of 2010 at the earliest. The shutdown resulted in the delay or cancellation of numerous diagnostic appointments as well as other medical imaging procedures that utilize isotopes.

Members of the medical community suggested that the temporary loss of the reactor's production was a "catastrophe," as the reactor supplied one-third of the world's supply of medical isotopes. Experts said that Canada's reputation as a safe and steady supplier of these materials was badly damaged and suggested that major importers would likely investigate whether it would be in their self-interest to develop their own means of producing the isotopes (a bill approving such a program passed the U.S. House of Representatives in November). Following a decision to split up and sell off the publicly

owned Atomic Energy of Canada Ltd., on June 10 Prime Minister Stephen Harper announced that the federal government would eventually pull out of the the medical-isotope-production industry altogether.

Lisa Raitt, minister of natural resources, came under fire on June 3 for her handling of the isotope case when it was revealed that she or a member of her staff had left classified briefing papers about the nuclear reactor at a television station following an interview. Although she offered her resignation to the prime minister, it was not accepted. Days later Raitt once again faced criticism from the opposition after a journalist based in Halifax, N.S., reported on the contents of a privately taped conversation between the minister and her former director of communications, Jasmine MacDonnell, in which Raitt described the story about nuclear radiation leaks and cancer as "sexy" and questioned the political acumen of Leona Aglukkaq, the minister for health. Raitt eventually offered a tearful apology to cancer survivors and their families for her remarks and noted that she had lost her own father and brother to cancer.

(WILL STOS)

lion for the 2009–10 fiscal year. Only one year earlier the federal government and all provincial and territorial governments had initially proposed balanced budgets for fiscal 2008–09. In spite of growing deficits, surging personal bankruptcies, and the loss of nearly 400,000 jobs from peak employment in October 2008 to August 2009, Canada remained in the best financial situation of the Group of Eight (G-8) industrialized countries, according to the federal government and some economists. The country's conservative risk-averse banking system, which had strictly controlled cash-to-credit ratios, was able to emerge from the 2008 credit crisis relatively unscathed and without the bank bailouts and extensive credit guarantees that were common in the U.S.

Other industrial sectors faced much more difficult conditions, however. Prime Minister Harper and Ontario Premier Dalton McGuinty announced on June 1 that the federal and Ontario provincial governments would buy a 12% stake in General Motors (GM) in exchange for Can\$10.5 billion. Up to 85,000 jobs would be lost, mostly in southern Ontario, if GM did not undergo government-backed restructuring. The agreement between the governments and the automaker precluded GM's Canadian operations from entering court-approved bankruptcy protection.

Foreign Affairs. A ruling by Canada's Immigration and Refugee Board, which had granted a white man

refugee status in Canada on the basis of the racial prejudice and violence that he claimed to have experienced in South Africa from the black majority there, prompted the federal Ministry of Immigration to announce on September 3 a plan to appeal that decision in the face of international outrage. South African officials condemned the original ruling, made by a quasi-judicial and independent board, as one that would serve to perpetuate racism. The refugee claimant had been living in Canada illegally since leaving South Africa. The South African government noted that the government had made efforts to fight violence and crime against all people, regardless of ethnicity or creed.

Trade negotiations between Canada and the European Union (EU) were launched at a leaders summit on May 6 in Prague. Topics up for discussion included facilitating the freer trade of agricultural goods, enhancing investment opportunities and government contract procurement, permitting temporary movement of workers between Canada and the EU member countries, and trying to better harmonize regulations concerning animal safety and intellectual property. The talks, which could take up to two years to complete, were hailed by Canadian free-trade proponents as a hopeful counterbalance to Canada's dependence on the U.S.'s economy and market. The EU was Canada's second largest trading partner, after the U.S.

A newly enacted EU ban on a range of seal products from Canada was expected to be an irritant during trade talks between Canada and the EU. The ban—which was lodged as a protest to an annual hunt of some 300,000 harp seals that some environmentalists and EU legislators had labeled as cruel and inhumane—affected only products from Canada's Atlantic region and excluded seal products produced by the Canadian Arctic's indigenous Inuit peoples. Canada defended the hunt as being conducted in a humane manner and as essential to the livelihoods of people living in rural and isolated areas on Canada's East Coast. The EU had imported Can\$2.5 million worth of seal products from Canada in 2008.

(WILL STOS)

CAPE VERDE



Area: 4,033 sq km (1,557 sq mi)

Population (2009 est.): 509,000

Capital: Praia

Chief of state: President Pedro Pires

Head of government: Prime Minister José Maria Neves

When in August 2009 U.S. Secretary of State Hillary Clinton made Cape Verde the seventh stop on her African tour,

she praised the country's economic advances and its successful implementation of the \$110 million Millennium Challenge compact to improve social services, increase agricultural productivity, and develop infrastructure. She noted the progress that the government was making toward greater accountability and transparency and that Cape Verde was the only country in Africa where women made up more than half of the government's cabinet ministers.

Cape Verde remained heavily dependent on the remittances sent home by people who had left, 500,000 of whom lived in the U.S., and on donor money from the European Union and elsewhere. Cape Verde's ties with China continued to grow, as did those with Angola; Pres. Pedro Pires had made an official visit there in December 2008. Cape Verde was, with Angola, active in the Community of Portuguese-Speaking Countries (CPLP), and ties between the ruling parties of the two countries were close. Also active in the Economic Community of West African States, Cape Verde hoped to extend its territorial waters into the Atlantic Ocean by another 150 nautical miles, but it remained to be seen whether the country could do so.

(CHRISTOPHER SAUNDERS)

CENTRAL AFRICAN REPUBLIC



Area: 622,436 sq km (240,324 sq mi)

Population (2009 est.): 4,511,000

Capital: Bangui

Chief of state: President François Bozizé

Head of government: Prime Minister Faustin Archange Touadéra

Despite some progress in 2008 in a series of peace agreements with rebel groups, continued insecurity in 2009 in the northern region of the Central African Republic (CAR) forced another 10,000 CAR refugees to flee into southern Chad, where they joined an estimated 60,000 of their countrymen. In February government troops were accused of having carried out violent reprisals in the Ndele region against civilians who were thought to be supporting rebels. UN peacekeepers took over responsibility for the troubled cross-border area on March 15, amid

fears that the Ugandan Lord's Resistance Army (LRA) was preparing to move across the CAR border from its bases in the Democratic Republic of the Congo. After CAR rebels burned surrounding villages on June 6, they struck a military base in the northern town of Birao. In late July, the LRA attacked towns in CAR, killing at least 10 people and causing hundreds to flee their homes. That same month UN officials called for immediate and urgent humanitarian aid to be sent to the world's second poorest country.

Fighting on April 12 between farmers and cattle traders killed an estimated 20 people in a livestock market near Bangui. Dozens were injured when clashes erupted over the ownership of cattle stolen a week earlier by bandits.

Under pressure from the Vatican, two senior prelates resigned in May, triggering a one-day strike by priests. The departure of the archbishop of Bangui and the bishop of Bossangoa followed an investigation into charges of moral laxity among the capital's priests.

(NANCY ELLEN LAWLER)

CHAD



Area: 1,284,000 sq km (495,755 sq mi)

Population (2009 est.): 10,329,000, excluding about 250,000 refugees from The Sudan

Capital: N'Djamena

Chief of state: President Lieut. Gen. Idriss Déby

Head of government: Prime Minister Youssouf Saleh Abbas

Chad's chronic instability persisted throughout 2009. The governments of The Sudan and Chad again agreed not to provide support to each other's rebel movements, but this had little effect. One of the rebel movements in the war-torn Sudanese region of Darfur continued to launch operations from Chad and was thought to receive much of its funding from Pres. Idriss Déby; meanwhile, Chadian rebels continued to operate from Darfur. Government forces in Chad were able to rebuff a rebel attack in May, and by mid-2009, despite a steep decline in fighting in Darfur that led some observers to declare that the region should no longer be considered a war zone, some 250,000 refugees

from the region remained in eastern Chad, where a small UN peacekeeping operation was stationed.

Déby's highly authoritarian government refused to enter into dialogue with the president's internal opponents. On the Economist Intelligence Unit's democracy index, published in late 2008, Chad was ranked 166th out of 167 countries. Chad's oil revenues did not bring the social and economic benefits promised by the government to local communities, but instead the revenues were used to build up the military and to facilitate corruption. Chad's main allies—France, Libya, the U.S., and China—did little to challenge the country's abuse of human rights, though U.S. Pres. Barack Obama's special envoy to The Sudan, retired air force general J. Scott Gration, did meet with Chadian officials. There was speculation that French Pres. Nicolas Sarkozy might abandon France's military bases in Chad, but the bases remained, and the U.S. continued to train Chadian soldiers, allegedly to fight al-Qaeda-affiliated terrorists.

(CHRISTOPHER SAUNDERS)

CHILE



Area: 756,096 sq km (291,930 sq mi)

Population (2009 est.): 16,602,000

Capitals: Santiago (national) and Valparaíso (legislative)

Head of state and government: President Michelle Bachelet

In 2009 Pres. Michelle Bachelet neared the completion of her four-year term in office having become the most popular president in contemporary Chilean political history. Since her election in January 2006, Bachelet had promised to bring an openness and accessibility to the presidency and to focus public policies on helping the poor and the marginalized—especially women, children, and the elderly. Despite a somewhat rocky start, Bachelet was able to meet these goals, which was reflected in her extraordinary popularity; a poll taken in October showed that 78% of Chileans gave her high marks.

Bachelet had only four years to achieve these goals because the presidential term of office had been short-

Aliosha Marquez—AP



A day after winning the first round of voting in Chile's presidential election, Sebastián Piñera holds up a replica of La Moneda, the country's presidential palace, during a campaign event in Santiago on December 14.

ened in a set of constitutional reforms approved during the previous administration of Ricardo Lagos. Moreover, as the fourth successive president to belong to the centre-left Concertación coalition, Bachelet had to battle a growing sense of political exhaustion among Concertación supporters; by the time she was to leave office in March 2010, the coalition would have been in power for 20 years.

The political contest to succeed Bachelet was lively, with four candidates vying for the presidency. For the first time, the political centre-left fielded three presidential candidates, thus splitting that vote. The Concertación's official candidate was Eduardo Frei Ruiz-Tagle, who had previously served (1994–2000) as president. Frei's inability to generate enthusiasm among Concertación supporters, however, led to the upstart candidacy of Marco Enríquez-Ominami, who ran as an independent. In contrast to Frei, Enríquez-Ominami was young and charismatic, and he centred his campaign on a critique of Frei and the old-style politics that he represented. To the left of both Frei and Enríquez-Ominami was Jorge Arrate, the Communist Party candidate, who registered only in single digits in polling.

On the political right, Sebastián Piñera, who lost to Bachelet in the 2006 runoff election, was vying again for the presidency. Unlike in his first attempt, however, when Piñera had to best Joaquín Lavín to become the right's candidate against Bachelet, Piñera was now

the consensus candidate of the right-wing alliance and waged a campaign that highlighted the need for greater governmental efficiency rather than one that presented a more fundamental critique of Concertación policy. Polling consistently put Piñera in first place among the four candidates.

As expected, no candidate gained an absolute majority of more than 50% in the December 13 election; as a result, a second round of voting was scheduled to take place on Jan 17, 2010. Piñera took the first round with 44% of the vote; Frei came in second with 30%; and Enríquez-Ominami garnered 20%. Although the combined vote total for the

three centre-left candidates was 56%, it was unclear whether Frei could capture all of those votes, especially those that went to Enríquez-Ominami. If Piñera won, it would mark the end of the era of the Concertación.

On the economic front, the country weathered the global recession relatively well, in large part because Bachelet had not bowed to political pressure early in her administration to spend the unexpected financial windfall that had resulted from the high price of copper, one of Chile's main exports. Instead, the government saved this revenue and was able to draw on these reserves when the country's export-driven economy slowed and the value of Chilean exports dropped by 30% during the global downturn.

(LOIS HECHT OPPENHEIM)

Domestic Affairs. Following the success of the 2008 Olympic Games in Beijing, China turned its political gaze inward in 2009, focusing its attention on sensitive historical anniversaries, ethnic unrest in its frontier regions, and the effort to maintain the economic growth that the Communist Party of China (CPC) believed underpinned its rule and the country's stability. At the same time, though, the strong performance of China's economy despite the global economic crisis gave the country unprecedented prominence on the world stage. (See Special Report on page 174.)

Foreshadowing a year of dissent, prominent Chinese dissidents and intellectuals issued Charter 08 in December 2008 after nearly a year of planning. This manifesto demanded that human rights, democracy, and constitutional government replace the Chinese government's program of authoritarian modernization and expressly linked its demands to the approaching 20th anniversary of the 1989 crackdown on the Tiananmen Square pro-democracy demonstrators. The Chinese government's response was swift. Liu Xiaobo, a well-known writer who helped write and circulate the charter, was detained around the time of the manifesto's initial release, and he remained in custody throughout 2009, though his formal arrest on charges of subversion was not approved until June. He was found guilty on December 23 and on December 25 was sentenced to 11 years' imprisonment. Many of the original 303 signatories of Charter 08 were questioned by the police, and Chinese media outlets were ordered to suppress coverage of the document.

Most dissent in China was, however, based on specific grievances. In the aftermath of the May 2008 earthquake in western Sichuan province that killed about 80,000 people—including up to 5,000 schoolchildren—a local activist, Huang Qi, attempted to investigate accusations that shoddy school construction had led to a disproportionate number of deaths. Huang was arrested and in November received a three-year prison sentence for possessing state secrets. Ai Weiwei, a prominent artist and activist, was severely beaten by police in August before he could testify at the trial of Tan Zuoren, another activist who had been arrested after having attempted to investigate the student deaths in Sichuan. Among other cases, the new general manager of the Tonghua Iron & Steel Group was murdered in July by workers angry over plans by a privately

CHINA



Area: 9,572,900 sq km (3,696,100 sq mi), including Tibet and excluding Taiwan and the special autonomous regions of Hong Kong and Macau

Population (2009 est., excluding Taiwan, Hong Kong, and Macau): 1,331,433,000

Capital: Beijing

Chief of state: President Hu Jintao

Head of government: Premier Wen Jiabao

owned steel conglomerate to take over and modernize the Jilin province steel plant. In August rioters in central China clashed with public security officials after more than 2,000 children whose schools were in close proximity to smelting facilities were found to have elevated levels of lead in their blood.

In addition to demonstrating decreased tolerance for dissent, the Chinese government also cracked down on lawyers who defended dissidents. Human rights lawyer Gao Zhisheng was arrested in February. Despite appeals by his wife to U.S. Pres. Barack Obama as the president paid a state visit to China in November, Gao's whereabouts remained unknown. Another blow was dealt to the emerging legal profession in July when the Beijing city government revoked the licenses of 53 lawyers who had taken on various cases against the state.

In early June the anniversary of the Tiananmen Square incident passed largely uneventfully as a massive police presence patrolled the site of the student demonstrations and popular Internet services such as Twitter were blocked. Wu'er Kaixi, a student leader during the Tiananmen protests who eventually resettled in Taiwan, attempted to return to China for the anniversary, but his effort was unsuccessful. On October 1 China's leadership celebrated the 60th anniversary of the founding of the People's Republic of China with a mass celebration featuring the weaponry of the country's modernizing armed forces and an affirmation by Pres. Hu Jintao of China's continued official commitment to socialism.

Despite this display of power, the CPC suffered a number of challenges to the legitimacy of its rule. In May the memoirs of former premier and CPC general secretary Zhao Ziyang were published posthumously in Hong Kong. In his memoirs, Zhao—a party insider who nonetheless spent years under house arrest after the Tiananmen Square incident—called for a reevaluation of Tiananmen and for China to become a parliamentary democracy. The government's handling of Tibet was also criticized publicly in a report authored by some 200 Chinese legal professionals and issued in June. The report concluded that the deadly riots that occurred in Tibet in March 2008 were caused by Chinese government policies that had disrupted the Tibetan economy, culture, and religion.

By far the most serious challenge to the CPC's authority, however, was the

Imaginechina/AP



Entertainers perform a dance routine during China's first public gay pride week, which took place in Shanghai in June.

unrest that was sparked by the ethnically motivated killings of two migrant Uighur workers in late June at a factory in southern Guangdong province. Dissatisfied over the investigations in Guangdong, Uighurs began rioting in the streets of Urumqi, the capital of the Uygur Autonomous Region of Xinjiang in western China. Attacks by Uighurs on ethnic Han Chinese and reprisals by mobs of Han left nearly 200 people dead in the worst ethnic violence that China had experienced since the founding of the People's Republic. Authorities moved quickly to restore order, but the secretary of the CPC Urumqi City Committee, Li Zhi, was removed from office in early September for his failure to protect the provincial capital's citizens. Exiled Uighur activist Rebiya Kadeer (see BIOGRAPHIES) was accused by authorities of having stoked the unrest.

In November nine men who took part in the Urumqi rioting were executed in Xinjiang. On December 3, death sentences were handed down by the Intermediate People's Court of Urumqi to five other individuals involved in the violence. That same month Xinjiang party secretary Wang Lequan was replaced by Meng Jianzhu, China's minister of public security, who had distinguished himself with his management of security at the Beijing Olympics.

In deference to the sensitive anniversaries of Tiananmen and the founding of the republic, Chinese politics during 2009 was even more carefully scripted than usual. When the National People's Congress (NPC) met in March, talks focused on ensuring economic growth of at least 8% for the year; the legislature

also endorsed the government's ongoing security clampdown in Tibet and affirmed the subordination of the NPC to the CPC. In particular, Wu Bangguo, the country's top-ranking legislator, said that the NPC's core value was to uphold the leadership of the party and that China's political system did not and should not adopt separation of powers between the executive, legislative, and judicial branches of government.

In areas other than politics, Chinese society continued its remarkable opening. In June China's first public gay pride week took place in Shanghai. Another historic development in Shanghai was the cautious steps made toward loosening the one-child policy that had been in place in China since the late 1970s; under new rules some couples in Shanghai would be allowed to have two children.

Internet censorship appeared to advance with the announcement that all new PCs would need to be loaded with filtering software, known as Green Dam, that would block certain types of objectionable content, such as pornography. Nonetheless, public outrage forced a delay in universal implementation of the policy. After the disturbances in Xinjiang, however, the Internet was blocked throughout China's vast western frontier and remained largely so through the end of the year.

Economy. The strength of China's economy was credited with helping stave off a worldwide economic collapse. In the face of the global downturn, China succeeded in its objective of maintaining the country's economic expansion, with year-on-year GDP growth estimated at 8.2%. The year began painfully as some

20 million migrant workers found themselves unemployed after tens of thousands of factories closed in 2008 in the Pearl River Delta. By the end of 2009, however, 10 million new urban jobs had been created.

Much of the economic growth and job creation was driven by a massive \$586 billion stimulus package and the extension of easily available credit, especially to state-owned or state-affiliated enterprises. Despite China's accelerating economic growth as the year progressed, cumulative annual exports, which were dominated by the private sector, were just \$113.7 billion—some \$20 billion less than in 2008.

China's efforts to secure more access to vital mineral resources in developed countries did not fare well. Chinalco attempted to buy the Australian-based mining conglomerate Rio Tinto for \$19.2 billion in February, but by June the deal had collapsed under political pressure from the Australian public not to sell control of strategic minerals to China. In July Chinese authorities arrested and detained four Rio Tinto employees on charges of espionage and theft of Chinese state secrets; Australian officials maintained that the arrests were in retaliation for the aborted Rio Tinto deal. The four employees remained in custody at year's end and were awaiting trial.

In the spring, though, Chinese concerns successfully acquired stakes in two Australian mining companies, investing \$438 million in Fortescue Metals Group and \$1.2 billion in Oz Minerals. In December President Hu celebrated another remarkable Chinese engineering feat when he helped to open a pipeline that would transport natural gas some 1,835 km (1,140 mi) from Turkmenistan to China.

On December 26, the \$17 billion Wuhan-Guangzhou railway opened to create a high-speed link through 20 cities. Running at speeds of 350 km/hr (217 mph), the train reduced travel time from Wuhan, an industrial city along the Yangtze River, to the southern port city of Guangzhou from 10 or more hours to about 3.

Foreign Relations. China's relations with the U.S. got off to an inauspicious start in 2009 when the U.S. lodged a protest with Beijing in March about what it claimed was harassment of a U.S. naval intelligence vessel, the USNS *Impeccable*, by five Chinese ships in international waters. China argued that the vessel was within its territorial waters and had no right to be there.

Throughout the year the U.S. cautiously pressed China to allow its currency, the renminbi, to appreciate. Despite this pressure, the renminbi did not appreciate significantly. In September the U.S. announced higher tariffs on Chinese tires, and in November it placed higher tariffs on Chinese steel pipes. At the same time, the administration of President Obama carefully avoided the kinds of open conflicts that had characterized his two predecessors' early months in office. In particular, neither Obama nor the secretary of state, Hillary Clinton, publicly rebuked China on human rights.

In November Obama visited China on an official state visit. An image of the president stepping off his plane in Shanghai holding his own umbrella impressed many ordinary Chinese citizens, who were used to the Chinese leadership's practice of having aides carry their umbrellas. At a town hall meeting with students from local Shanghai universities, Obama also struck a chord with his statement that "the more freely information flows, the stronger the society becomes, because then citizens of countries around the world can hold their own governments accountable." Obama's speech was carried over the Internet but not on Chinese television. Many critics, however, called the Obama visit largely unsuccessful because he failed to extract commitments from China on issues of importance to Washington, such as sanctions against Iran, policy toward North Korea, or cooperation on global warming.

The failure to achieve consensus on global warming became evident in December at the UN Climate Change Conference in Copenhagen. China's representatives argued that the U.S. and other developed countries should subsidize less-developed countries such as China in the effort to reduce carbon dioxide emissions. The U.S. maintained that China was in a special category among less-developed countries and had the resources to pay for cuts itself. Intensive last-minute discussions resulted in the signing of the Copenhagen Accord, under which China agreed to work with other nations to limit any rise in global temperatures to 2 °C (3.6 °F).

Relations with Japan improved significantly after the historic victory of the opposition Democratic Party of Japan in the Japanese general election on August 30. Chinese Vice Pres. Xi Jinping visited Japan in December and met with the new prime minister, Yukio Hatoyama (see BIOGRAPHIES), and Em-

peror Akihito. In response to North Korea's long-range ballistic missile test in April and its nuclear test in May, China joined the other permanent members of the UN Security Council in imposing sanctions on North Korea. Premier Wen Jiabao followed up on the sanctions by visiting North Korea in October for talks on nuclear disarmament with North Korean leader Kim Jong Il. China's defense minister, Li Guangjie, also visited Pyongyang in November to promote defense exchanges between the longtime allies.

China joined Russia in continuing to urge that no sanctions be placed on Iran for its nuclear activities, although China did agree to the International Atomic Energy Agency's censure of Iran in November. For a time in the first half of 2009, Iran was the leading exporter of oil to China, sending 700,000 bbl of oil a day in the month of May alone.

Tensions increased between China and India over India's Himalayan province of Arunachal Pradesh, which China claimed as part of Tibet. In June India increased its troop levels along the Chinese border in Arunachal Pradesh, and the Indian government in November permitted the Dalai Lama to make a visit to the province—a move that prompted diplomatic protests by China.

China's relations with France recovered slightly after diplomatic tensions over Tibet in 2008. French Pres. Nicolas Sarkozy met with President Hu twice at international summits in 2009. In February Wen visited the U.K., where he signed three economic agreements with the government of Prime Minister Gordon Brown. Wen's lecture at the University of Cambridge was interrupted, however, when a protester hurled a shoe at him. China and the EU held an inconclusive summit in Nanjing in November at which the EU pressed China to appreciate its currency and Wen asked the EU to remove trade barriers. (MICHAEL R. FAHEY)

COLOMBIA



Area: 1,141,748 sq km (440,831 sq mi)

Population (2009 est.): 44,972,000

Capital: Bogotá

Head of state and government: President Álvaro Uribe Vélez

Luis Robayo—AFP/Getty Images

Three years into his second four-year term, Colombian Pres. Álvaro Uribe remained very popular in 2009. The constitution had been revised once to allow him to run for a second term, and a movement was under way to permit him to run for a third term in 2010. The constitutional reform required popular approval via a referendum. Before the referendum could be held, however, it had to be approved by Congress and reviewed by the Constitutional Court. The referendum received congressional approval in September (after much bargaining) and was passed to the Constitutional Court. If the court took the maximum time allowed to make a decision, Uribe would be prevented from running. The delay put Uribe's allies in limbo as they refused to declare their candidacies until his status was decided. Meanwhile, the opposition Liberal Party and Alternative Democratic Pole held primaries in late September to winnow their fields of prospective presidential candidates to a single official candidate each.

Uribe's popularity appeared generally impervious to a number of government scandals. In the so-called parapolitics scandal, more than 70 members of Congress—most of them supporters of the president—were placed under investigation for alleged connections to right-wing paramilitary groups. A second scandal involved allegations that soldiers had killed innocent citizens and—in an attempt to boost the soldiers' chances for promotion—had recorded those killed as guerrillas or drug traffickers. In yet another scandal, the Department of Administrative Security (DAS), a secret police unit, was accused of having tapped the phones of human rights workers, journalists, judges, and opposition politicians. Uribe responded to the latter scandal by proposing to liquidate the DAS and replace it with a new intelligence unit.

The president and the Supreme Court were in conflict on several fronts. It was the court's duty to investigate charges that the legislators who supported the referendum to allow Uribe's reelection bid had acted illegally because the proposal did not have the prior approval of the National Electoral Council. The court also investigated whether the country's inspector general, who was closely tied to the Uribe administration, had behaved wrongfully when he cleared government officials of charges of vote buying during previous congressional deliberations in 2006 on whether to allow Uribe to seek reelection that



A university student in the Colombian city of Cali rests beneath a wall painted with graffiti in which a wolf, representing the U.S., remarks, "Grandma, I come to help you fight against drug trafficking."

year. In an unprecedented move, the Supreme Court in July rejected as unfit all three of the candidates put forward by Uribe for consideration for the office of attorney general.

The government's close relations with the U.S. continued to cause trouble for it in the region. The announcement that the U.S. military would be allowed to use seven Colombian military bases as part of the battle against drug trafficking (and related armed groups) met with varying levels of opposition from other governments in the region. Venezuelan Pres. Hugo Chávez and Ecuadorian Pres. Rafael Correa were the most vociferous critics. Venezuela suspended relations with Colombia. More alarming to Colombia, however, was the fact that Venezuela borrowed \$2.2 billion from Russia to buy arms, including tanks and antiaircraft missiles. Brazil also announced major arms purchases from France, including jet fighters and attack submarines. The spectre of an arms race in the region loomed large.

The Centre for Human Rights and the Displaced estimated that 4.6 million Colombians had been displaced since 1985 by the armed conflict between the government, left-wing guerrillas, and right-wing paramilitaries. The violence pushed more than 380,000 Colombians from their homes in 2008 alone. In 2009 the government began compensation payments to 220,000 victims of the violence, offering families about \$9,500 each.

The global economic downturn was felt deeply in Colombia. Urban unem-

ployment reached 13%, and industrial production was down. Two quarters of negative growth put the economy, technically, into recession. The government statistics agency, however, said that it was standing by its estimates of very modest growth for the year as a whole—from 0.5% to 1.5%. Particularly hard hit were the victims of fraudulent investment firms. As many as four million people in Colombia lost their savings when such firms closed or collapsed in late 2008. Curfews were imposed in several cities in an effort to control protesters seeking the return of their money. Many felt the government moved too slowly in response to the crisis.

(BRIAN F. CRISP)

COMOROS



Area: 1,862 sq km (719 sq mi), excluding the 374-sq-km (144-sq-mi) island of Mayotte, a de facto dependency of France since 1976
Population (2009 est.): 676,000 (excluding 196,000 on Mayotte)

Capital: Moroni

Chief of state and head of government:
 President Ahmed Abdallah Mohamed Sambi

In 2009 Comoros faced referenda that had significant impact on the political future of the country. On May 17

Comorans voted in a controversial referendum to modify the framework of the power-sharing government that had been in place since 2001. The constitutional change pared down the governmental structure; federal presidents became governors of the semiautonomous Grande Comore, Anjouan, and Moheli islands, and the term of the union presidency was extended (from four) to five years. More than 95% of Mayotte balloters taking part in a referendum held on March 29, 2009, on Mayotte (the only one of the four Comoros islands that remained a dependency of France), approved a change of status with France from that of a departmental collectivity to an overseas department. (See *Dependent States*, above.) Both the African Union and Comoros, which viewed Mayotte as occupied by France, rejected the outcome of the vote.

On June 30 an airplane carrying 153 people crashed off the coast of Grande Comore as it attempted to land at Moroni, the capital. In the worst air disaster in Comoros's history, a lone survivor was rescued from wreckage in the Indian Ocean. (MARY EBELING)

CONGO, DEMOCRATIC REPUBLIC OF THE



Area: 2,344,858 sq km (905,355 sq mi)

Population (2009 est.): 66,020,000

Capital: Kinshasa

Head of state: President Joseph Kabila

Head of government: Prime Minister Adolphe Muzito

The situation in the Democratic Republic of the Congo (DRC) remained grim throughout 2009. Despite vast mineral wealth, mining production severely declined owing to mismanagement, corruption, endemic civil unrest, the global recession, and a lack of new investment. In March 2009 the IMF lowered its projection of GDP growth in the DRC for the year to 2.5% from 6% in 2008.

Early in 2009 significant changes in the political-military scene occurred in eastern DRC. Desiré Kamanzi led a faction of the National Congress for the Defense of the People (CNDP) to break away from its ruthless leader,



During her August visit to the Democratic Republic of the Congo, U.S. Secretary of State Hillary Clinton purchases a shirt from patients at a clinic in the eastern city of Goma.

Gen. Laurent Nkunda, and transform the militia movement into a political party. The new leadership agreed to integrate its soldiers into the Armed Forces of the Democratic Republic of Congo (FARDC). Smaller armed groups followed suit. Meanwhile, the government forged an unexpected alliance with Rwanda to conduct a joint military operation in the DRC's North Kivu province to eliminate the influence of the Democratic Forces for the Liberation of Rwanda (FDLR); the FDLR had been a major factor in destabilizing the area for 12 years. Though the five-week campaign (January 20–February 25) had limited success, it forced Nkunda to flee into Rwanda, where he was arrested and faced possible charges for war crimes. Pressure exerted by the DRC for his extradition failed.

On March 23 the government signed separate peace agreements with the CNDP, the North Kivu armed groups, and the South Kivu armed groups; as part of the pact, each group committed to converting its organizations into political movements in return for the integration of rebel soldiers and officials into the FARDC, national police, and other administrative units. The rebels, however, continued to fight intermittently. To quell FDLR rebellion in Kivu, in March the FARDC, supported by UN peacekeeping forces, launched Operation Kimia II, which, like the January–February operation, failed. In a

joint operation with the Ugandan government, the DRC forces engaged Lord's Resistance Army (LRA) insurgents near the border, but that mission also met with limited success.

Unfortunately, the national army, which incorporated former rebels, did little to reduce antigovernment rebel activity or improve the situation. It became part of the problem. Human rights violations by the FDLR and by undisciplined FARDC elements increased during Kimia II. In North and South Kivu, 800,000 civilians were displaced by internecine fighting in the first half of the year. The UN estimated that the number of internal refugees reached two million. By 2009 the use of rape as a war tactic against women, children, and men by all armed forces had doubled or tripled in nine eastern conflict zones. According to Human Rights Watch, 65% of known rape cases in North Kivu were committed by the FARDC soldiers. In recognition of his work in treating thousands of victims of sexual abuse, Congolese gynecologist Denis Mukwege was awarded several international prizes in 2008. (See BIOGRAPHIES.)

In August, U.S. Secretary of State Hillary Clinton visited the DRC as part of her African tour. She urged the government to do more to protect civilians and to bring military offenders to justice and announced a \$17 million plan to help achieve these efforts.

(LARAY DENZER)

CONGO, REPUBLIC OF THE



Area: 342,000 sq km (132,047 sq mi)

Population (2009 est.): 3,683,000

Capital: Brazzaville

Head of state and government: President Denis Sassou-Nguesso, assisted until September 15 by Prime Minister Isidore Mvouba

The reelection of Republic of the Congo Pres. Denis Sassou-Nguesso in the July 12, 2009, presidential poll took place amid considerable controversy. Sassou-Nguesso, who had ruled for much of the past 30 years, took 78% of the vote. The government claimed that 66% of the 2.2 million eligible voters cast ballots, but many international observers considered that figure to be grossly exaggerated, especially because the major opposition parties boycotted the election and many people entitled to vote had not been issued voting cards. In September, Sassou-Nguesso named a new government and abolished the post of prime minister, which he had created in 2005 in violation of the constitution.

On February 10 the government launched a program to purchase and

destroy weapons from the former rebels known as "Ninjas" in the southern Pool region. The operation was considered a success when on March 2 officials in the city of Kinkala burned nearly 3,000 guns turned in by former Ninja fighters. Those still possessing illegal arms were given another week to sell their guns to the government for as much as \$200.

A vaccination campaign began in February to inoculate children and pregnant women in the northern Enyellé district against such diseases as diphtheria, tetanus, polio, meningitis, and whooping cough. In addition, 2,000 treated mosquito nets were to be distributed as part of efforts to control malaria, which was the primary cause of death of children under age five. On March 7 ground was broken for a water purification plant, financed by China, in Brazzaville. Water supplies in the capital remained a major problem.

On a positive note, a food and nutrition security program was initiated in February, designed to provide new incentives for farmers to increase production for the market. Notwithstanding various development projects in the past, only 5% of the country's arable land was currently under cultivation. Negotiations with South African farmers to lease some 200,000 ha (about 494,200 ac) of Congolese farmland for

the production of food and fibre crops were successfully concluded in October. (NANCY ELLEN LAWLER)

COSTA RICA



Area: 51,100 sq km (19,730 sq mi)

Population (2009 est.): 4,509,000

Capital: San José

Head of state and government: President Óscar Arias Sánchez

The year 2009 in Costa Rica was highlighted by natural disaster, preelection fever, a weak economy, and international mediation efforts. On January 8 a major earthquake struck the country, with its epicentre 6.5 km (4 mi) east of the Poás Volcano in Alajuela province. The shock waves were felt throughout the country, and 23 persons were killed, with another 13 missing. More than 800 homes were damaged or destroyed, and more than 2,000 people took refuge in government-supplied shelters. International emergency assistance and special government funding were quickly appropriated to deal with the aftereffects of the disaster.

National elections were set for Feb. 7, 2010, and the political parties spent 2009 in nominating conventions. The governing National Liberation Party (PLN) held an open primary on June 7, and the PLN claimed that nearly one-fifth of the electorate turned out for the event. The winner, Laura Chinchilla Miranda, had served in the incumbent government as vice president and minister of justice; she defeated Johnny Araya, former mayor of San José. On May 31 the opposition Citizen Action Party (PAC) selected Ottón Solís in a closed primary with a much smaller turnout.

In line with the worldwide economic downturn, the Costa Rican economy contracted sharply, with manufacturing, construction, exports, and imports especially affected. Rising government expenditures and shrinking revenues increased the current-account deficit and caused the government to seek a standby loan from the IMF.

Nobel Peace Prize-winning Pres. Óscar Arias turned his negotiating talents to the political crisis in neighbouring Honduras, where Pres. Manuel Zelaya

Supporters of Republic of the Congo Pres. Denis Sassou-Nguesso attend an election rally in Brazzaville on July 10.



Shu Shi—Xinhua/Landov

Al Dia, Manuel Vega/AP



Houses lie destroyed in Cinchona, Costa Rica, after a major earthquake in early January triggered deadly landslides in the area.

was ousted in June by that country's military and exiled to Costa Rica but returned to Honduras in September. On October 5 former Costa Rican president Rafael Calderón (1990–94) was sentenced to five years in prison for having embezzled \$520,000 in 2004.

(MITCHELL A. SELIGSON)

CÔTE D'IVOIRE



Area: 320,803 sq km (123,863 sq mi)

Population (2009 est.): 20,617,000

De facto capital: Abidjan

Chief of state: President Laurent Gbagbo

Head of government: Prime Minister Guillaume Soro

Seven years after the civil war that divided Côte d'Ivoire in half (the rebel-held north and the government-con-

trolled south), preparations were under way in 2009 for the long-awaited presidential elections, which were contingent on the reunification of the country. Progress was marked by the redeployment of 4,000 police to the north. Prime Minister Guillaume Soro announced on May 14 that the poll would occur on November 29. Soro's New Forces party accused Pres. Laurent Gbagbo and his ruling Ivorian Popular Front of having conspired to delay the electoral process. On May 18, Gbagbo met with leaders of the major opposition parties to discuss the voter-registration program and to seek confirmation that no boycott would take place. When the registration process was completed on June 30, more than six million names were on the lists. On August 8, Gbagbo appointed his associate Paul Yao N'dré as head of the Constitutional Council, which would have primary responsibility for conducting and validating the election. On October 30, however, Gbagbo announced that the vote would be postponed.

On March 29, just prior to the start of a World Cup qualifying match between Côte d'Ivoire and Malawi at Houphouët-Boigny Stadium in Abidjan, stampeding fans caused a wall to collapse. Nineteen people died. An official inquiry concluded that poor security efforts and the provision of many more tickets than the stadium's capacity would allow were the major factors in the tragedy. Four people, including the organizer of the match, were charged with involuntary manslaughter. On June 13 the Ivorian team beat Cameroon in a charity match designed to raise funds for the victims' families.

On January 15, Sotra, the state-owned engineering branch of the country's transport corporation, placed the first three commuter buses built entirely in Côte d'Ivoire into service in Abidjan. In other economic news, on April 1 the IMF agreed to cancel one-quarter of the country's \$12.8 billion national debt, and in May the Paris Club restructured the country's foreign debt and wrote off some of its scheduled loan repayments.

French journalist Jean-Paul Ney, imprisoned in Abidjan for 16 months, was released on May 6. Accused of having been involved in an attempted coup planned for Christmas 2007, Ney was never tried but was arrested following the appearance on the YouTube Web site of his video that appeared to support former rebel Ibrahim Coulibaly, the leader of several earlier attempted coups.

(NANCY ELLEN LAWLER)

CROATIA



Area: 56,542 sq km (21,831 sq mi)

Population (2009 est.): 4,431,000

Capital: Zagreb

Chief of state: President Stipe Mesic

Head of government: Prime Ministers Ivo Sanader and, from July 6, Jadranka Kosor

Difficulties in Croatia's accession negotiations with the European Union dominated the political scene in 2009. In December 2008 Slovenia had begun blocking Croatia's bid owing to an ongoing dispute over the countries' shared border, particularly the maritime boundary in the bay of Piran. Croatia had submitted to the EU accession documents that Slovenia charged were prejudicial to the settlement of the border issue. Slovenia was particularly concerned about losing direct access to the high seas, and as an EU member it was entitled to veto Croatia's accession talks.

Croatia's EU bid was also criticized by the Dutch government, which was concerned that Zagreb was not cooperating fully with the International Criminal Tribunal for the Former Yugoslavia (ICTY). Croatia was accused of having failed to hand over documents needed in the trial of a Croatian general indicted for war crimes allegedly com-

Newly installed Croatian Prime Minister Jadranka Kosor arrives for a meeting at the European Commission headquarters in Brussels in July.



Dominique Faget—AFP/Getty Images

mitted during Operation Storm, a 1995 battle in which Croatia reclaimed land occupied by Serb rebels. The Croatian government claimed that certain documents had been stolen and that it had sent all the relevant papers it had.

By midyear Croatia had made progress on only one of the thorny issues hindering its EU accession bid: the reform of its shipbuilding industry. The government in June set out its program for restructuring and privatizing the six state-owned shipyards. The EU accepted the plan and thereby allowed Croatia to open accession talks on competition policy. The privatization of the shipyards got off to a bad start, however, when the government received only two bids, both from Croatian companies, in its first international tender.

July brought an unexpected political shake-up when Ivo Sanader announced his resignation as prime minister and retirement from politics. He had garnered support from 83 parliamentarians for his chosen successor, Jadranka Kosor, and her nomination was approved on July 6. Kosor, a former journalist, had entered politics in 1995 and had stood as the Croatian Democratic Union (HDZ) candidate in the 2005 presidential elections, winning 34% of the vote to incumbent Stipe Mesic's 66%.

The change of leadership kick-started the stalled EU accession process. By mid-September Kosor had agreed to Slovenian demands that Croatia treat the documents it had submitted to the EU as irrelevant to the border dispute, and Ljubljana lifted its veto. The border issue was no longer an obstacle to Croatia's accession. In fact, the European Commission announced in October that Croatia could complete its accession talks in 2010. In November Croatia and Slovenia signed an agreement to send the border dispute to international arbitration.

The year was difficult, however, for the Croatian economy. Exports declined in Croatia, as they did elsewhere in Europe, owing to the global recession, although the country's critical tourism sector did not suffer as badly as expected. The Finance Ministry projected that GDP would contract by 5% in 2009. Facing a major drop in revenues, the government revised the budget three times and also increased the value-added tax, introduced a "crisis tax" on higher earners, and levied a luxury tax on yachts, cars, and villas. Planned spending on infrastructure was also postponed, a measure that was expected to increase unemploy-

ment. The jobless rate had already hit 14% by June.

Moreover, the government's fiscal package was criticized for purportedly making it harder for businesses to operate and for failing to address the long-term burden on the budget posed by the public administration and social support systems. Greater political courage, however, was unlikely from Kosor's fragile minority government. Political parties were also increasingly in campaign mode owing to the approach of presidential elections in January 2010. (LIZ DAVID-BARRETT)

CUBA



Area: 109,886 sq km (42,427 sq mi)

Population (2009 est.): 11,235,000

Capital: Havana

Head of state and government: President of the Council of State and President of the Council of Ministers Raúl Castro Ruz

On Jan. 1, 2009, Cuban Pres. Raúl Castro visited the eastern city of Santiago to commemorate the 50th anniversary of the Cuban Revolution of 1959. (See Sidebar.) Fidel Castro issued a brief note to "congratulate our heroic people," but he was otherwise absent from the anniversary celebrations. During the course of the year, however, he appeared to be recuperating from the serious stomach illness that forced him to relinquish power in 2006; he wrote weekly newspaper columns and occasionally appeared in photographs and video clips looking healthier and rested.

The Cuban economy slid into a period of dire crisis that halted the process of tentative reform that Raúl Castro had initiated upon assuming the presidency. The global economic slowdown, triggered by the collapse of the U.S. real-estate and financial markets, sharply dimmed the island's future growth prospects, and Cuba struggled to recover from damaging hurricanes that struck the island in 2008. Official predictions that Cuba would achieve 6% growth in 2009 were later slashed to 2%, and several academic economists predicted that growth could turn negative.

The Cuban government began to distribute land grants to workers seeking to harvest agricultural lands, but other

key aspects of the reform agenda stalled. In the summer the Cuban government rolled out emergency measures to conserve energy in an effort to prevent electricity blackouts, a problem that had been the scourge of the Cuban population in the 1990s. Air conditioning was rationed to five hours a day; amusement parks and office buildings scaled back their hours of operation; and electric baking ovens and cold storage units were required to be given mandatory power time-outs. Cuba's heavy dependence on imports led to a shortage of foreign exchange, forcing layoffs across many state enterprises while others closed outright.

Cuba's economic downturn contributed to simmering tensions within the government. President Castro summarily fired Vice Pres. Carlos Lage and Foreign Minister Felipe Pérez Roque; the dismissals came amid the most dramatic cabinet shake-up in years. In all, at least 10 cabinet officials were replaced and the Ministries of Foreign Trade and Foreign Investment were merged, as were the Ministries of Fishing and Food. Castro later postponed the sixth Communist Party congress, a major leadership conference that had been scheduled for the second half of 2009.

U.S.-Cuban relations began to experience a greater degree of openness after

Colombian pop singer Juanes performs during the "Peace Without Borders" concert in Havana on September 20.



Desmond Boylan—Reuters/Landov

The 50th Anniversary of the Cuban Revolution

On Jan. 1, 2009, the Cuban Revolution that brought the regime of Fidel Castro to power marked its 50th anniversary. A half century had passed since Castro led a small band of rebels to triumph during the 1959 revolution that ousted the unpopular and corrupt regime of Fulgencio Batista. Castro's embrace of communism and his alliance with the Soviet Union soon provoked conflict with the U.S. In response to Castro's actions, U.S. Pres. Dwight D. Eisenhower imposed economic sanctions on Cuba in 1960 and broke off diplomatic relations with the country in January 1961. Three months later Eisenhower's successor, Pres. John F. Kennedy, backed the Cuban exile-led Bay of Pigs invasion, which backfired badly when Castro's forces easily repelled the assault. In early 1962 Kennedy placed a wide-ranging U.S. embargo on the island that remains the central element of U.S. policy toward Cuba. That October the Cuban missile crisis was set in motion when Kennedy learned that Castro had entered into a secret agreement with then Soviet premier Nikita Khrushchev to install nuclear missiles in Cuba. The incident brought the world to the brink of nuclear war before it was peacefully resolved.

The dramatic events of the 1960s proved to be only the beginning of decades of tensions in U.S.-Cuban relations. In the years that followed, the Cuban Revolution reshaped U.S. priorities in Latin America. During much of the Cold War, the Castro government promoted wars of liberation in Latin America and Africa and established itself as a significant global actor. Castro faced off against a succession of American presidents, including Lyndon Johnson, Richard Nixon, and Gerald Ford. In the late 1970s efforts by Pres. Jimmy Carter to normalize relations with Cuba ultimately failed to bear fruit, and during the 1980s Pres. Ronald Reagan forcefully embraced sanctions against Cuba as a means of containing communism in Latin America. The collapse of the Soviet Union and the end of the Cold War appeared to create a brief moment of opportunity in the early 1990s for the U.S. and Cuba to set their relationship on a new path. By 1992 the Cuban economy was reeling owing to the loss of nearly \$4 billion in annual Soviet subsidies, and the country descended into a severe economic crisis. Instead of extending an olive branch to Cuba, however, the U.S. passed legislation to ratchet up the sanctions, including the Cuban Democracy Act of 1992 and the Helms-Burton Act in 1996. The administration (2001–09) of Pres. George W. Bush further tightened the embargo on Cuba, and most diplomatic contacts were frozen. Despite the occasional

opportunities to reconcile their estranged relationship, the U.S. and Cuba never seized on them and instead littered their history with diplomatic failures.

When Fidel Castro fell ill with a serious stomach ailment in the summer of 2006, there was ample speculation that his death was finally at hand and that this would pave the way for a restoration of democracy and a subsequent rapprochement in U.S.-Cuban relations. Instead, Fidel lived on, though he was forced to pass power to his younger brother, Raúl Castro, on a provisional basis before formally resigning Cuba's presidency in February 2008. Raúl, who had served as Cuba's minister of defense for more than 45 years, implemented a limited number of economic reforms and repeatedly stated his willingness to engage in dialogue with the U.S. Fidel's continued presence and his frequent writings on domestic and international topics, however, served to check Raúl's power and inevitably slowed the pace of change.

In the early 21st century, Cuba strengthened its ties with other Latin American countries and established a major alliance with Hugo Chávez's Venezuela, agreeing to send tens of thousands of doctors to serve in Venezuela's poor neighbourhoods in exchange for nearly 100,000 bbl of oil a day at discounted prices. Cuba also enjoyed warm relations with Argentina, Brazil, Chile, Bolivia, and Ecuador—countries each led by left-leaning politicians. In 2009 Costa Rica and El Salvador both reversed their Cold War-era policies and extended full diplomatic relations to Cuba; as a result, the island now boasted normal ties with every country in the Western Hemisphere except the U.S.

The inauguration in January 2009 of Barack Obama as the 44th U.S. president initially generated renewed optimism about setting U.S.-Cuban relations on sounder footing, but there was a lack of boldness on both sides. Although the U.S. and Cuba initiated low-level diplomatic discussions on issues related to migration and direct postal service, the Obama administration vowed to maintain the embargo, and the Castro government rebuffed American requests to free political prisoners and hold competitive multiparty elections. Perhaps the greatest legacy of the Cuban Revolution was the impressive ability demonstrated by its leaders to survive and to adapt during the tumultuous decades since its inception. Obama was the 11th U.S. president to confront the foreign policy challenges posed by the Cuban Revolution, and if history was any guide, he would not be the last.

(DANIEL P. ERIKSON)

Barack Obama was inaugurated in January as president of the U.S. In April the U.S. repealed all restrictions on the ability of Cuban Americans living in the U.S. to visit Cuba or send money to their relatives living on the island. In June the U.S. joined with the other countries in the Western Hemisphere to approve a path for Cuba's entry into the Organization of American States, but the Castro administration rebuffed the measure. Still, diplomatic contacts between the U.S. and Cuba increased. Bi-

lateral migration talks that had broken down in 2003 were restarted, as were negotiations on the resumption of direct postal service between the two countries. The Obama administration's outreach to Cuba was backed by a majority of Cuban Americans, whose support for the embargo had dramatically waned, according to a number of opinion polls. Vehement anti-Castro voices remained prominent, however, and ensured that Obama would not move to overturn the embargo, although the

U.S. Congress debated several bills that would allow all Americans to travel to Cuba without restriction.

According to the nongovernmental Cuban Commission on Human Rights, the number of political prisoners in Cuba increased slightly during the year, from 205 to 206, marking the first year that the number of political prisoners had not fallen since Raúl Castro took power in 2006. Still, several prominent dissident groups praised the government's decision to allow Colombian

pop singer Juanes to organize a major concert dubbed "Peace Without Borders." The concert, which provoked controversy in Miami—where some exiles denounced it as a propaganda coup for the Cuban government—drew more than one million Cubans to Havana's Plaza de la Revolución and was widely hailed as a landmark cultural event.

Former Cuban vice president Juan Almeida Bosque died on September 11. (See OBITUARIES.) Almeida had been one of the leading figures of the Cuban Revolution. (DANIEL P. ERIKSON)

CYPRUS



Area: 9,251 sq km (3,572 sq mi) for the entire island; the area of the Turkish Republic of Northern Cyprus (TRNC), proclaimed unilaterally (1983) in the occupied northern third of the island, 3,355 sq km (1,295 sq mi)

Population (2009 est.): island 1,084,000; TRNC only, 276,000 (including Turkish settlers and Turkish military)

Capital: Nicosia (also known as Lefkosa/Lefkosa)

Head(s) of state and government: President Dimitris Christofias; of the TRNC, President Mehmet Ali Talat

In 2009 Cyprus remained a divided island, though the open, if controlled, border allowed significant movement of people crossing in both directions, whether to work, shop, or attend school or for tourist or entertainment purposes. The two Cypriot presidents met during the year under the aegis of the UN to discuss a range of issues that included power sharing and governance, land tenure arrangements, security, and the future of the Turkish force in Northern Cyprus. The first round of meetings ended in August; a second round of talks scheduled for September was postponed for several days following a border-crossing incident in which hundreds of Greek Cypriots on a religious pilgrimage were reportedly delayed by Turkish Cypriot authorities. Although talks between the two leaders resumed, both expressed disappointment that their meetings had not produced more concrete results.

While the presidents dealt with the island's political future, opinion polls on both sides of the dividing line showed

Cypriots more concerned with economic matters than politics. The economy presented a mixed picture. Greek Cyprus had a slight increase in GDP, while all other EU members showed decreases. Turkish Cyprus experienced a drop in tourism, most notably a decline in the numbers of visitors from Turkey. Turkish Cyprus's five universities also experienced lower enrollment from Turkey. Other economic problems in Turkish Cyprus were the large number of houses for sale—approximately 10,000—and a negative trade balance with Greek Cyprus. These problems were somewhat offset by subsidies from Turkey. To assuage the island's chronic water shortage, Turkish Cyprus planned to construct a pipeline from Turkey, while Greek Cyprus planned to build a desalination plant; both projects were expected to go on line in the following several years. (GEORGE H. KELLING)

CZECH REPUBLIC



Area: 78,867 sq km (30,451 sq mi)

Population (2009 est.): 10,504,000

Capital: Prague

Chief of state: President Vaclav Klaus

Head of government: Prime Ministers Mirek Topolánek and, from May 8, Jan Fischer

The year 2009 was disruptive politically in the Czech Republic, as the government collapsed in March and the Constitutional Court rejected plans for early elections. The cabinet's dismissal was especially embarrassing, since it occurred during the Czech Republic's first-ever term holding the rotating presidency of the European Union. On the economic front, the country performed relatively well, despite the global recession; however, automobile manufacturing, a key industry, suffered, and fiscal deficits increased because of an increase in expenditures used to avert a financial crisis.

The dismissal of Prime Minister Mirek Topolánek's cabinet was not surprising; the government had been on shaky ground ever since its appointment in January 2007. Indeed, the cabinet was formally supported by only half of the 200-seat parliament, relying on the backing of several members who had quit the opposition Czech Social

Democratic Party (CSSD). In advance of the no-confidence vote held on March 24, growing conflicts within Topolánek's Civic Democratic Party (ODS) and its two junior coalition partners—the Christian and Democratic Union–Czech People's Party (KDU-CSL) and the Green Party (SZ)—finally set the stage for the government's collapse. That vote, which followed several unsuccessful attempts by the CSSD to bring down the cabinet, was encouraged by Czech Pres. Vaclav Klaus, a long-standing rival of Topolánek.

After the government's collapse, the ODS and CSSD rallied together to support a nonpartisan consensus candidate as interim prime minister. Jan Fischer, who had previously headed the Czech Statistical Office, was sworn in as prime minister on May 8.

The ODS and CSSD had also called for early parliamentary elections (to be held in October), and several opinion polls gauged the contest as neck and neck. Nonetheless, the gap between the two parties was unexpectedly wide in the June elections to the European Parliament (EP); the ODS won 31.5% of the vote and 9 of the country's 22 seats, compared with 22.4% and 7 seats for the CSSD. Still, the results were hardly representational, since voter participation reached just 28.2%. The only other parties to surpass the 5% threshold were the opposition Communist Party of Bohemia and Moravia (with 14.2% of the vote and four seats) and the KDU-CSL (with 7.6% and two seats).

In early September the country received a shock when the Constitutional Court declared the parliamentary law and presidential decree on early elections invalid. That decision was sparked by a complaint by an unaffiliated parliamentary deputy, who claimed that the early polls violated his right to serve a full term in office. Responding to the court's verdict, deputies approved a constitutional amendment allowing the parliament to dissolve itself, and elections were planned for November. The CSSD suddenly changed its position in mid-September; however, arguing that the polls should be held in line with the original schedule, in May 2010. The official justification for the shift was that the new constitutional amendment could be subjected to legal questions, causing further deadlock and delay. Analysts suspected that the change of course was based on the party's desire for more time to secure a higher approval rating as well as concerns about competition from the new

conservative Tradition Responsibility Prosperity 09 (TOP 09) party, which split from the KDU-CSL shortly after the EP elections and rose unexpectedly in opinion polls.

The election delay gave Fischer's interim government the responsibility to move forward with highly unpopular but necessary decisions, particularly relating to the 2010 budget deficit, which was projected to rise sharply if no action was taken. The parliament unexpectedly backed a package of austerity measures on September 25 and thereby strengthened the mandate of Fischer, who had threatened to resign if they were not approved.

From an international perspective, Czech relations with Brussels were damaged not only by the country's political instability during its EU presidency but also by its delay in approving the Lisbon Treaty to reform EU institutions. Klaus initially refused to sign the treaty, even after it was backed by the Czech lower and upper houses in February and May, respectively. He finally backed down in early November, however, allowing the treaty to take effect throughout the EU on December 1. In relations with the United States, Prague received a much-publicized visit from U.S. Pres. Barack Obama in early April. In September the Obama administration canceled the controversial missile defense shield that was to have been built in the Czech Republic and Poland.

(SHARON FISHER)

DENMARK



Area: 43,098 sq km (16,640 sq mi)

Population (2009 est.): 5,523,000

Capital: Copenhagen

Chief of state: Queen Margrethe II

Head of government: Prime Ministers Anders Fogh Rasmussen and, from April 5, Lars Løkke Rasmussen

After months of unsettling media speculation—and persistent denials by Danish Prime Minister Anders Fogh Rasmussen that he was in the running for a top international position—Rasmussen was appointed secretary-general of NATO on April 4, 2009. He took office in August, becoming the first Dane to hold the post. Turkey had ini-

Dominique Faget—AFP/Getty Images



New Danish Prime Minister Lars Løkke Rasmussen appears at a press conference in Brussels on May 13.

tially opposed Rasmussen's candidacy, largely over his handling of the Prophet Muhammad cartoon scandal in 2006. The objections were ultimately lifted, however, reportedly after Turkey was promised top positions within the alliance. Back home, Lars Løkke Rasmussen, finance minister in the centre-right Liberal-Conservative minority government, took over as prime minister on April 5. The new prime minister (who was not related to his predecessor) was intent on garnering public support in a country that had been hard hit by the recession.

Elections in June to the European Parliament produced a mixed result: the opposition Social Democrats won 4 of Denmark's 13 seats; the Liberal and Conservative government parties captured 4; anti-EU parties of the left and right secured 3; and the Green Party won 2. The unusually high turnout of 60% was attributed to the inclusion on the ballot of a referendum on granting women equal rights in the succession to the Danish throne. The measure passed; Danes voted 45% in favour of allowing the monarch's firstborn child the rights of accession regardless of its gender.

In June the number of Danish troops killed in Afghanistan since 2001 reached 25—one of the highest per capita death tolls among coalition forces. Some 700 Danish soldiers were stationed in the country as part of NATO's International Security Assistance Force.

Denmark was sharply criticized by both the UN High Commissioner for Refugees and Amnesty International for the government's plan to forcibly repatriate rejected Iraqi asylum seekers. In August police ousted about 20 such Iraqis from the crypt of the Copenhagen church where they had been living for three months. Violent clashes broke out between protesters and the police as the Iraqis were arrested and bused to an asylum centre, where they faced deportation. The refugees then staged a hunger strike. Iraq, which called on Denmark to temper its repatriation policy until conditions for the refugees' voluntary return improved, dismissed Danish Immigration Minister Birthe Rønn Hornbech's claim that an agreement had been reached with Iraq to return 250 Iraqi citizens, regardless of their volition.

In a rare visit to Copenhagen by an incumbent U.S. leader, Pres. Barack Obama met in early October with Danish political leaders and the royal family. Obama was in Denmark during a hectic five-hour stopover while (unsuccessfully) lobbying the International Olympic Committee for Chicago to host the 2016 Games.

By far the most important event of the year was Copenhagen's hosting on December 7–18 of the 15th Conference of the Parties to the UN Framework Convention on Climate Change, also known as COP15. The gathering, which was attended by some 15,000 participants from 170 countries, conducted crucial international negotiations on a successor plan to the Kyoto Protocol on global warming. (See also ENVIRONMENT.)

(CHRISTOPHER FOLLETT)

DJIBOUTI



Area: 23,200 sq km (8,950 sq mi)

Population (2009 est.): 864,000

Capital: Djibouti

Chief of state and head of government:

President Ismail Omar Guelleh, assisted by
Prime Minister Dileita Muhammad Dileita

The dispute that started in 2008 between Djibouti and its northern neighbour Eritrea continued to be a source of heightened tension for the two countries for most of 2009. The skirmish

began in April 2008 when Eritrean troops occupied the Ras Doumeira area just over the border in Djibouti. In January 2009, after months of stalemates, the UN Security Council passed Resolution 1862, which ordered both countries to engage in negotiations and called for an immediate withdrawal of Eritrean troops from Djibouti. In late September, Djibouti petitioned the UN Security Council to enforce its earlier resolution; meanwhile, Eritrea refused to acknowledge that it was encroaching on Djibouti land.

Djibouti entered into separate agreements with the European Union and Japan to help stave off pirate attacks. The EU agreement, the Atalanta mission, was mandated by the UN World Food Programme to protect food-aid shipments into Somalia; EU forces would be based in Djibouti. Food prices on the continent had spiked, owing in large part to the increased number of pirate attacks on ships off the coast of Djibouti and Somalia. Djibouti relied almost exclusively on imported food. The crisis deepened as a result of continuing drought as well as the global increase in food prices. By October more than 23 million people in the Horn of Africa were in need of food assistance, an increase of some 4 million since early in the year. (MARY EBELING)

DOMINICA



Area: 751 sq km (290 sq mi)

Population (2009 est.): 71,900

Capital: Roseau

Chief of state: President Nicholas Liverpool

Head of government: Prime Minister Roosevelt Skerrit

The International Monetary Fund in March 2009 urged Dominica to prioritize capital spending and to broaden its tax base in order to maintain an overall fiscal surplus in a tougher global environment. The government indicated that it would aim for a target of 3% of GDP, which was not an easy goal to achieve under current conditions.

Opposition parties protested in March in the capital, Roseau, demanding electoral reform, including what they called a “clean” voters list. The United Workers Party claimed in June that Prime

Minister Roosevelt Skerrit was stalling efforts to implement voter identification cards prior to the general election that was due in October 2010. On November 19, however, during Skerrit’s address to the country, he announced that the elections would be held on December 18. In the balloting the Dominica Labour Party scored a landslide, with 16 seats in the parliament, while the United Workers Party secured only 4 seats.

Following several years in which Dominica and other smaller Caribbean states had voted alongside Japan to overturn the International Whaling Commission’s (IWC’s) ban on commercial whale hunting—which had caused critics to suggest that Japan was “buying” their vote with aid—Prime Minister Skerrit insisted that he was a convert to environmental preservation. In 2008 Dominica had abstained from the vote at the IWC’s annual meeting, and Skerrit announced in March 2009 that Dominica would no longer support Japan’s efforts to reestablish commercial whaling. (DAVID RENWICK)

DOMINICAN REPUBLIC



Area: 48,671 sq km (18,792 sq mi)

Population (2009 est.): 9,749,000

Capital: Santo Domingo

Head of state and government: President Leonel Fernández

For a country whose economy was heavily dependent on trade with the U.S., remittances from the U.S., nickel mining, tourism, and duty-free industrial zones, the Dominican Republic weathered the financial storms of 2009 better than expected. Economic indicators declined significantly when contrasted with previous years—as in 2006, when GDP reached 10.7%—but at the midpoint of 2009, GDP was still in positive territory at approximately 1.4%. Inflation closed out the year at 5%, and tourism numbers were resilient, with figures similar to those in 2007.

The almost unassailable image of Pres. Leonel Fernández was shaken, however, by his perceived failure to address debilitating social and infrastructure crises. Government commitments to tackle endemic corruption, the ero-

sion of educational standards, increasing drug addiction, and lingering extreme poverty rang hollow. A low minimum daily wage of \$2.52—which was lower by 10 cents than that of Nicaragua, the second poorest country in the Western Hemisphere—exacerbated labour tensions. Polls taken during the year showed Fernández’s ruling Dominican Liberation Party trailing its principal adversary, the Dominican Revolutionary Party (PRD).

A constitutional reform package negotiated by Fernández and PRD leader Vargas Maldonado was passed that eliminated consecutive presidential reelection. Also in the package was a provision that criminalized abortion, including therapeutic abortions (those performed in cases of rape or incest or when a pregnancy threatened the life of a mother); the measure was considered highly draconian.

The Dominican Republic’s chronically fragile relations with neighbouring Haiti were jarred by strong Haitian reaction to a new Dominican policy that stipulated that children born to Haitian parents residing illegally in the Dominican Republic were not entitled to Dominican citizenship. In other areas of foreign affairs, there was success. In March Fernández demonstrated exceptional skill when he brokered negotiations that cooled an incendiary dispute involving Ecuador, Venezuela, and Colombia that arose following an attack by the Colombian military on a rebel base located within Ecuador.

(JOHN W. GRAHAM)

EAST TIMOR (TIMOR-LESTE)



Area: 14,919 sq km (5,760 sq mi)

Population (2009 est.) 1,110,000

Capital: Dili

Chief of state: President José Ramos-Horta

Head of government: Prime Minister Xanana Gusmão

East Timor celebrated 10 years of independence in 2009 with an international bicycle ride, Tour de Timor, which was designed to show the world that Dili was safe and welcoming and had returned to normal life after the attempted assassination in 2008 of Pres. José Ramos-Horta. Vice Prime Minister

Kyodo/AP



Some 290 bicyclists assemble in front of the presidential palace in Dili to begin the inaugural Tour de Timor bicycle race on August 24.

Mario Carrascalao thanked the international community for creating peace in his country and underscored that East Timor had one of the lowest per capita crime rates in the world. He added, however, that the country's roads remained in the same condition that they had been in when Indonesia left East Timor. Luta Hamutuk, an organization that monitored foreign aid given to East Timor since independence, estimated that most of the roughly \$8 billion donated to the country since that time had been spent on the salaries of foreigners and on administration and imports, while only 10% of foreign aid ended up in the local economy. President Ramos-Horta was equally concerned that too little aid money was going to the people of East Timor.

A ceremony was held in Dili to celebrate the independence anniversary and was attended by representatives of East Timor's most important neighbours, Australia and Indonesia. Among those at the festivities were Indonesian Foreign Minister Hassan Wirajuda and Australian Gov.-Gen. Quentin Bryce. (See BIOGRAPHIES.) President Ramos-Horta reassured Indonesia of his opposition to the establishment of an international tribunal to bring to justice those said to be responsible for human rights abuses during the struggle for independence. Ramos-Horta called on the United Nations to disband its serious crimes unit. He also awarded retired Australian general Peter Cosgrove the Order of East Timor in recognition

of Cosgrove's leadership of the multinational peacekeeping mission that had kept order in the country at the time of independence. (A.R.G. GRIFFITHS)

ECUADOR



Area: 272,045 sq km (105,037 sq mi), including the 8,010-sq-km (3,093-sq-mi) Galapagos Islands

Population (2009 est.): 14,005,000 (Galapagos Islands, about 22,000)

Capital: Quito

Chief of state and head of government: President Rafael Correa Delgado

Ecuadoran Pres. Rafael Correa was re-elected handily in April 2009, winning 52% of the vote; former president Lucio Gutiérrez garnered 28%, and banana tycoon Alvaro Noboa received 11%. Vowing to push ahead with his vision of "21st century socialism," Correa expanded programs aimed at improving life for the poor and challenged foreign resource companies and investors to accept new terms of engagement with Ecuador.

A new mining law that imposed minimum royalty rates and limited the scope of exploration concessions was generally welcomed by foreign compa-

nies, but some Indian groups opposed it. A clash in late September between Shuar Indians and police seeking to break up an antimineral road blockade left at least one Indian dead. In the petroleum sector, the government seized the assets of the French firm Perenco in a dispute over taxes and pressed foreign firms to exchange joint production-sharing agreements for service contracts with state-owned Petroecuador. As a result, some firms put investment plans on hold, and the output of crude oil, Ecuador's chief export, declined. Meanwhile, the judge hearing a \$27 billion oil-pollution lawsuit against the U.S. multinational corporation Chevron was forced to step aside after the company produced evidence that he had discussed the eventual verdict with government officials.

Ecuador expected economic growth to slow to 2% in 2009, mainly because of weaker oil prices and a decline in remittances from Ecuadorans living abroad. To compensate, the government imposed new tariffs and import restrictions, said that it would double the tax on capital outflows, and negotiated advance payments from China for crude oil. It also repurchased, at 35 cents on the dollar, nearly \$3 billion in defaulted bonds that it said had been illegally issued under a former administration.

Relations with the United States and neighbouring Colombia continued to be strained in 2009. Colombia maintained that Ecuador provided tacit support to

After meeting with Ecuadoran Pres. Rafael Correa in Quito on October 5, Indian leaders review the draft of a proposed agreement that addressed many of their concerns over new water and mining laws in the country.



Dolores Ochoa/AP

guerrillas of the Revolutionary Armed Forces of Colombia (FARC). In July Colombian authorities released a video in which a senior FARC commander said that Correa's reelection campaign had received funds from the rebel army. FARC leaders denied the allegation. In September the last U.S. personnel left the military base at Manta on the Pacific coast after Ecuador declined to renew a lease allowing them to conduct antidrug operations; these were then shifted to Colombian bases. Two U.S. diplomats were expelled in February after the government said that they had threatened to suspend U.S. aid in an attempt to influence local police appointments. Despite these irritants, the U.S. renewed a long-standing package of duty exemptions and other trade benefits for Ecuador.

(PAUL KNOX)

EGYPT



Area: 1,002,000 sq km (386,874 sq mi)

Population (2009 est.): 82,999,000

Capital: Cairo

Chief of state: President Hosni Mubarak

Head of government: Prime Minister Ahmad Nazif

During 2009 Egypt shared in several global crises, including the financial downturn and the H1N1 flu epidemic. These crises were exacerbated within Egypt by local issues, including a spate of strikes, human rights concerns, and disagreement with the Nile River basin countries over the management of water resources. There were also mass arrests of senior members of the banned Muslim Brotherhood organization.

The impact of the international financial crisis on the Egyptian economy was harshest during the first half of the 2008–09 fiscal year. By September, inflation was estimated at 10.8%, remittances by Egyptian expatriates had declined by 23% between April and July, and tourism revenues had declined by 7.3%. GDP growth for 2009 was projected to reach 4.5%.

Panic struck as cases of H1N1 flu (a respiratory disease caused by an influenza virus) were reported in Egypt. Precautionary measures by the government included the slaughter of the

Nasser Nouri/AP



Slaughtered pigs are heaped onto a pile in Egypt following the government's order that the country's estimated 350,000 pig population be killed in an effort to prevent the spread of the H1N1 virus.

country's estimated 350,000 pig population, a one-week delay in the start of the school year, and the installation of fever-detecting instruments at ports of arrival. Barring a major global outbreak, however, Egyptian health authorities decided that pilgrims could proceed to Mecca and Medina for the hajj in late November as scheduled. By December 20 there were more than 7,300 reported cases of infection and 89 deaths.

In early February 2009, four newspaper editors who had been sentenced to jail in 2007 on charges of having libeled the state and the ruling National Democratic Party had their sentences commuted to fines. The former chairman of al-Ghad ("Tomorrow") party, Ayman Nour, was released from jail the same month and pledged to continue his political activism. Meanwhile, the government-appointed Political Parties' Committee denied, for the fourth time in nine years, a request to authorize a "centrist" party.

In a wave of protests launched in mid-February, pharmacists, truck drivers, public transport bus operators, real-estate-taxation employees, and other workers initiated strikes or sit-in protests over financial incentives and other grievances. A call to declare civil mutiny on April 6 failed to materialize.

In September the government-sponsored National Council for Human Rights delivered its five-year report on Egyptian human rights practices to the Geneva-based UN Human Rights Council. The Egyptian council called for reconsideration of the electoral system and its electoral supervisory mechanism in expectation of the 2010 parliamentary elections, pointing to irregularities in the past presidential and parliamentary elections that had put into question the integrity of the process. It also highlighted the rise in the rates of poverty and called for measures to ensure transparency, combat corruption, and strengthen antitorture measures. In addition to urging an end to the state of emergency, it also called for guarantees to check interference by the executive with the judiciary. It noted improvements in the military justice system that tries civilians under the state of emergency law, including the right to appeal.

In mid-August some 31 leaders of the Muslim Brotherhood were detained on charges of funding an international organization of the group, while 26 Egyptians and other nationals went on trial in August on charges of having organized a cell of Hezbollah to carry out subversive activities in the Suez Canal zone and attacks on Israeli targets in Egypt.

In July ministers of irrigation and water resources of the Nile River basin countries met in Alexandria to discuss a legal framework agreement regulating the distribution of water and conditions for future projects. Egypt, one of the downstream countries, had several conditions that needed to be met prior to signing the agreement: full recognition of its historical water rights, an annual quota of 55.5 billion cu m (1.96 trillion cu ft), and prior notification of any projects by the Nile basin countries that could affect the resources of the downstream countries. Cairo also insisted that future amendments to the agreement be approved unanimously (or, if accepted by a majority, that Egypt and The Sudan be among that majority).

Despite persistent campaigning and intense lobbying, in September Egypt's candidate for the post of UNESCO director general, Minister of Culture Farouk Hosni, narrowly failed to secure the required 30-member majority vote of the 58-member Executive Board. He lost to Bulgarian Irina Bokova, the first woman to hold the post.

(AYMAN M. EL-AMIR)

EL SALVADOR



Area: 21,041 sq km (8,124 sq mi)

Population (2009 est.): 6,192,000

Capital: San Salvador

Head of state and government: Presidents

Elías Antonio Saca González and, from June 1, Mauricio Funes Cartagena

Following a hard-fought campaign, television journalist Mauricio Funes (*see* BIOGRAPHIES) of the Farabundo Martí National Liberation Front (FMLN) won the presidential election in El Salvador on March 15, 2009. Funes, who was the first FMLN presidential candidate not to have participated in the guerrilla warfare of the 1980s, defeated the National Republican Alliance (ARENA) candidate, Rodrigo Ávila, by a margin of 51.3%–48.7%, ending ARENA's long control (since 1989) of the Salvadoran government.

Although sympathetic to other leftist governments in the hemisphere, especially that of Luiz Inácio Lula da Silva in Brazil, Funes emphasized that he did not want ideological confrontation with the U.S. and that he was not a part of the more extreme left represented by Venezuelan Pres. Hugo Chávez. One of Funes's first acts upon taking office was to restore relations with Cuba. In July the Salvadoran government also announced its support for Honduran Pres. Manuel Zelaya, following his overthrow in Honduras. In the realm of domestic policy, Funes began implementing dramatic improvements in education and children's health benefits, especially for the poor; he provided not only free education, but also meals and uniforms for poor public-school students. He also launched new aid programs for the elderly poor and moved against widespread corruption in the government.

The global recession exacerbated already-serious economic difficulties for the new government, with widespread unemployment and a sharp decline in exports and imports. In addition, remittances from Salvadorans in the U.S. dropped more than 10% during the first seven months of 2009. Standard & Poor's Ratings Services in May lowered its credit ratings for El Salvador to BB, two levels below investment grade. Funes promised considerable economic

Luis Romero/AP



Residents of Verapaz, El Sal., survey the damage caused by deadly flooding and mud slides that occurred throughout El Salvador in early November.

advancement, and his social programs maintained his support. According to a CID Gallup poll, by September he enjoyed an 86% approval rating, even though poverty and underemployment stood at 40%.

Violence and crime remained a serious problem. French filmmaker Christian Poveda, whose 2008 film *La Vida Loca* reflected the hopeless lives of members of the Mara 18 street gang, was killed in September as he drove back from filming in La Campanera, a poor suburb of San Salvador. The Mara 18 and rival Mara Salvatrucha gangs represented part of a huge criminal network in both Central America and the U.S.

(RALPH LEE WOODWARD, JR.)

EQUATORIAL GUINEEA



Area: 28,051 sq km (10,831 sq mi)

Population (2009 est.): 633,000

Capital: Malabo

Chief of state and head of government:

President Brig. Gen. Teodoro Obiang Nguema Mbasogo, assisted by Prime Minister Ignacio Milam Tang

In 2009 few outside Equatorial Guinea's ruling circle celebrated the 30th anniversary of the coup d'état that brought Teodoro Obiang Nguema Mbasogo to power in August 1979. While Equatorial Guinea was one of the largest oil producers in sub-Saharan Africa, and Obiang was one of the world's richest men, the majority of the country's population remained very poor and without access to any social services. While Obiang spent a fortune on cars and houses, infant and child mortality increased. A Human Rights Watch report released in July detailed the misappropriation of oil revenue by Obiang, and two months earlier a French judge agreed to launch a formal investigation into issues raised in a lawsuit filed by the global anticorruption organization Transparency International, which accused Obiang and two other African presidents of having misused public funds, embezzled, and engaged in money laundering.

Amid allegations of vote rigging, Obiang was overwhelmingly reelected president on November 29. Earlier that month Obiang had made headlines by pardoning British mercenary Simon Mann, who in 2008 had received a 34-year prison sentence for plotting a 2004 coup attempt against Obiang.

Equatorial Guinea remained involved with the Extractive Industries Transparency Initiative (EITI), which it had joined in 2008, though transparency in the country's oil revenue was not immediately forthcoming. The maritime border dispute with Gabon over the island of Mbanie in the Gulf of Guinea, where oil had been discovered, remained unresolved.

(CHRISTOPHER SAUNDERS)

ERITREA



Area: 121,144 sq km (46,774 sq mi)

Population (2009 est.): 5,073,000

Capital: Asmara

Head of state and government: President Isaias Afwerki

Eritrea was beset with immense political, economic, and social problems in 2009, its 16th year of independence from its neighbour and archenemy, Ethiopia. The small and impoverished

country also earned the distinction of being one of the world's most militarized countries.

Pres. Isaias Afwerki continued to rule with the hard-line stance he had adopted upon the country's independence in 1991. He attracted scorn at home and abroad as his government persisted in detaining without trial opposition figures and critics, including several politicians and journalists who had been arrested in 2001.

The Afwerki regime also stuck to a strict program of military conscription aimed at maintaining high troop levels at its disputed border with Ethiopia. Eritrea ended the year with an active army of about 200,000 soldiers. Tensions remained high at the frontier, over which the country had fought a two-year war with Ethiopia that ended with a shaky cease-fire in 2000.

During the year Kenya and Western countries, including the U.S. and the U.K., accused Eritrea of having aided Islamist insurgents involved in a civil war in Somalia. In May the African Union asked the United Nations to impose sanctions on Eritrea, alleging that the country was destabilizing the Horn of Africa. The UN Security Council voted to impose sanctions on Eritrea in December.

Eritrea's economy remained stagnant. Drought and high food prices abroad exacerbated the situation and particularly hurt the approximately 1.3 million people—nearly 30% of Eritrea's population—who were living below the international poverty line. The dire economic and political situation forced many of its citizens to undertake perilous and sometimes fatal journeys to flee the country. In August about 70 such refugees perished at sea near the Italian coast when their small boat ran out of fuel and capsized.

In efforts to alleviate the suffering in Eritrea, the European Commission in May allocated about \$4.1 million to the country. The amount was part of about \$71.6 million in humanitarian aid that the organization granted to five African countries. In September the European Commission approved about \$174 million in development funding for Eritrea for the 2010–13 fiscal years. That month the country also completed consultative talks with the International Monetary Fund. The organization concluded that the Eritrean economy would continue to be hampered by debt and inflation, despite some gains from new mining industry construction.

(PATRICK L. THIMANGU)

ESTONIA



Area: 45,227 sq km (17,462 sq mi)

Population (2009 est.): 1,340,000

Capital: Tallinn

Chief of state: President Toomas Hendrik Ilves

Head of government: Prime Minister Andrus Ansip

The distressing state of the economy dominated Estonian political life during 2009. Disagreements over proposed budget cuts led to the decision by Prime Minister Andrus Ansip in May to dismiss the Social Democratic Party from the ruling coalition—a move that reduced the three-party coalition to a minority government. In elections to the European Parliament in June, Ansip's Reform Party was bested by its main rival, the Centre Party, led by Tallinn Mayor Edgar Savisaar, as well as by Indrek Tarand, an independent candidate. In local government elections in October, the Centre Party won an absolute majority in Tallinn and nearly a third of the vote in the entire country, though the Reform Party retained its leading position in Tartu. Turnout in both elections reached record levels.

All of the important economic indicators were negative in 2009. There was a massive decline in GDP and real-estate values, while unemployment rose to double digits during the first quarter of the year. In addition, state revenue, wages, retail sales, and foreign direct in-

vestment all fell considerably. The government sought to take advantage of the drop in inflation to move closer to adoption of the euro, making painful budget cuts—including politically sensitive ones in social services—in an effort to keep the budget deficit below 3% of GDP as required by the EU for euro adoption.

Estonia continued to be an active participant among the NATO forces in Afghanistan, but its reputation in the alliance was blemished by the revelation that Herman Simm, a senior Estonian defense official, had spied for Russia for more than a decade. Simm was convicted of treason in an Estonian court in February. Despite the Simm case, relations with Russia thawed slightly, though for both environmental and political reasons, Estonia remained critical of the Russian-German Nord Stream pipeline project—a gas pipeline that was to be built across the Baltic Sea.

(TOIVO U. RAUN)

ETHIOPIA



Area: 1,127,127 sq km (435,186 sq mi)

Population (2009 est.): 82,825,000

Capital: Addis Ababa

Chief of state: President Girma Wolde-Giyorgis

Head of government: Prime Minister Meles Zenawi

Domestic politics in Ethiopia were relatively calm throughout 2009 when

Estonian trade union members stage a demonstration in Tallinn on June 3 in opposition to government-mandated changes to labour laws and unemployment benefits.



Timur Nisametdinov—NIPA/AP

compared with the years of political turmoil that followed the disputed 2005 national and regional elections. One of the leaders of the main political opposition party, however, Birtukan Mideksa, was rearrested in December 2008. The government accused her of having violated the conditions of the 2007 political pardon, and her life sentence was reinstated. There also were several arrests of Oromo leaders in late 2008 accused of having involvement with the banned party the Oromo Liberation Front (OLF), and nine were convicted in September of raising funds and buying weapons for the OLF. In April, 32 military and former military leaders were arrested and accused of having planned illegal acts in the name of the party Ginbot 7, which was headed by opposition leader Berhanu Nega from exile. The main legal opposition parties repeatedly accused the government of harassment and intimidation.

The Ethiopian economy was expected to grow at a rate of about 6.5% in 2009, down from 8% in 2008, with most of its exports coming from the agricultural sector, particularly coffee, tea, spices, and cereals. The decline in global demand for important exports had a negative impact on the Ethiopian economy, as did rising prices for fuel. Furthermore, the combination of high inflation and rising food prices—together with stagnant wages and employment opportunities, decreases in remittances from the Ethiopian diaspora, and increasing internal migration to Ethiopian cities—meant that urban citizens faced increasing economic hardships in 2009. Meanwhile, more than 47% of the country's rural population lived below the poverty line. Power rationing and critical supply shortages in items such as cement were persistent problems, as were periodic droughts and food insecurity. At least 6.4 million Ethiopians were in urgent need of food assistance during the year, with a total of 12.5 million people in need of some type of food aid.

A highly controversial law that severely limited the actions of civil society organizations was passed in January. In particular, it prohibited foreign organizations and those that received more than 10% of their funding from foreign sources from participating in activities such as conflict resolution and human rights-related work. It also empowered a government agency to closely monitor all organizations and impose extremely harsh penalties for violation of the law's provisions. In ad-

dition, new antiterrorism legislation was passed in July.

The border dispute with Eritrea largely remained at a stalemate in 2009. Neither country had taken steps to demarcate the border in line with the 2002 ruling of the Eritrea-Ethiopia Boundary Commission, which Ethiopia had rejected. In August the Hague-based Eritrea-Ethiopia Claims Commission ruled that compensation should be paid by each country to the other for damages inflicted during the 1998–2000 war.

In early 2009 Ethiopia formally withdrew its armed forces from neighbouring Somalia, where they had been serving since December 2006 in support of the Transitional Federal Government of Somalia, but reports of Ethiopian troop activity inside the country continued throughout the year. (LAHRA SMITH)

FIJI



Area: 18,272 sq km (7,055 sq mi)

Population (2009 est.): 845,000

Capital: Suva

Chief of state: Presidents Ratu Josefa Iloilovatu Uluivuda and, from July 30 (acting), Ratu Epeli Nailatikau

Head of government: Prime Minister Voreque Bainimarama (interim)

In early April 2009, Fiji's Court of Appeal ruled that under the 1997 Constitution, Pres. Ratu Josefa Iloilovatu Uluivuda did not have the power to dismiss the previous government in 2007 or to install the interim government that had seized power in 2006 and that the latter move was therefore invalid. President Iloilo immediately abrogated the 1997 constitution, dismissed the judges, and appointed himself head of state with power to rule by decree. With the backing of the military, he announced that he would install an interim government for a five-year period, during which time the reforms contained in the People's Charter for Peace, Change and Progress would be implemented, and the country would be prepared for elections under a new nonracial electoral system by September 2014. The president reappointed the interim prime minister, Commodore Voreque Bainimarama, who in turn reappointed his interim ministers.



Members of Fiji's pro-democracy movement hold a kava ceremony in front of the venue for the Pacific Islands Forum summit meeting held in Cairns, Australia, in August.

These moves created international tensions for Fiji; on May 1 the Pacific Islands Forum suspended the country's membership, and in September, Fiji's membership in the Commonwealth was also suspended. On July 28, Bainimarama announced that the ailing 88-year-old Iloilo was retiring from office; he was succeeded as acting president by Vice Pres. Ratu Epeli Nailatikau.

Tourism, a mainstay of Fiji's economy, was assisted by a 20% devaluation in the Fijian dollar as the country continued to open new hotels and to attract visitors from Australia and New Zealand. In April, Fiji filed claim with the UN for recognition of an extended continental shelf in the hope of securing rights to seabed minerals in the South Fiji Basin.

(CLUNY MACPHERSON)

FINLAND



Area: 338,425 sq km (130,667 sq mi)

Population (2009 est.): 5,339,000

Capital: Helsinki

Chief of state: President Tarja Halonen

Head of government: Prime Minister Matti Vanhanen

The Finnish economy took a further plunge in 2009. The economy was heavily dependent on exports, which had accounted for 44% of GDP in 2008. The value of exported goods alone dropped a historic 35% in the first quarter of 2009 from the same period a year earlier. At the same time, the value of imports, most notably raw materials and other items needed in manufacturing, decreased by 31%. Accordingly, industrial production was at its lowest in 10 years, registering a 37.3% drop in August year-on-year. GDP was 9.2% lower in July than it had been a year earlier; the unemployment rate grew to 8.8% in August; and inflation dropped to -1% in September.

In June, Finns elected five men and eight women to the European Parliament. Timo Soini, chair of the tiny True Finns, garnered the most votes (130,715) and secured a seat for his party, which was sharply critical of immigration. The True Finns gained the most proportionately, capturing 9.8% of the vote, up from 0.5% in 2004. The Greens also increased their number of members, from one to two. In absolute terms, the winner was the Conservative Party, followed closely by the Centre Party, each of which won three seats, down from four. The Social Democratic Party won two seats, down from three, thanks largely to the sympathy votes collected by Mitro Repo, a Finnish Orthodox priest who had been effectively defrocked for his political aspirations. Repo received the most votes after Soini and Anneli Jäätteenmäki of the Centre Party, a former prime minister who had resigned after less than three months in office in 2003. Voter turnout increased slightly from the previous European Parliament elections, from 39.43% to 40.3%.

The 2008 scandal over unannounced campaign contributions unraveled further in 2009. The Centre Party agreed to return about \$75,000, or two-thirds of the funding it had ultimately received from Nova Group, a real-estate company, to the company's bankruptcy estate. The company had donated money mainly to the Centre Party but also to many candidates of other parties in hopes of securing favours. Several state-owned or publicly funded entities chaired by politicians were found to have donated funds to the campaigns of said politicians. Prime Minister Matti Vanhanen of the Centre Party was implicated for the \$29,000 he had received for his 2006 presidential campaign from Nuorisosäätiö, a youth housing foundation he had formerly chaired

that was close to the Centre Party. The foundation had received funding from the state gambling monopoly RAY (Raha-automaattiyhdistys), whose rules prohibit it from giving aid for political purposes. Vanhanen survived a parliamentary vote of confidence 117 to 27 with the help of the Greens, who exacted stricter regulation of campaign contributions as a quid pro quo for their support. (SUSANNA BELL)

FRANCE



Area: 543,965 sq km (210,026 sq mi)

Population (2009 est.): 62,596,000

Capital: Paris

Chief of state: President Nicolas Sarkozy

Head of government: Prime Minister François Fillon

Like almost everywhere else, France felt the global recession of 2009, but in ways that reflected its political strengths and weaknesses. The downturn's impact was softened by the French state's traditionally large role in the economy of spending and providing welfare. Yet with only a weak parliamentary opposition to air their complaints, many French took part in national street demonstrations to protest the government's inability to do even more to protect jobs and wages. The French model of regulated capitalism

was hailed for steering the country clear of the excesses of Anglo-Saxon lending and borrowing. Pres. Nicolas Sarkozy discarded the 43-year-old Gaullist model of semidetachment from NATO, however, and brought France fully back into the Atlantic alliance.

Domestic Affairs. The popularity of Sarkozy, who had been elected in 2007 to a five-year presidential term, had increased by the beginning of 2009, partly owing to the stabilization of his personal life through his marriage to singer and model Carla Bruni. His very active governing style, however, invited people to lay the blame for most problems at his door rather than that of the government of his centre-right Union for a Popular Movement (UMP), led by Prime Minister François Fillon. The year's big concern was the economy: GDP was expected to fall by more than 2%. Although this decline was smaller than that in many other countries, it was the first drop in France's annual GDP since 1993.

As the unemployment rate began to increase toward the 10% mark, both the government and workers began to adopt unorthodox tactics to stem its rise. Days before authorizing loans to Renault and Peugeot-Citroën to sustain their car businesses, Sarkozy urged Peugeot to close its factories in the Czech Republic or Slovakia rather than in France. This caused a minor furor among his European Union partners and led the Czech Republic, which held the presidency of the EU in the first part of 2009, to convoke a special EU summit that condemned such job protectionism. For their part, some French workers revived the practice of "boss-

Former employees of a Sony plant in the French village of Pontonx-sur-l'Adour protest in front of the factory in April by symbolically planting crosses that bear the names of workers whose jobs had been eliminated.



Bob Edme/AP

napping,” or detaining their bosses, usually just overnight, to try to get them to alter settlement deals. About 10 such boss-nappings occurred, including at plants owned by Molex of the U.S. and Sony of Japan. This practice declined somewhat, however, as the economy improved in the second quarter, partly as a result of the French government’s relatively small but swift stimulus program of about \$33 billion. Sarkozy also planned a “national bond” issue for investment of more than \$50 billion in long-term research projects and the national infrastructure.

The financial issue of the year was the regulation of banks and bankers’ bonuses. Sarkozy took a stand with German Chancellor Angela Merkel in EU and Group of 20 negotiations for tougher international controls on bonuses. At home he persuaded French bankers to agree to a code of practice linking bonuses to the longer-term performance of their banks. Despite having been the only Western country to nationalize banks in the postwar period as a deliberate policy, in 2009 France avoided the emergency quasi-nationalization of banks as was carried out in the U.S. and the U.K. The French government did, however, provide banks with \$56 billion in fresh capital and guaranteed \$450 billion of their lending.

Elected on a promise to allow people to “work more to earn more,” Sarkozy finally persuaded Parliament, after nearly two years of debate, to pass legislation easing the Sunday trading laws. The new law allowed all retail stores (not just small shops such as bakeries) in certain areas to open for business on Sundays. It was to take effect in 20 commercial zones around Paris, Lille, and Marseille and in hundreds of smaller cities and towns that were often visited by tourists—but not in Lyon, the country’s second largest urban area, where UMP deputies objected.

Sarkozy also returned to the issue concerning the veiling of Muslim women. In 2004 he had been instrumental as interior minister in passing a measure forbidding students in French public schools to wear ostentatious religious symbols, such as Muslim head scarves. In a June 2009 speech to Parliament, Sarkozy attacked the wearing of burkas by Muslim women as being a symbol of servitude unsuited to a republic dedicated to equal rights, though he proposed no legislation to ban the garments.

In the June 7 European Parliament elections, the UMP became the first po-

litical party of a sitting French president to win since elections to that parliament started in 1979. The UMP won 27.8% of the vote, and the Socialists secured 16.5%, only a whisker ahead of the Greens, who received 16.3%. This result confirmed the splintering of the Socialists that began when Ségolène Royal, their presidential candidate in 2007, lost the election to Sarkozy and then lost her bid to become the party’s leader to Martine Aubry, the mayor of Lille. Sarkozy continued to foster this splintering by giving cabinet jobs to Socialists, including in 2009 the nephew of François Mitterrand, the last Socialist president. A few months after Frédéric Mitterrand was appointed culture minister, a controversy erupted over his confession in a 2005 autobiography to having engaged in sex tourism in Asia. An important rift remained evident in Sarkozy’s own centre-right bloc: Dominique de Villepin, a former prime minister and Sarkozy’s rival within the neo-Gaullist movement, went on trial in September, accused of having slandered Sarkozy in the so-called Clearstream affair. The trial lasted a month, and the verdict was due in January 2010. Of still greater political, even constitutional, importance was the October 2009 decision by a judge that former president Jacques Chirac should stand trial on charges of embezzlement for having allegedly used, during his long tenure as mayor of Paris, the city payroll to pay national political party operatives. The trial of Chirac, who had enjoyed immunity from prosecution during his 12 years (1995–2007) as president, was expected to take place in 2010.

Foreign Affairs. Carrying on the momentum of his very active EU presidency in 2008, Sarkozy started 2009 by attempting to mediate a cease-fire in Israel’s offensive in the Gaza Strip. His reasons for trying to broker peace were partly domestic. In the past, Mideast tensions had reverberated in France—which has the biggest Muslim and Jewish communities in Western Europe—and they did so again in 2009. During the Gaza conflict, several synagogues and other Jewish sites in France were attacked or vandalized. In contrast to some of his predecessors, Sarkozy had no desire to displace the diplomatic role of the U.S., particularly under Pres. Barack Obama, though in 2009 France did establish its first permanent military installation in the Gulf, a base in Abu Dhabi, U.A.E.

In a historic move, Sarkozy reversed Gen. Charles de Gaulle’s 1966 decision

to leave NATO’s integrated military command. France fully rejoined the alliance at the April 2009 NATO summit, held in the French city of Strasbourg. The immediate military significance of this move, involving the dispatching of a few more French officials to NATO committees and commands, was limited; France had always sent troops to NATO operations. It ended, however, the long-running “European” versus “Atlanticist” political tension in the alliance and constituted French acceptance of NATO as a European institution.

Nonetheless, Sarkozy was criticized from several quarters for purportedly throwing away France’s freedom of diplomatic maneuver. The Socialists attacked him; in 1966 it had been their party that rounded on de Gaulle for his nationalist gesture in stiff-arming NATO. Sarkozy was also criticized, however, by some in his own UMP ranks as “Sarko the American,” a charge that could pose him some difficulty, depending on events, in the presidential elections of 2012. (DAVID BUCHAN)

GABON



Area: 267,667 sq km (103,347 sq mi)

Population (2009 est.): 1,475,000

Capital: Libreville

Chief of state: Presidents Omar Bongo Ondimba, Didjob Divungi Di Ndinge (acting) from May 6, Rose Francine Rogombé (interim) from June 10, and, from October 16, Ali Ben Bongo Ondimba

Head of government: Prime Minister Jean Eyeghe Ndong and, from July 17, Paul Biyoghé Mba

Gabonese Pres. Omar Bongo died on June 8, 2009, after he suffered a fatal heart attack while abroad for cancer treatment. In power for 41 years, at the time of his death he was Africa’s longest-serving head of state. His body was flown to Gabon on June 11, and the state funeral took place in Libreville on June 16. French Pres. Nicholas Sarkozy, in attendance, was jeered by crowds protesting a French government investigation launched in May into Bongo’s finances.

On June 10 Rose Francine Rogombé, the speaker of the Senate, was sworn in as interim president. A presidential

election was scheduled for August 30, and the ruling Gabonese Democratic Party selected Defense Minister Ali Ben Bongo, son of the late president, as its candidate. Official results gave Bongo the victory, with 41.7% of the vote. His nearest rivals, former interior minister André Mba Obame and longtime opposition leader Pierre Mamboundou, each took approximately 25% of the poll. Calling the election fraudulent, demonstrators took to the streets in Port-Gentil, Libreville, and other cities; violent protests ensued. In October the results of a recount requested by the opposition were released; the results upheld Bongo's victory, and he was inaugurated on October 16.

On April 19 Gabonese activist Marc Ona Essangui was awarded a share of the 2009 Goldman Environmental Prize. He was honoured for his battle to save the rainforest of Ivindo National Park.

(NANCY ELLEN LAWLER)

GAMBIA, THE



Area: 11,632 sq km (4,491 sq mi)

Population (2009 est.): 1,705,000

Capital: Banjul

Head of state and government: President
Col. Yahya Jammeh

In 2009 The Gambia continued to receive bad publicity for suppressing freedom of expression and for arbitrary kidnappings and beatings of citizens by state agents. The editor of *The Point*, a privately owned daily, was charged for having reported the arrest of a Gambian diplomat. The fate of Ebrima Manneh, a journalist who had been arrested in 2006, remained unknown, though the African Commission on Human and Peoples' Rights, which was based in Banjul, urged the Gambian government to release him. In March, Amnesty International reported that approximately 1,000 Gambians had been detained and tortured in state-sanctioned witch hunts. Though these were halted and the prisoners released, the government did not condemn what had happened. In May Pres. Jammeh warned a prominent critic to shut up or be jailed. The Community Court of the Economic Community of West African States heard a case of torture

brought by a Gambian journalist against operatives of The Gambia's National Intelligence Agency. Several journalists were arrested in June and put on trial for having criticized President Jammeh's smear campaign against Deyda Hydara, an editor brutally killed in 2004, and for having suggested that the government was responsible for his murder. They received two-year jail sentences in August, but after international criticism, they were given a presidential pardon in September. Whether the Coalition for Human Rights in The Gambia, formed by Gambians living in Senegal with international connections, could exert any influence on the Gambian government remained to be seen.

(CHRISTOPHER SAUNDERS)

GEORGIA



Area: 57,612 sq km (22,244 sq mi), excluding the disputed areas (from the early 1990s) of 8,640 sq km (5,336 sq mi) in Abkhazia and 3,900 sq km (1,506 sq mi) in South Ossetia

Population (2009 est.): 4,368,000, excluding the populations of Abkhazia and South Ossetia

Capital: Tbilisi

Head of state and government: President
Mikheil Saakashvili, assisted by Prime Ministers Grigol Mgaloblishvili and, from February 6, Nika Gilauri

Political tensions intensified in Georgia in 2009. In late January, 11 opposition parties called on Pres. Mikheil Saakashvili to resign and appealed for free and fair preterm parliamentary and presidential elections. On April 9 the opposition launched a series of demonstrations, but Saakashvili still refused to step down. On May 11 Saakashvili met with opposition representatives and, as a compromise, offered to hold early local elections in May 2010 and to form commissions tasked with electoral and constitutional reform. On May 18 the opposition responded with further demands, which Saakashvili rejected. On May 5 some 40 military personnel were arrested and charged with plotting a coup d'état; their trial began on August 21.

After three months of service, on January 30 Grigol Mgaloblishvili resigned as prime minister owing to health problems. Saakashvili named his first deputy, Finance Minister Nika Gilauri, to succeed Mgaloblishvili.

Tensions also continued concerning Abkhazia and South Ossetia. In July Russia blocked an extension of the mandate of the UN Observer Mission in Georgia, and the mission's 130 members were constrained to leave Abkhazia. Several rounds of talks in Geneva failed to yield a breakthrough on the deployment of international observers in Abkhazia and South Ossetia. In May opposition parties were barred from participating in South Ossetia's parliamentary elections, and in August Russian businessman Vadim Brovtsev

A Georgian opposition protester stands in a makeshift jail cell outside the official residence of Pres. Mikheil Saakashvili in Tbilisi on May 2.



Vano Shlamov—AFP/Getty Images

was appointed South Ossetian prime minister.

In violation of the previous year's armistice agreements, on September 15 Russia signed military cooperation pacts with Abkhazia and South Ossetia. On September 30 an international group tasked with evaluating the events that had culminated in the August 2008 war concluded that Georgia had begun the hostilities but condemned Russia's disproportionate response and its failure to prevent ethnic cleansing by South Ossetian forces. One positive sign came in late December when Georgia and Russia struck a deal to reopen their main border crossing, which had been closed since 2006.

On January 9 Georgia and the U.S. signed the Charter on Strategic Partnership, which envisaged U.S. assistance for Georgian democratization. In July U.S. Vice Pres. Joe Biden visited Tbilisi to reaffirm Washington's support for Georgia's territorial integrity.

Georgia's GDP fell by 11.6% during the first half of 2009, and foreign direct investment fell by 80%. Prime Minister Gilauri forecast overall contraction of at least 1.5%. (ELIZABETH FULLER)

GERMANY



Area: 357,114 sq km (137,882 sq mi)

Population (2009 est.): 82,000,000

Capital: Berlin; some ministries remain in Bonn

Chief of state: President Horst Köhler

Head of government: Chancellor Angela Merkel

The year 2009 was dominated in Germany by national and state elections. Although the year's NATO summit was held jointly by Germany and France, the German women's association football (soccer) team won the European championships for the fifth time running, and a German economic recovery was predicted, all paled against the backdrop of the elections. The intense concentration on the battle between the parties was forcefully disrupted, however, by such events as failing businesses, violence in schools, and political as well as religious scandals.

Domestic Affairs. Possibly the most tragic events of the year were the attacks at two secondary schools: in

March a 17-year-old gunman shot and killed 15 people, most of them female students, in a rampage that began in Winnenden, and in September an ax-wielding 18-year-old man set off two firebombs in a classroom in Ansbach, wounding 10 people. These assaults were the latest in a series of six attacks at German schools over eight years. In a country in which violence in schools was virtually unheard of prior to 2000, the incidents led to a reconsideration of the role of guns in society and the pressures placed on teenage boys. The increase in violence by teenagers of both genders had been much lamented in recent years, but the Winnenden shooter's apparent targeting of females and the seemingly easy access that both teenagers had to weapons gave the discussion new fuel. Proposals to restrict the types of guns that hunters could own, to limit young people's access to violent computer games, and to reduce violence on television were debated. None of those measures was realized, though some gun-control laws were tightened.

On a more positive note, the year brought success in Germany's fight against age discrimination in the workplace. According to EU guidelines, all references to age had to be removed from job applications and advertisements. Reports in 2009 from both employers and unemployment agencies showed an increase in employment of those aged 50 and above.

The slight increase in the fertility rate in 2007 and 2008 was attributed to a new measure that encouraged fathers as well as mothers to take time off from work to care for their newborns. Statistics released in 2009 indicated that about 20% of new fathers were choosing to remain at home for a time so that the mothers could return to work sooner. This trend was expected to have long-term impacts on the German economy, because it was hoped to increase the likelihood that working women would have children. A rise in the number of births would also require the expansion of the day-care system, which was underdeveloped in many German regions. The policy encouraging the greater involvement of men in the upbringing of their children was the product of the minister for family matters, Ursula von der Leyen of the Christian Democratic Union (CDU), who had also increased funding and expanded facilities for child care. All these policies were historically atypical for the conservative CDU and were symptomatic

of the broad identity struggle that had been occurring within the party for a few years. This identity crisis was highly visible in the election campaign and diminished the CDU's lead over the other parties in opinion polls.

Elections. Prior to the general elections, elections were held for five state parliaments. The state elections were staggered throughout the national legislative period and were therefore thought to be good indicators for the national election. The first vote of the year took place in January in Hessen, where early elections had been called after coalition-building negotiations collapsed. The state's 2008 election had created a situation in which only a grand coalition would have been viable. The main parties, the CDU and the Social Democratic Party (SPD), however, could not find common ground. This was inauspicious, since these parties were ruling together in a grand coalition at the national level. The Social Democrats suffered a loss in the 2009 Hessen elections, which allowed the Christian Democrats to form a coalition with one of the smaller parties. This seemed like good news for Chancellor Angela Merkel and her Christian Democrats, who began the election year anticipating a win.

This optimism was shaken on various occasions throughout the following nine months. Many of the CDU's policies relating to the economic crisis and to gender and social politics seemed to be more in keeping with the traditional political philosophy of the Social Democrats. This led to the impression, among voters as well as parliamentarians, that the Christian Democratic political program was diffuse and undefined, even that close to the election. Additionally, the party had to weather strife and mishap in the months leading up to September 27, the day of the national election.

Traditionally, the Christian Democrats were linked at the national level with a Bavarian state party, the Christian Social Union (CSU). Over the previous decade this connection had become less comfortable. While the CSU slipped farther toward the social conservative side of the spectrum, the Christian Democrats increasingly moved in the opposite direction. In its desire to raise its profile, the CSU was more than vocal in its protest and critique of its sister party—a tactic that the CDU did not appreciate in a year when it was standing for national reelection while the CSU did not have to face any elections in Bavaria.

Johannes Eisele—Reuters/Landov



Angolan-born politician Zeca Schall, a member of Germany's ruling Christian Democrats who was threatened during the year by supporters of the extreme-right National Democratic Party, poses for a portrait in front of an election poster in the state of Thuringia.

Saarland, Saxony, and Thuringia did, however, hold state elections one month before the national election, which gave them national importance. In two of the three states, the ruling Christian Democrats lost percentage points in the double digits and were therefore forced to consider forming grand coalitions. This seemed to throw into question the party's expected win in the national election, and national opinion polls showed the Social Democrats gaining ground.

Of all the election campaigns, the one in Thuringia proved to be the most turbulent. The state's minister president had suffered a serious skiing accident, and though his party insisted that he would be ready to stand for election in August (and he ultimately was), many doubted as late as May that he would be able to do so. International attention was drawn to the election when a black Christian Democrat, Zeca Schall, was threatened by supporters of the extreme-right National Democratic Party (NPD).

Traditionally, the national election campaigns had almost always been carefully neutral and nonconfrontational until after the state elections, and this held true in 2009. Even the so-called "TV duel" between Chancellor Merkel and the SPD candidate, Frank-Walter Steinmeier, was not highly antagonistic. Differences other than in rhetoric emerged mainly in relation to the minimum wage and to nuclear energy, which the SPD opposed vehemently and the

CDU embraced as an intermediate measure. It was the smaller parties—the neoliberal Free Democratic Party (FDP), the environmentalist Green Party, and the social democratic Left Party—that advertised with concrete and clear policy proposals. This was reflected in the results of the national election.

The CDU and CSU together captured 33.8% of the vote, and Merkel was reconfirmed in her role as chancellor, while the SPD received 23% of the vote. Both the CDU-CSU and the SPD lost percentage points relative to the 2005 election, however, even if the CDU-CSU's loss was small (1.4%) compared with the 11.2% loss of the SPD. The winners were the smaller parties; the FDP increased its share by 4.7% (to 14.6%), the Left by 3.2% (to 11.9%), and the Greens by 2.6% (to 10.7%). This result allowed the CDU to form a coalition with the FDP, its traditional coalition partner, rather than being forced back into an uncomfortable grand coalition with the SPD. The success of the Christian Democrats could be at least partially attributed to the first signs in August that the German economy was improving. The election was again notable for the poor turnout, which at 71% was the lowest in the history of the Federal Republic of Germany.

The state elections in Brandenburg and Schleswig-Holstein, held on the same day as the national election, passed almost without notice. Nevertheless, the Brandenburg result was notable, because for the first time a coali-

tion between the SPD and the Left Party would be in power in that state. Schleswig-Holstein had to undergo early elections because its grand coalition had failed in July. As a result of these elections, a government of the CDU and the FDP was formed, mirroring that of the national government.

Foreign Affairs. International affairs were largely ignored in Germany because of the elections. While 2008 had been dominated by international climate change summits and economic accords, 2009 was marked by a withdrawal of attention to the domestic front, except in the few instances when the magnitude of global affairs forced the country to take heed.

One such instance centred on German disillusionment with the pope. The country had for 30 years registered a steady decrease in believers; the percentage of adherents in the Roman Catholic and Protestant faiths each dropped from about 50% of the population to only some 30%, and atheists and the nonreligious accounted for about 30% of the population by 2009. This decline halted with the election in 2005 of a German pope, and the resulting short-lived euphoria even led to an increase in Catholic church attendance. The scandal surrounding the pope's decision in January 2009 to withdraw the excommunication of a bishop who openly denied the Holocaust shattered this euphoria, however, and drove people from the churches again.

The Constitutional Court's decision on the Lisbon Treaty did not come as a large surprise. In the spring both houses of the German parliament voted to ratify the treaty, which would reform certain EU institutions. The court ruled in June, however, that the ratification process could not proceed until the country passed new legislation giving the German parliament more oversight over and greater participation in the implementation of EU treaties in Germany. This ruling could be seen as a continuation of its decision on the Maastricht Treaty, which established the EU. In its Maastricht decision, the court had ruled that as long as the fundamental makeup of the Federal Republic was not violated, EU treaties did not violate the country's Basic Law. It had warned, however, that if Germany's democratically elected bodies did not have more oversight over and input into EU treaties, there could come a time when the treaties would become unconstitutional. The court recognized this danger in the Lisbon Treaty. In

September the German parliament passed the new legislation required by the court, and the country completed its ratification of the treaty.

While the Group of 20 summit held in April in London escaped the country's attention almost entirely, the NATO summit held that same month in Strasbourg, France, and Kehl, Ger., did intrude on German introspection. The NATO summit was noticed mainly because the protests against the alliance, which turned 60 years old in 2009, were smaller and generally less intense than expected. At the Group of Eight summit in Heiligendamm in 2007, record numbers of protesters had arrived—why not in Strasbourg? The economic crisis, preoccupation with domestic affairs, and widespread admiration of U.S. Pres. Barack Obama could be named as reasons. It was hard for most Europeans to protest against the man who had replaced U.S. Pres. George W. Bush, whom many Germans perceived as “public enemy number one.”

The Economy. In February the German government approved a second economic stimulus package of more than \$65 billion. (The first had been passed in November 2008.) Many parliamentarians criticized their government for this action, which they thought pushed Germany too far into debt and would be of dubious efficacy. Later decreases in unemployment and reports from economic research institutes that the German economy was emerging from recession seemed to prove the doubters wrong. It could be argued, however, that it was too early to judge the matter, because the second round of governmental measures could not yet have had any real influence.

At the end of 2008, the car manufacturer Opel had been suffering because of the economic difficulties of its owner, General Motors (GM). In early 2009 Opel requested financial aid from the government because it was facing the possibility of plant closures. The government granted the aid, and the CDU then had to address doubts about the coherence of its political philosophy. Traditionally, the party was opposed to national subventions of failing businesses, but the loss of Opel would have cost thousands their jobs. The government's decision to provide funding and to involve itself in the negotiations with GM was one instance in which traditional CDU voters did not recognize their party. Another such instance was the nationalization of the Hypo Real Estate bank. In both cases the CDU ar-

gued that the companies were vital to the health of the economy and therefore had to be supported for the greater financial good of the country. In the case of Hypo Real Estate, this might not have been the end of the debate. Its nationalization opened the door to a number of court cases relating to the legalities of the German government's dispossession of the shareholders—court battles that would have to be fought over the following few years.

(NICOLA CORKIN)

GHANA



Area: 238,533 sq km (92,098 sq mi)

Population (2009 est.): 23,832,000

Capital: Accra

Head of state and government: Presidents

John Agyekum Kufuor and, from January 7, John Atta Mills

On Jan. 7, 2009, the inauguration of John Atta Mills as president of Ghana took place amid a carnival atmosphere as thousands of people converged on Independence Square in Accra to watch Pres. John Agyekum Kufuor hand over power, marking the second time in the country's history that the presidency had been transferred to an opposition

politician. The outgoing president had warded off potential violence by persuading his party to accept the electoral results. This welcome sign of political stability and democracy in a region beset by armed conflict, political turmoil, and corruption underscored Ghana's status as a model of democracy and civil society.

Six months later U.S. Pres. Barack Obama highlighted Ghana's importance as an emergent democracy when he decided to make it the destination for his first official state visit to sub-Saharan Africa. Deliberately bypassing other influential African states, notably Kenya and Nigeria, he made it clear that he chose Ghana because it promoted democratic principles, transparency, and sustained prosperity. In his address to the Ghanaian parliament, he contended that “Africa doesn't need strongmen, it needs strong institutions.” He also emphasized the importance of African initiative in development policy as well as the need for global “partnership grounded in mutual responsibility and mutual respect.”

The International Monetary Fund (IMF), concerned about possible negative consequences of the world economic crisis on new democracies, approved a \$600 million three-year loan in July to Ghana. The funds were designed to reduce its budget deficit and to protect its currency. Ghana's two leading exports, cocoa and gold, maintained their value in world commerce.

(LARAY DENZER)

A crowd gathers in Cape Coast, Ghana, on July 11 in anticipation of the arrival of U.S. Pres. Barack Obama, who made Ghana the destination for his first official state visit to sub-Saharan Africa.



Haraz N. Ghanbari/AP

GREECE



Area: 131,957 sq km (50,949 sq mi)

Population (2009 est.): 11,285,000

Capital: Athens

Chief of state: President Karolos Papoulias

Head of government: Prime Ministers
Konstantinos Karamanlis and, from
October 6, Georgios Papandreou

In 2009 the government of Greek Prime Minister Konstantinos (Kostas) Karamanlis struggled with eroding public trust due to a series of corruption scandals, the effects of the global economic crisis, and fallout from the riots in Athens in late 2008. On January 7 Karamanlis reshuffled his cabinet; the most notable change was the removal of Georgios Alogoskoufis, who was replaced as finance and economy minister by Ioannis Papathanassiou. Former foreign minister Antonis Samaras returned to the government as culture minister. On May 4–5 the opposition failed to muster the required parliamentary majority to indict former Aegean minister Aristotelis Pavlidis, who was accused of having solicited bribes in return for granting subsidized shipping contracts.

In the June 7 elections to the European Parliament, the Panhellenic Socialist Movement (PASOK) won 36.7% of the vote, while the ruling centre-right New Democracy (ND) party garnered 32.3%. PASOK and the ND secured eight parliamentary seats each. The Communist Party of Greece (KKE), with 8.4% of the vote, earned two seats, as did the right-wing Populist Orthodox Rally (LAOS), with 7.2%. The Coalition of the Radical Left (SYRIZA) and the Ecologists Greens, which won 4.7% and 3.5%, respectively, each claimed one seat.

Early parliamentary elections took place on October 4—only halfway through the Greek parliament's term. PASOK prevailed at the polls, winning 43.9% of the vote and 160 of the 300 seats. The ND turned in its worst-ever performance in parliamentary elections, taking 33.5% of the vote and 91 seats. The KKE won 7.5% (21 seats), LAOS 5.6% (15 seats), and SYRIZA 4.6% (13 seats). The Ecologist Greens failed to reach the 3% threshold required for holding seats in the parliament, managing to win just 2.5%. On election night Karamanlis announced his resignation as ND president. He was succeeded by Antonis Samaras.

On October 6 PASOK president Georgios Papandreou was inaugurated as Greece's new prime minister. His cabinet was sworn in the following day. Several ministries were merged or re-

structured, and an Environment, Energy, and Climate Change Ministry was created. Theodoros Pangalos was named deputy prime minister. Other key posts went to Georgios Papakonstantinou (finance), Louka Katseli (economy, competitiveness, and shipping), Ioannis Ragoússis (interior), and Evangelos Venizelos (defense). Papandreou himself took over the Foreign Ministry.

In foreign affairs Greek relations with Turkey remained cool as Turkish military planes and warships repeatedly violated Greek airspace and territorial waters throughout the year. There was no breakthrough in the UN-mediated negotiations with Macedonia over that country's name, as several proposals by UN mediator Matthew Nimetz failed to secure the approval of both sides. In 2009 Greece held the rotating chairmanship of the Organization for Security and Co-operation in Europe.

The global economic crisis seriously weakened the Greek economy, in particular two of its key sectors—tourism and shipping. GDP was estimated to shrink by 0.8%. Inflation was expected to drop to below 2%, while unemployment increased to more than 9%. On the social front, the influx of illegal immigrants continued, but there was no consensus among the political parties on how to address the issue. In December the government announced tough measures to deal with the country's high deficit, including major cuts in government spending.

In a high-profile case involving German electronics giant Siemens AG, which apparently paid large bribes over an extended period of time to secure Greek government contracts, former senior PASOK official Theodoros Tsoukatos admitted to having received some \$600,000 in 1999 on behalf of his party. A Greek request to the German authorities to extradite former Siemens Hellas CEO Michalis Christoforakos was approved by several German courts, but Germany's Federal Constitutional Court overturned such rulings on two occasions.

A number of terrorist attacks occurred, including one bombing attack in early September on the Athens Stock Exchange, for which elusive urban guerrilla groups, including the so-called Revolutionary Struggle and the Conspiracy of the Cells of Fire, claimed responsibility. In late September four alleged members of the latter group were arrested, and warrants for another six suspects were issued.

Georgios Papandreou, leader of the Panhellenic Socialist Movement, celebrates his party's win in the Greek parliamentary elections on October 4.



Louisa Gouliamaki—AFP/Getty Images

In March the flight operations, technical base, and ground handling operations of the ailing state carrier Olympic Airlines were sold to the Greek financial conglomerate Marfin Investment Group. The new Olympic Air started flight operations on October 1 with a significantly reduced fleet and network.

Greece was hit hard by several devastating wildfires. The worst fires, which broke out in Attica in late August, destroyed about 21,000 ha (52,000 ac) of land and some 150 homes.

(STEFAN KRAUSE)

GRENADA



Area: 344 sq km (133 sq mi)

Population (2009 est.): 107,000

Capital: Saint George's

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Carlyle Glean

Head of government: Prime Minister Tillman Thomas

In 2009 the government of Grenada continued to emphasize its determination to relaunch the country's offshore financial sector seven years after the entire sector had been shut down. Offshore banking was suspended in 2002 after a massive fraud scheme led to the collapse of a major financial institution. As a result, investors lost more than \$170 million. As part of its efforts to reopen offshore banking, the government instituted a number of reforms aimed at increasing oversight of the sector, including the creation of a new regulatory financial agency.

In March the World Bank's International Centre for Settlement of Investment Disputes ruled in favour of the Grenadan government in a dispute with RSM Production Corp., a small U.S. oil company. RSM claimed that it was denied an offshore oil exploration license because it had refused to bribe a government minister in 1996.

In June Grenadan Prime Minister Tillman Thomas defended a proposed union between Trinidad and Tobago and the nine members of the Organisation of Eastern Caribbean States. The proposal called for the establishment of an economic and political union by 2013.

On September 5 the government released Bernard Coard and the remaining 13 imprisoned leaders of the 1983 military coup that resulted in the death by a firing squad of then prime minister Maurice Bishop along with several of his cabinet ministers and supporters. This event had triggered the U.S.-led invasion of the island.

(DAVID RENWICK)

GUATEMALA



Area: 109,117 sq km (42,130 sq mi)

Population (2009 est.): 14,027,000

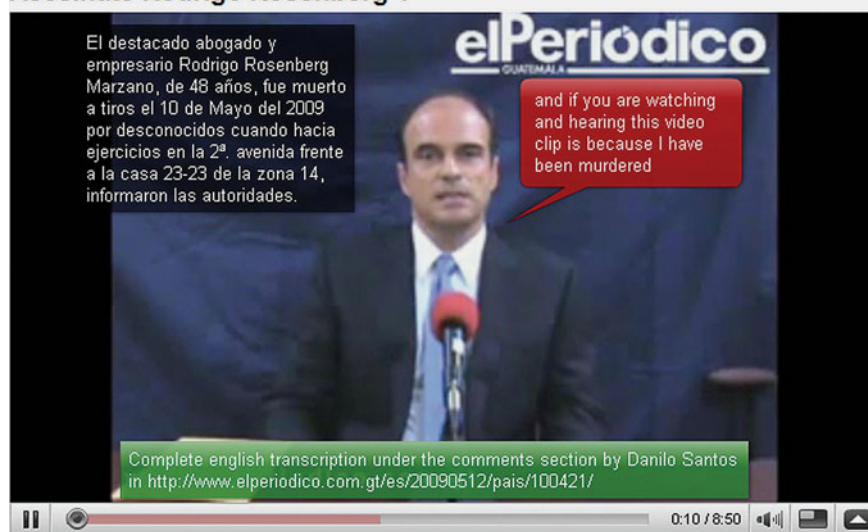
Capital: Guatemala City

Head of state and government: President Álvaro Colom Caballeros

The murder of prominent attorney Rodrigo Rosenberg in May 2009 brought a severe challenge to the Guatemalan government when shortly after his death a video appeared in which the victim declared, "If you are hearing or seeing this message, it is because I was assassinated by President Álvaro Colom." In the video, Rosenberg also claimed knowledge of Colom's involvement in two other killings as well as in money laundering and corruption. Colom denied the accusations, refused to resign, and invited the UN and the U.S. to assist in the investigation of the murder.

Guatemalan attorney Rodrigo Rosenberg, who was murdered in May, appears in the video in which he accuses Pres. Álvaro Colom of ordering his assassination.

Asesinato Rodrigo Rosenberg 1



AFP/Getty Images

Gang violence continued to plague Guatemala. The murder of bus drivers and kidnappings, especially in the capital, prompted President Colom in June to launch a new campaign to reduce criminality and increase security in schools. Violence in the country increased in part because of the Mexican crackdown on drug traffickers. As a result, heavily armed Mexican drug gangs moved south and began to operate in Guatemala, especially in the border area. One group in particular, "Los Zetas," described as a hit squad for the Mexican drug cartels, made several death threats against President Colom.

(RALPH LEE WOODWARD, JR.)

GUINEA



Area: 245,836 sq km (94,918 sq mi)

Population (2009 est.): 10,069,000

Capital: Conakry

Head of state and government: Presidents Capt. Moussa Dadis Camara and, from December 5, Sékouba Konaté (acting); assisted by Prime Ministers Ahmed Tidiane Souaré and, from January 2, Kabiné Komara

Within hours of Pres. Lansana Conté's death on Dec. 22, 2008, a military coup led by Capt. Moussa Dadis Camara dissolved Guinea's civilian government. On Jan. 6, 2009, the newly formed National Council for Democracy and Development (CNDD) officially took over all functions of the state. Despite Camara's promise to hold elections within a year, Guinea was suspended from both the African Union and the Economic Community of West African States.

On March 16 a coalition of political leaders met with the military rulers, offering a plan for a return to civilian rule and a plea that both legislative and presidential elections be scheduled. On August 17 Camara announced that the presidential poll would be held on Jan. 31, 2010, and that members of the junta had agreed not to stand. Despite this, rumours that Camara planned to run for president sparked a massive demonstration on September 28, when 50,000 opposition supporters took to the streets. Soldiers fired directly into the crowds, reportedly killing more than 150 people and wounding hundreds; the government, however, put

Seyllou—AFP/Getty Images



Guinea's military ruler, Capt. Moussa Dadis Camara, appears in Conakry on October 2 as Guinea marks its 51st anniversary of independence.

the death toll at 57. In a television speech on September 30, Camara warned that rioters would be severely punished, and all further opposition meetings were banned.

On January 22 the CNDD called 14 former government ministers and business leaders to appear at televised hearings investigating corruption. Three of the former ministers, including former prime minister Ahmed Tidiane Souaré, were arrested on March 23 and charged with having embezzled \$5.3 million of state funds. They were released in April after agreeing to repay the money.

Camara was shot and wounded in Conakry on December 3 in an assassination attempt that was blamed on one of his top aides, Lieut. Abubakar Toumba Diakité. Camara was reportedly taken to Morocco for medical treatment while authorities launched a search for Diakité. Guinea's vice president, Sékouba Konaté, took over as acting president on December 5. According to government officials, Camara's injuries were not life-threatening.

(NANCY ELLEN LAWLER)

GUINEA-BISSAU



Area: 36,125 sq km (13,948 sq mi)

Population (2009 est.): 1,534,000

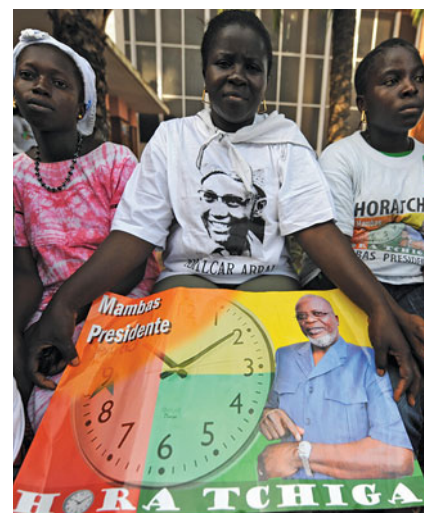
Capital: Bissau

Chief of state: Presidents João Bernardo Vieira, Raimundo Pereira (interim) from March 3, and, from September 8, Malam Bacai Sanhá

Head of government: Prime Ministers Carlos Correia and, from January 2, Carlos Gomes Júnior

Guinea-Bissau remained politically unstable in early 2009. Hours after a bomb blast killed Gen. Batista Tagme Na Waie, the head of the armed forces and longtime rival of Pres. João Bernardo Vieira, Vieira himself was shot dead on March 2 by renegade soldiers in an apparent revenge attack. No one was arrested for the assassination, but the expected political chaos did not follow, and the military did not seize power. Under a transitional government headed by National Assembly Speaker Raimundo Pereira, who was appointed interim president, and Prime Minister Carlos Gomes Júnior of the dominant African Party for the Independence of Guinea and Cape Verde (PAIGC), the country organized a presidential election. It was postponed to

Supporters of Malam Bacai Sanhá display a poster of the candidate two days before Guinea-Bissau's presidential runoff on July 26.



Seyllou—AFP/Getty Images

allow for voter registration to be completed, and during the campaign one of the candidates running for president was shot dead by security forces; nevertheless, the election took place on June 28, followed by a runoff on July 26. Malam Bacai Sanhá of PAIGC—who campaigned on the slogan “The time is now!”—defeated the other leading candidate, former president Kumba Ialá, and was inaugurated as the new president of a country ranked third from last on the United Nations 2008 Human Development Index and one that remained a transit point in the cocaine trade for shipments sent from South America en route to Europe. (CHRISTOPHER SAUNDERS)

GUYANA



Area: 214,999 sq km (83,012 sq mi)

Population (2009 est.): 769,000

Capital: Georgetown

Chief of state: President Bharrat Jagdeo

Head of government: Prime Minister Sam Hinds

In 2009 Guyana faced setbacks in its plan to expand its renewable energy capacity through the addition of hydroelectric power. Synergy Holdings, the Florida-based developer of the proposed 154-MW Amaila Falls hydroelectric power plant, was having difficulty raising (by the October deadline) the \$450 million required for the company to hold on to its 35-year BOOT (build, own, operate, transfer) agreement with the government. Synergy, which missed its first-quarter deadline for starting work on the project, blamed the global financial crisis for its problems.

In party elections held in August by the main opposition People's National Congress Reform (PNCR), Robert Corbin was reelected party leader. Also in August, the PNCR stepped up its demands for an independent investigation into alleged links between the ruling People's Progressive Party (PPP) and Guyanese drug trafficker Shaheed (“Roger”) Khan. Khan had pleaded guilty to drug-related charges in a U.S. federal court in March.

Janet Jagan, the American-born former president of Guyana, died in March at the age of 88. (See OBITUAR-

IES.) She was South America's first elected female president and was credited with helping the PPP maintain its hold on power. (DAVID RENWICK)

HAITI



Area: 27,700 sq km (10,695 sq mi)

Population (2009 est.): 9,521,000

Capital: Port-au-Prince

Chief of state and government: President

René Préval, assisted by Prime Ministers

Michèle Pierre-Louis and, from November 11,

Jean-Max Bellerive

Despite Haiti's having entered 2009 in precarious condition as a result of its battering the previous year by skyrocketing food costs, political turmoil, and tropical storms, by late 2009 cautious optimism about the country's future had returned. This was a result of stability within Haiti, intensified international attention to the country, and hiatus from another year of devastating natural disasters.

Within Haiti, Pres. René Préval and Prime Minister Michèle Pierre-Louis effectively managed resources at their disposal toward recovery from storm devastation. Transportation and communications networks were largely restored; disaster-mitigation planning increased; and the number of those suffering from food insecurity diminished from roughly one-third to one-fifth of the population. Kidnappings and crime declined precipitously. Elections to renew more than one-third of Haiti's 30-member Senate were held in April—albeit with only 11% voter turnout—and fiscal-reform legislation enabling Haiti's eligibility for debt relief was passed. More problematic was legislation to raise Haiti's daily 70 gourde (about \$1.80) minimum wage. A law pushing it to 200 gourdes (about \$5) provoked concern from manufacturers that the increase would harm Haiti's ability to attract investment and thereby to expand jobs desperately needed to reduce the estimated 70% unemployment rate. Political negotiations, unpopular among students who led street demonstrations in favour of the full increase, ultimately yielded a compromise of 125 gourdes (about \$3.25). Haiti's parliament initiated

steps toward constitutional reform, following recommendations of a nonpartisan presidential commission.

Stability and recovery received a large boost from intensified international attention. Responding to the Haitian government's proposal for a “new paradigm for cooperation,” donors met in mid-April and pledged \$353 million toward government-identified priority needs, enhancing significant bilateral and private aid flows. Former U.S. president Bill Clinton, UN special envoy to Haiti, initiated efforts to coordinate donors, nongovernmental organizations, and the Haitian government and to attract international investment. Priorities also focused on energy, environmental rehabilitation, and increased food production and rural investment. Other actions included another year-long extension of the UN Stabilization Mission in Haiti (MINUSTAH).

Despite these developments, social and economic conditions among Haitians—56% of whom survived on less than \$1 a day—did not improve significantly. In late October, parliamentarians voted to remove Pierre-Louis from office, citing a lack of economic progress. Her successor, Jean-Max Bellerive, promised greater foreign investment and job creation. Despite 9.7% inflation and declining remittances, the economy grew by 2.4% largely owing to disaster-recovery funding. (ROBERT MAGUIRE)

HONDURAS



Area: 112,492 sq km (43,433 sq mi)

Population (2009 est.): 7,466,000

Capital: Tegucigalpa

Head of state and government: Presidents

Manuel Zelaya and, from June 28, Roberto Micheletti

In Honduras the year 2009 began with leaders of the country's business community angry at Pres. Manuel Zelaya for raising the minimum wage during the global economic crisis. Zelaya came in for further criticism when Congress accused the executive branch of having attempted to illegally influence its appointment of new Supreme Court justices. A constitutional crisis almost resulted because the justices were not

Esteban Felix/AP



Supporters of ousted Honduran president Manuel Zelaya clash with security forces near the presidential palace in Tegucigalpa on June 29.

selected until January 25, the day mandated for the new court to take office.

In March Zelaya publicly announced his desire to continue in office, which was not possible under the current constitution. He issued an order to hold a referendum on June 28 to ask whether voters when casting ballots in the general elections in November also wanted the government to convoke a constituent assembly to reform the constitution. The Supreme Court, Congress, and the country's electoral tribunal declared the referendum illegal. Zelaya dismissed the head of the military for refusing to distribute the ballots, but the court overturned the dismissal. Zelaya then rallied his supporters to seize the ballots. The election was ready to take place on June 28, but that morning military and police officers arrested Zelaya and transported him by plane to Costa Rica. Although Honduras's constitution lacked clear means for impeaching a president, Congress appointed its leader, Roberto Micheletti, to complete Zelaya's term, and the Supreme Court charged Zelaya with having violated the constitution.

The international community opposed the coup. The Organization of American States, after demanding that Zelaya be restored to office, suspended Honduras. U.S. Pres. Barack Obama resisted cutting off humanitarian aid to the country, fearing harm to Honduras's poor population. U.S. Secretary of State Hillary Clinton eventually per-

suaded Zelaya and Micheletti to accept Costa Rican Pres. Óscar Arias as a mediator. Arias proposed a plan that would return Zelaya to the presidency but also would require him to form a national unity government and abandon efforts to change the constitution, but this proposal failed. Zelaya returned to Honduras on September 21, taking refuge in the Brazilian embassy in Tegucigalpa. He did not participate in the November 29 general elections, in which Porfirio Lobo of the opposition National Party won the presidency. On December 2, Congress voted against restoring Zelaya to office for the final two months of his term.

(MICHELLE M. TAYLOR-ROBINSON)

HUNGARY



Area: 93,030 sq km (35,919 sq mi)

Population (2009 est.): 10,021,000

Capital: Budapest

Chief of state: President Laszlo Solyom

Head of government: Prime Ministers Ferenc Gyurcsany and, from April 14, Gordon Bajnai

Public discontent with Socialist Prime Minister Ferenc Gyurcsany's management of the economic crisis and wide-

spread unease about a \$26 billion IMF-led rescue package triggered major changes in Hungarian politics in the spring of 2009. Gyurcsany announced in March that he would stand aside, and Economy Minister Gordon Bajnai became prime minister in mid-April. Bajnai accepted only a symbolic salary of 1 forint (the Hungarian currency) for taking on this crisis-management role but said that he would step down after the general elections in the spring of 2010. Gyurcsany initially remained the leader of the Socialist Party but later resigned from that post too.

Bajnai inherited an economy on the verge of collapse, a public debt standing at 77% of GDP, and a set of strict IMF conditions. The forint had lost 20% of its value against the euro, which made it difficult for the government to service its foreign-currency-denominated debt. The financial crisis also directly affected the 1.7 million citizens—more than a sixth of the population—who had taken out foreign-currency mortgages and loans.

A nonparty technocrat himself, Bajnai created a government of experts, cut ministerial salaries by 15%, and announced an austerity program, which included radical cuts in all areas of public spending and a reform of the health care, pension, and education systems. He overhauled the tax system by cutting personal income tax rates and employers' social security contributions and by increasing the value-added tax (VAT) and excise and business taxes. His government also introduced a new "wealth" tax on property and luxury items. Although Hungary's credit ratings were downgraded in the spring, Bajnai's achievements later eased investors' fears about the country's prospects for riding out the global financial crisis.

In the June European Parliament elections, the opposition Fidesz–Hungarian Civic Alliance (widely known as Fidesz), which was critical of the new government, secured a sweeping 56% of the vote. As in other European Union countries, voter turnout was low, at 36%. The governing Socialists received only 17% of the vote, while the SzDSz–Hungarian Liberal Party captured only 2% in the balloting and thus no seats, which signaled a likely end to that party's 20-year history.

The biggest election surprise was the success of the far-right fringe party Jobbik, which had campaigned on an anti-Jewish and anti-Roma (Gypsy) platform. Supported by a mix of far-right

Attila Kisbenedek—AFP/Getty Images



Protesters in Budapest demand the holding of new elections in Hungary following Prime Minister Ferenc Gyurcsany's offer of resignation on March 21.

and disillusioned Socialist voters, Jobbik won 15% of the vote and became the most popular extremist party in Hungary since the fall of communism in 1989, even though no powerful politicians or public figures were associated with it.

A disconcerting shift toward extremism in Hungary was also indicated by a string of attacks on the country's Roma community and growing public support for the Jobbik-allied paramilitary organization known as the Hungarian Guard. The black-uniformed group was banned during the summer by a Budapest court but was later reconstituted under a different name.

In the autumn bilateral relations between Slovakia and Hungary hit rock bottom after the Slovak parliament approved amendments to its state language law that criminalized the use of minority languages, including Hungarian, in public. All of Hungary's parliamentary parties condemned the law, and Bajnai's government turned to Brussels for help in defending the rights of Slovakia's Hungarian-speaking community, which made up some 10% of the population.

As exports to the European Union collapsed and industrial production plummeted, GDP contracted by 7%. Unemployment rose to more than 10%. Though no banks collapsed, the Bajnai government spent more than 3% of GDP on bank bailouts and loan-guarantee programs. (ZSOFIA SZILAGYI)

ICELAND



Area: 103,000 sq km (39,769 sq mi)

Population (2009 est.): 318,000

Capital: Reykjavik

Chief of state: President Ólafur Ragnar Grímsson

Head of government: Prime Ministers Geir H. Haarde and, from February 1, Jóhanna Sigurðardóttir

In 2009 Iceland's economy continued to struggle following the collapse of the country's banking system a year earlier. Real GDP contracted by an estimated 8–10%; unemployment increased to more than 10%; and the country became heavily indebted abroad. A \$2.1 billion line of credit was extended to Iceland by the IMF and was supplemented by additional loans from the other Nordic states as well as from Poland and the Faroe Islands. In July the Icelandic government announced a plan to recapitalize the country's three largest banks—Landsbanki, Glitnir, and Kaupthing—which the government had seized after the failure of those institutions in October 2008. Landsbanki's situation posed particular problems for Iceland, since more than \$3 billion in deposits in the bank's branches in the

U.K. and The Netherlands could not be withdrawn following the bank's collapse. The U.K. and The Netherlands responded by compensating depositors for most of their losses; in return, Iceland agreed to assume up to \$5.5 billion of debt from Landsbanki and to repay the sum over the next 7–15 years.

In the wake of the banking crisis, Iceland's coalition government of the Independence Party and the Social Democrats, under the leadership of Prime Minister Geir H. Haarde, came under severe criticism. Street demonstrations outside the Althingi (parliament) took place that eventually led to the government's downfall. On February 1 a new coalition government of the Social Democrats and the Left-Green Party came into office under Jóhanna Sigurðardóttir, Iceland's first female prime minister. (See BIOGRAPHIES.) New elections were held on April 25, in which the Social Democrats and the Left-Greens captured a total of 34 seats in the 63-seat legislature, while the Independence Party managed to take only 16 seats. The new government decided to apply for EU membership and filed Iceland's formal application on July 17.

(BJÖRN MATTHÍASSON)

INDIA



Area: 3,166,414 sq km (1,222,559 sq mi)

Population (2009 est.): 1,198,003,000

Capital: New Delhi

Chief of state: President Pratibha Patil

Head of government: Prime Minister Manmohan Singh

Like most countries around the world, India entered 2009 worried about the impact of the global economic downturn on its own growth prospects. Anxiety about the economy was compounded by renewed concern about terrorism in the region, sparked by the vicious terrorist attacks in Mumbai (Bombay) in late November 2008. Despite these problems, the ruling coalition, the United Progressive Alliance (UPA), succeeded in returning to power in the general elections of May 2009, improving its seat tally in the Lok Sabha, the lower house of parliament. (See Sidebar.) Paradoxically, a stronger ruling coalition might find itself under

The Indian Elections of 2009

India's 15th general elections to the lower house of parliament, the Lok Sabha (House of the People), were conducted over a four-week period from April 16 to May 13, 2009. In India's parliamentary system, the country's prime minister is elected by a simple majority of the Lok Sabha's 543 elected members. No single political party had been able since 1984 to secure a majority in the parliament. As a result, the country's oldest and largest party, the Indian National Congress, had led a coalition known as the United Progressive Alliance (UPA) to form governments since May 2004.

In May 2009 the UPA won a near majority, with 262 seats, and the Congress Party improved its own tally from 145 in the 2004 election to 206. The president of the Congress Party and chairperson of the UPA, Sonia Gandhi, widow of slain former Indian prime minister Rajiv Gandhi, had once again nominated Manmohan Singh as prime minister. Because Singh was elected to the parliament as a member of the Rajya Sabha, the upper house, the party's seniormost leader, Pranab Mukherjee, continued as leader of the party in the Lok Sabha. While the triumvirate of Sonia Gandhi, her son, Rahul, and Manmohan Singh ran the party, the government was headed by Gandhi, Singh, and Mukherjee. Mukherjee, a longtime cabinet member, became finance minister in 2009 and remained the government's principal troubleshooter and problem solver.

More political parties contested the election than in previous years, and some newly founded parties, such as the Praja Rajyam (in the state of Andhra Pradesh), registered their presence; in most constituencies the battle was fought mainly between three or four major contenders. The opposition to the ruling alliance was divided largely between the National Democratic Alliance, a coalition led by the main opposition party, the Bharatiya Janata Party (BJP), which won 157 seats, and the so-called Third Front, a shifting alliance of left-wing-, regional-, and caste-based parties led by the Communist Party of India (Marxist), which captured 80 seats.

The Congress Party named Singh its candidate for prime minister, and the BJP selected Lal Krishna Advani; the Third Front had no candidate. Among its several leaders, the main contenders for the prime ministership were thought to be the Uttar Pradesh (UP) chief minister, Mayawati Kumari; the former UP chief minister, Mulayam Singh Yadav; and the former Andhra Pradesh chief minister, Chandrababu Naidu.

The ideological platforms of Indian political parties were traditionally trifurcated into left, right, and centre. The Congress Party always occupied the ideological centre in Indian politics, while the opposition BJP was the party of the right. The communist parties constitut-

ed the core of the left. Such sharp distinctions based on Western political thought tended to break down in India, however, with parties often adopting diametrically opposite policy platforms while in opposition and in government. A growing number of regional- and caste-based parties also tended to adopt shifting platforms.

In the 2009 elections as well, it was difficult to classify the election manifestos of the three major coalitions neatly along this left, right, and centre axis, however apparent the nature of the political divide. Many regional parties did not provide a manifesto. The Congress Party sought support on the basis of its good record of economic management, improvement in relations with major powers, especially the United States (with which India had signed a historic agreement for cooperation in the development of civil nuclear energy), and the promise of a "youthful" leadership under Rahul Gandhi.

For its part, the BJP focused on what it called the Congress Party's inability to deal with the challenge of terrorism and labeled Singh as a weak prime minister who had ceded much political clout to the party president, Sonia Gandhi. The left had a more traditional political platform, echoing its favourite political positions on domestic and global affairs.

Most opinion polls and several exit polls had forecast a "hung" parliament, with no coalition capable of forming a stable government. The results, however, favoured the ruling coalition, with the Congress Party performing impressively in the states of Uttar Pradesh and Andhra Pradesh (in the latter the party held on to power in the state assembly with a thumping majority). While the media credited Prime Minister Singh with securing the victory on the basis of his impressive leadership on the economic and foreign-policy fronts, traditional Congress Party supporters preferred to credit Rahul Gandhi's leadership.

The BJP and the parties of the left were dealt a severe blow, with the left facing particularly ignominious defeats in West Bengal and Kerala. The BJP found itself engaged in a prolonged fratricidal war, with party leader Advani facing severe criticism; his position remained unchallenged, however, owing to internal divisions on the naming of his successor. As the year drew to a close, neither the BJP nor the left had yet recovered from the defeat of 2009, but the Congress Party had not yet been able to articulate an agenda for its new term. As a result, the government completed its first 100 days in office with neither much fanfare nor much to show for its improved strength in the parliament.

(SANJAYA BARU)

less pressure to perform, or at any rate to undertake difficult government and economic reforms. Although government reform was not a key issue in the elections, government failures lay at the root of many of India's problems with law and order, civil strife, and insurgency.

The Economy. After an unprecedented five-year run of a nearly 9% average an-

nual rate of growth, the Indian economy slowed to a growth rate of 7.1% in 2008–09 and was expected to record an even lower rate of 6.3–6.5% in 2009–10. This slowdown was only partly caused by the global downturn. An equally important factor was the poor monsoon rains in 2009, the weakest in more than 35 years, which had a negative impact on agricultural output.

The Indian banking and financial system had virtually no direct exposure to American subprime-mortgage assets or to the financial institutions in the U.S. that were at the heart of the crisis. The Indian central bank took care to ensure that Indian banks had limited "off-balance-sheet" activities and securitized assets and had adhered to the so-called Basel norms, standards set by the Bank

Sucheta Das/AP



Members of the Trinamool Congress Party—part of India's ruling United Progressive Alliance—celebrate with coloured powder following the UPA's strong showing in the general elections in May.

for International Settlements for managing financial risk. The early prudent and risk-averse regulation of the financial system helped to limit the impact of the trans-Atlantic financial crisis on the Indian financial sector.

The economy was negatively affected, however, by various other channels. First, the downturn in global trade reduced export growth. Second, Indian corporations' access to foreign commercial loans was curtailed, and this resulted in the cost of credit going up, since interest rates were higher in India. Finally, reduced portfolio investment in Indian equities by international institutional investors pushed Indian stock market indexes down.

To counter the impact of the slowdown, the government unveiled fiscal stimulus packages in late 2008 and in the first quarter of 2009. This additional public spending contributed to an increase in the government's fiscal and budgetary deficits. A liberal fiscal policy along with insufficient monsoon rains and an expected downturn in agricultural production contributed to inflationary pressures. By the end of 2009, inflation had emerged as a major policy concern.

Foreign Policy. Managing relations with Pakistan in the aftermath of the 2008 terrorist attacks in Mumbai emerged as a major foreign-policy challenge in 2009. Equal attention had to be paid to India's relations with the United States, where a new administration took charge, and with China. India officially accused Pakistan's chief spy agency of

having conspired to stage the terror attacks in Mumbai. The Indian government provided information to Pakistan showing links between the terrorists who attacked Mumbai and militants based in Pakistan, claiming the latter were "clients and creations" of Pakistan's Inter-Services Intelligence agency. Pakistan denied the charge, initially refusing to accept any link to the Mumbai attacks and later conceding that some "nonstate actors" based in Pakistan might have been involved in planning them. The action taken against those identified by India and the United States as coconspirators also became a contentious issue.

Partly to stem this deterioration in the bilateral relationship and partly to pick up the threads of an earlier dialogue with then president of Pakistan Pervez Musharraf, Indian Prime Minister Manmohan Singh met in July 2009 with Pakistani Prime Minister Yousaf Raza Gillani on the sidelines of the Non-aligned Movement summit at Sharm el-Sheikh, Egypt. The joint statement issued after the meeting was criticized in India both by opposition political parties and by sections of the Congress Party (the leader of the ruling coalition) for being too soft on Pakistan and for bringing up, for the first time ever in such a joint statement, the issue of insurgency in Pakistan's Balochistan province. Pakistan had charged India with having aided Baloch rebels, while India maintained that the Baloch nationalist movement was an entirely homegrown resistance movement.

Even as Pakistan dominated the headlines, renewed differences between India and China on the border issue, especially regarding the status of the Indian state of Arunachal Pradesh, caused some friction between the Asian giants. China continued to claim Arunachal Pradesh as its territory. India consistently rejected this claim, having held regular elections to the provincial government, including in October 2009. India's plans to step up infrastructure development in the state met with strong Chinese disapproval on the board of the Asian Development Bank, which India had approached for a loan to fund this investment. Although China tried to block the loan, it was ultimately approved. India-China trade and business relations continued to flourish nonetheless; China emerged as India's biggest trade partner, despite Indian allegations of dumping and nontransparent pricing of Chinese goods. India and China continued to work together in international forums, such as the World Trade Organization, the World Bank, and the IMF, and tried to coordinate their positions in the negotiations on climate change.

The summit of the Group of 20, of which India was a member, emerged as a major global decision-making body in 2009; this was a high point of Indian diplomacy during the year. India remained concerned, however, about the slowing of the pace of its interaction with the United States under the administration of Pres. Barack Obama. While Prime Minister Singh enjoyed a cordial meeting with Obama during Singh's state visit to the U.S. in late November, Obama's preoccupations with domestic economic issues and U.S. relations with China and the Muslim world reduced India's salience in U.S. foreign policy, compared with what it had been under his predecessor, Pres. George W. Bush. India also concluded free-trade agreements with the Association of Southeast Asian Nations and South Korea. (SANJAYA BARU)

INDONESIA



Area: 1,860,360 sq km (718,289 sq mi)

Population (2009 est.): 229,965,000

Capital: Jakarta

Head of state and government: President Susilo Bambang Yudhoyono

In 2009 Indonesia consolidated its reputation as Southeast Asia's most democratic country. Simultaneous elections were held in April for the national, provincial, and district legislatures, and those were followed by direct presidential elections in July. The elections were largely peaceful and, in the opinion of most observers, reasonably fair, despite some administrative bungles by the Election Commission.

In the general elections the Democrat Party (PD) of Pres. Susilo Bambang Yudhoyono (commonly known as SBY) dominated with 21% of the vote. The PD's two major rivals, the Indonesian Democratic Party of Struggle, led by former president Megawati Sukarnoputri, and the Golkar Party of Vice Pres. Jusuf Kalla, each garnered 14%. In their worst-ever election result, Indonesia's Islamic parties together gathered just 29% of the vote, down from the roughly 37% that the parties had received in both the 1999 and 2004 elections. The only Islamic party to improve on its performance in previous elections was the Prosperous Justice Party, which earned 7.8%. Two new political parties, Gerindra and Hanura, led respectively by prominent former generals Prabowo Subianto and Wiranto, returned vote totals of less than 5%, despite expensive advertising and voter-mobilization campaigns. Only 9 of the 38 parties contesting the general elections cleared the 2.5% threshold required for

holding seats in the 560-member national parliament.

The presidential elections were concluded in one round after SBY and his vice presidential running mate, Boediono, won 61% of the vote, inflicting a crushing defeat on Megawati and her running mate, Prabowo, who tallied 27%, and the team of Kalla and Wiranto, who managed only 12%. The election results represented a major political turnaround for SBY. After trailing Megawati in opinion surveys in mid-2008, the president was able to regain the ascendancy, and polls from early 2009 consistently showed him to be by far the most popular and trusted politician in Indonesia. SBY's revival was due in large measure to voter approval of his government's economic policies, which were credited with offsetting the worst effects of the global financial crisis. Indeed, Indonesia had one of the strongest-performing economies in the region, with an annual growth rate of 4.2% that ranked behind only China and India. Robust domestic consumer demand and high export commodity prices were chief drivers of Indonesia's economic expansion. What proved particularly popular with voters was a range of direct government payments to lower-income families to compensate for the effects of rising prices. The commencement of these payments coincided with the rally in the president's support.

Corruption continued to command public and media attention during

2009. Numerous high-level officials were convicted and jailed for graft, including Aulia Pohan, the father-in-law of SBY's son and a deputy governor of Bank Indonesia, the country's central bank. The most sensational case of all, however, was a scandal that surrounded the Corruption Eradication Commission (KPK). In May KPK chairman Antasari Azhar was arrested and charged with graft and with having ordered the murder of an executive at one of Indonesia's state-owned enterprises. Prosecutors allege that Antasari wanted the executive killed because he had threatened to expose Antasari's affair with the executive's wife and his protection of high-level officials involved in corruption. Antasari went to trial in October. His case rendered great harm to the standing of the KPK, previously Indonesia's most respected institution, according to opinion surveys. The commission suffered further damage to its reputation after another two of its five commissioners were forced to stand down after becoming the focus of corruption investigations. The KPK's critics used these events to argue for a reduction in the commission's powers.

On July 17 Indonesia experienced its first terrorist attack in almost four years when two suicide bombers struck the luxury JW Marriott and Ritz-Carlton hotels in Jakarta, killing 9 people and injuring 50 others. Responsibility for the bombing was claimed by Noordin Top, a former member of the Jemaah Islamiyah terrorist organization. Two weeks later police raided a house on the outskirts of Jakarta and discovered a large car bomb possibly intended for an attack against SBY. A string of arrests followed, culminating in the shooting of Noordin and several of his top associates at their hideout in Central Java. Noordin's death was a heavy blow for violent jihadism in Indonesia; he had been a key figure in all of the major terrorist bombings in the country since 2003.

In late September and early October, several earthquakes struck western Indonesia, causing devastation and heavy loss of life in the Padang region of West Sumatra. The confirmed death toll exceeded 600, with estimates that more than 1,000 people may have perished. The collapse of many public buildings prompted calls for tighter construction standards, particularly given that scientists were warning of more severe quakes over the next two decades.

(GREG FEALY)

Election officials dressed as wayang (classical Javanese puppet) characters stand guard at a polling station in Solo, Java province, during Indonesia's presidential elections in July.



Andry Prasetyo—Reuters/Landov

IRAN



Area: 1,648,200 sq km (636,374 sq mi)

Population (2009 est.): 74,196,000

Capital: Tehran

Supreme political and religious authority:

Rahbar (Spiritual Leader) Ayatollah Sayyed Ali Khamenei

Head of state and government: President Mahmoud Ahmadinejad

As the 2009 presidential election approached, Iran faced a period of intense political turmoil. In the run-up to the election, a power struggle developed between key individuals critical of Pres. Mahmoud Ahmadinejad and those who supported him. Ahmadinejad, aligned with the country's Revolutionary Guards, was confronted by an array of reformists, clergy, conservatives, and progressive intellectuals who hoped to ensure his defeat in the election scheduled for June 12. As the election drew closer, Ahmadinejad's opposition coalesced around one main challenger, Mir Hossein Mousavi. (See BIOGRAPHIES.) For the first time, the hierarchy of the Islamic Republic was split in public on the course of future action.

As a result, the election outcome was expected to be close. The announcement on June 13 that Ahmadinejad had won outright was therefore greeted by many with surprise. Official results indicated that the turnout was 85% but that only 34% of the vote was won by Mousavi, who demanded that the results be investigated. The failure of Supreme Leader Ayatollah Ali Khamenei to respond to election irregularities led to a week of unrest among those frustrated by Ahmadinejad's dubious success.

On June 19 Khamenei issued a public call for unity but also increased police and Basij militia antiriot action against demonstrators. In July the riots gradually abated, but agitation for a new election remained. Nevertheless, Ahmadinejad was sworn in as president on August 5 with Khamenei's blessing. The rupture caused by the disputes damaged the cohesion of the ruling elite, making Iran politically less stable in spite of declarations that no erosion had occurred in regard to the principles of the Islamic republic.



Supporters of Iranian opposition leader Mir Hossein Mousavi rally in front of the Azadi ("Freedom") tower in Tehran to protest the outcome of Iran's June presidential election.

Political maneuvering continued after the midyear unrest with neither side entirely dominant. Ahmadinejad won control of most ministries in the new cabinet, although there were areas that were taken over by opponents. Among these were the judiciary, which was headed by Sadeq Larijani, the brother of Majles (parliament) speaker Ali Larijani. Talks between Khamenei and former president Hashemi Rafsanjani in August brought relief from overt infighting within the regime.

The unity of the regime was again severely tested when the death of Grand Ayatollah Hossein Ali Montazeri, who had opposed the election results, was announced on December 19. (See OBITUARIES.) The event sparked further uprisings in Tehran on December 27 in which five protesters were killed. The government was much taken aback by this recurrence of violence and by the size of the opposition clustered around Mousavi, whose nephew was among those killed during the riots. There was no sign at any stage that the regime would change the decision concerning the legitimacy of the election, however.

The political unrest in June and July interrupted a slight easing of relations with the U.S. Although U.S. Pres. Barack Obama had sent a Noruz (New Year) message to the Iranian people and had offered wide-ranging diplomatic dialogue with the regime, the harsh treatment of peaceful demonstrators following the elections evinced a sharp rebuff from Obama.

The U.S. also claimed a direct role in negotiations over Iran's nuclear program. Secretary of State Hillary Clinton

responded to Iran's continuing failure to desist from developing nuclear capacity and promised U.S. protection to the Arab states of the Persian Gulf against any Iranian threat. The meeting of the UN General on September 24 endorsed Obama's proposals for an end to the proliferation of nuclear weapons.

Nevertheless, Iran pressed on with its nuclear program, including plans to inaugurate the Bushehr atomic power station, expand capacity at Natanz, and secretly create a new underground facility near Qom. Negotiations with the EU toward external monitoring of the nuclear program made little progress. Ahmadinejad's government continued its support for militant groups such as Hamas and Hezbollah, adding to friction with the U.S., the EU, and Israel.

Discontent with the Ahmadinejad government, caused partly by its poor economic performance, contributed to the June rioting. Economic growth registered about 6% but was declining. GDP stood at \$344.8 billion in March, with per capita income about \$4,837. Inflation ran at some 25% during the year. Meanwhile, the oil sector's earnings totaled \$81.2 billion but were scheduled in the 2009–10 budget to decrease to about \$30 billion–\$36 billion as the oil price dipped on the international market. The unemployment rate exceeded 10%.

The annual budget expenditure was reduced to \$298 billion. A key reform expected to be introduced in the 2010–11 budget was a contentious plan to gradually eliminate subsidies on fuel, food-stuffs, and medical equipment. (KEITH S. MCLACHLAN)

IRAQ



Area: 434,128 sq km (167,618 sq mi)
Population (2009 est.): 30,747,000 (including about 2,000,000 Iraqi refugees, of which about 1,200,000 are in Syria and about 450,000 are in Jordan)
Capital: Baghdad
Head of state: President Jalal Talabani
Head of government: Prime Minister Nuri al-Maliki

Iraq's provincial elections of Jan. 31, 2009, produced some unexpected results with significant implications. Prime Minister Nuri al-Maliki's State of Law coalition list emerged as the big election winner. Maliki, who campaigned on behalf of a stronger central government, made substantial gains against Shi'ite and Kurdish blocs, mainly the Shi'ite Islamic Supreme Council of Iraq (ISCI). Arab Sunnis participated broadly for the first time since the national elections of 2005. The results revealed a turn by Iraqis away from sectarianism and indicated approval of Maliki's tilt toward the political centre. The provincial elections, however, did not include the three Kurdish provinces in the north or the disputed city and province of Kirkuk. All parties were quick to absorb the theme of the election results—a popular desire for reconciliation—and to reflect this message in their campaign programs in preparation for the national parliamentary elections of 2010.

After repeated delays, on November 8 the Iraqi Council of Representatives adopted the long-awaited new election law. The law had been held up largely by the explosive dispute over the oil-rich province of Kirkuk, where Arabs, Kurds, and Turkmen each claimed a majority. The parliament resolved the contention, temporarily, by agreeing to use voter rolls from 2009 and not 2005; although national elections had been last held in 2005, many displaced Kurds had not yet moved back into the region by that year. The new election law provided for an open list, in which voters could choose candidates by name, rather than a closed (party) list, in which voters would not know the names of individual candidates. The number of deputies was increased from 275 to 325 to accommodate population growth.

Parts of this election law were vetoed, however, by Vice Pres. Tariq al-Hashimi, a Sunni. He sought more seats in the parliament for some 2.6 million Iraqi refugees, most of whom were Sunni. A new amendment, backed by Shi'ite and Kurdish members, shuffled the new distribution of seats by reverting to the 2005 voter rolls and adding seats for a 2.8% annual increase in the population. This result gave more seats to Kurds than to Sunnis. Finally, after more negotiations, on December 6 lawmakers, pressured by the U.S. and the UN, reached a compromise on seat distribution, which gave a slight increase to the Sunni provinces. The date for the 2010 elections was rescheduled from January 16 to March 7.

Although Iraq still suffered from a lack of security, the year saw an improvement in that situation compared with previous years. The reduction in violence helped the U.S. to withdraw its troops from Iraqi urban areas by June 30 and to regroup in less-visible camps in the countryside. A Status of Forces Agreement concluded in 2008 between Iraq and the U.S. specified that the Iraqi army and police would assume the responsibility for manning checkpoints and patrolling city streets in Baghdad and elsewhere. Some joint U.S.-Iraqi military operations continued against al-Qaeda and other insurgents, especially in and around Baghdad and the northern province of Nineveh.

Iraq continued to face many problems: high unemployment (18–20%), low standards of living, and a lack of potable water and electricity. Corruption remained very high, as did common crime—robbery, murder, and kidnapping for ransom. All those social ills created a deep sense of discontent and unease among Iraqis and prevented many Iraqi emigrants from returning from neighbouring Syria and Jordan.

On August 26 'Abd al-'Aziz al-Hakim (see OBITUARIES) died of lung cancer. Hakim had been the most powerful Shi'ite political figure in Iraq and the leader of the ISCI, the main Shi'ite political party. His death created a political vacuum and some turmoil in the party, which prompted the election, on September 1, by the party leadership of his son, 'Ammar al-Hakim, to replace him as head of the ISCI.

In the semiautonomous Kurdish region of northern Iraq, the Kurds continued to build their own institutions. On July 25 parliamentary and presidential elections were held in the three provinces that constituted the Kurdistan Regional Government—Al-Sulaymaniyah, Arbil, and Dahuk. Twenty-four lists competed for 111 parliamentary seats, and five candidates stood for the presidency. The Kurdistan list, comprising the Kurdistan Democratic Party (KDP) and the Patriotic Union of Kurdistan (PUK), came in first, winning 57.3% of the vote. A new party, Change, which had split from the PUK, came in

Iraqis gather at the site of a massive bomb attack near the Ministry of Justice in Baghdad on October 25.



Hadi Mizban/AP

second with 23.8%, and a reform list was third, with 12.8%. In the presidential elections Mas'ud Barzani, head of the KDP, won with 69.6% of the vote. A coalition government, dominated by the KDP and the PUK and headed by Barham Salih (PUK), was formed.

Despite repeated delays by the parliament in approving a new oil law, the Iraqi government signed an important agreement on November 3 with a consortium of BP and the China National Petroleum Corp. to develop the giant oil field of Al-Rumaylah in southern Iraq, a step forward for the Iraqi oil industry. BP had been expelled from Iraq in 1972 when the former Ba'th regime nationalized the oil industry.

Water shortages continued to be a major problem in Iraq. The government worked with neighbouring countries Syria, Turkey, and Iran to increase the amount of water they allowed to flow into Iraqi rivers. Water shortages and water pollution were particularly felt in Basra and elsewhere in southern Iraq.

On October 13 the Iraqi parliament approved an Iraqi-British security pact, despite the protest of some lawmakers. The agreement allowed the British to help develop Iraqi naval forces.

Relations with Syria deteriorated when Iraq accused the Syrian government of tolerating al-Qaeda militants and former Ba'thists living in Syria whom Iraqi officials blamed for major explosions in Baghdad. These explosions, on August 19 and October 25, killed hundreds of Iraqis and severely damaged several government buildings. Syria denied any involvement in the bombings, but Iraq insisted on a UN investigation and rejected any mediation by Arab or other countries.

Iraq's relations with Kuwait remained tense. Iraq had been hoping for the cancellation of some \$25 billion in UN-required reparations for Iraq's 1990 invasion of Kuwait. Those requests had been systematically rejected by Kuwait, which insisted on full payment. By fall 2009 Kuwait had become more inclined to accept a UN-sponsored solution suggesting that Kuwait invest those reparations in diverse development projects in Iraq. Iraq had also asked other Arab countries, including Saudi Arabia, to cancel its outstanding debts. Settling the Kuwaiti reparations issue was essential to removing Iraq from obligations imposed under Chapter VII of the UN Charter after the country's failed invasion of Kuwait, which in turn was vital to Iraq's ability to trade freely with the rest of the world. (LOUAY BAHRY)

IRELAND



Area: 70,273 sq km (27,133 sq mi)

Population (2009 est.): 4,553,000

Capital: Dublin

Chief of state: President Mary McAleese

Head of government: Prime Minister Brian Cowen

In Ireland a very difficult 2009 ended without firm solutions to many problems posed by the global financial crisis, though government efforts to impose pay cuts, increase taxes, and reduce public spending signaled that the task of rebuilding the economy had begun. The scale of the damage caused by the crisis would previously have been unimaginable. Early in the year Ireland's two major financial institutions, Allied Irish Banks and the Bank of Ireland, were on the brink of default; lending had stopped, unfinished construction sites were boarded up, and drastic job cuts occurred as businesses slashed expenses. In February the government agreed to provide Allied Irish Banks and the Bank of Ireland each approximately \$5.25 billion in recapitalization funds, and in September it proposed legislation to set up a state-run "bad bank"—known as the Na-

tional Asset Management Agency—to absorb nonperforming loans from a number of domestic commercial banks and thereby enable those institutions to resume normal commercial lending.

A government advisory committee, the Special Group on Public Service Numbers and Expenditure Programmes, chaired by economist Colm McCarthy, published a report in July that identified \$7.5 billion in possible public spending cuts, including a 5% reduction in social welfare payments and the elimination of more than 17,000 public-sector jobs. In setting out a menu of options for the 2010 annual budget, the McCarthy report included numerous measures that would be politically difficult to implement. Among the more controversial suggestions were cuts in health care spending, the closure of half of all police stations, and sharp reductions in payments to farmers. As the December deadline for the annual budget approached, tensions emerged in the coalition government led by Fianna Fáil and the Green Party, with a number of backbench members of Fianna Fáil withdrawing their support for the government and the Green Party threatening to withdraw support until it had secured concessions on protecting education spending and in other areas.

Prime Minister Brian Cowen had a torrid first 18 months in office, receiving blame for the country's economic problems and for squandering the budget surplus. Local government and

In Dublin, supporters of the EU's Lisbon Treaty celebrate the overwhelming passage of the measure by Irish voters in a referendum held in October.



Julien Behal—PA Wire/AP

European Parliament (EP) elections held in June gave no comfort to the ruling coalition. Both Fianna Fáil and the Greens lost seats in county and city council elections, while the opposition Fine Gael and Labour Party made gains. Sinn Féin, however, was unable to capitalize on the economic travails, losing its sole EP seat and failing to make expected gains elsewhere. The recently formed pan-European Libertas party, which had campaigned against the Lisbon Treaty on EU organization, also disappointed its supporters, failing to win a single EP seat. After having initially rejected the Lisbon Treaty in a 2008 referendum, Irish voters passed the measure by a margin of 67% to 33% in a new referendum held in October.

Not all of Ireland's woes were political or economic. The Commission to Inquire into Child Abuse, which was established in 2000 to investigate the abuse of children in Catholic-run residential institutions in Ireland from the 1930s onward, published its final report in May. The report concluded that beatings and neglect were routine and that sexual abuse was "endemic" in many institutions and also that church authorities were often aware of the abuse and made efforts to protect offenders from legal charges. In a leading editorial, the *Irish Times* described the report as a "map of an Irish hell." A separate inquiry into child-abuse allegations against clergy members in Dublin ended in July; the inquiry focused on allegations made against 46 priests between 1975 and 2004 and on how those complaints were handled by the archdiocese of Dublin. The inquiry's findings caused considerable public disquiet over the role of senior churchmen, who were criticized for not pursuing allegations of child sex abuse by clergy with sufficient vigour. By year's end four of the five serving bishops cited in the report had resigned.

Consumer prices in Ireland continued to fall. In November the Consumer Price Index showed prices down 5.7% over a 12-month period. In the first 10 months of the year, housing prices fell by 12.7% (this figure referred only to completed home sales). Unemployment continued to rise throughout the year. From January to November the seasonally adjusted rate was 12.5%—almost double that of a year earlier. Net emigration resumed, with an estimated 65,100 people emigrating during the 12 months ended in April—an increase of more than 40% over the previous 12-month period—while the number of

immigrants declined from 83,800 to 57,300. The number of births reached 74,500 during 2009, the largest figure attained since 1896. (KIERAN FAGAN)

ISRAEL



Area: 21,643 sq km (8,357 sq mi), including the Golan Heights and disputed East Jerusalem, excluding the Emerging Palestinian Autonomous Areas

Population (2009 est.): 7,128,000, excluding 305,000 Jews in the West Bank

Capital: Jerusalem is the proclaimed capital of Israel (since Jan. 23, 1950) and the actual seat of government, but recognition has generally been withheld by the international community

Chief of state: President Shimon Peres

Head of government: Prime Ministers Ehud Olmert and, from March 31, Benjamin Netanyahu

The Emerging Palestinian Autonomous Areas (the West Bank and the Gaza Strip)

Total area under disputed administration: West Bank 5,900 sq km (2,278 sq mi); Gaza Strip 363 sq km (140 sq mi)

Population (2009 est.): West Bank 2,787,000, including 2,482,000 Arabs and 305,000 Jews; Gaza Strip 1,492,000

Principal administrative centres: Ramallah and Gaza

Head of government: President Mahmoud Abbas, assisted by Prime Minister Salam Fayad

In 2009 three major developments dominated the Israeli political scene. The election of Benjamin Netanyahu to a second term as prime minister, a more vigorous U.S. Middle East peace policy, and the international fallout from Israel's 22-day military operation in the Gaza Strip from late December 2008 to mid-January all had potentially far-reaching consequences.

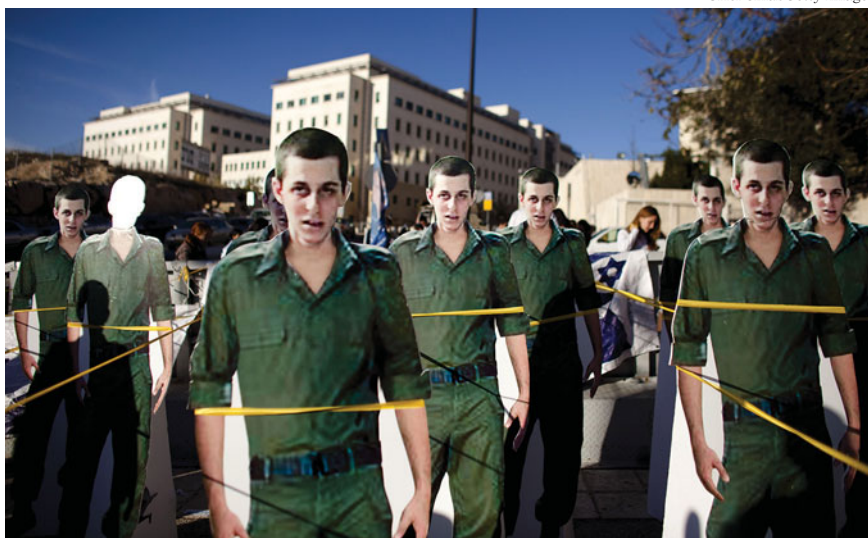
Netanyahu's victory in the February election was far from clear-cut. Although his right-wing Likud party won one seat fewer than former foreign minister Tzipi Livni's centrist Kadima, the right-wing bloc of parties allied to Likud garnered a majority of 65 seats in the 120-member Knesset (parliament). This enabled Netanyahu to form a stable 74-member coalition composed of Likud (27 seats), right-wing Yisrael

Beiteinu (15), three right-tending religious parties (Shas [11], Torah Judaism [5], and Jewish Home [3]), and, controversially, the centre-left Labour Party (13), whose leader, Ehud Barak, retained the defense portfolio and became one of Netanyahu's closest confidants.

After taking office on March 31, Netanyahu distanced himself from the internationally accepted two-state model for peace with the Palestinians but, under heavy pressure from Washington, soon backtracked. In a major policy speech at Bar-Ilan University on June 14, he committed himself to an independent Palestinian state alongside Israel. "In my vision of peace, there are two free peoples living side by side in this small land, with good neighbourly relations and mutual respect, each with its flag, anthem, and government, with neither threatening its neighbour's security and existence," he declared. Netanyahu's offer, however, was not unconditional: the Palestinian state would have to be demilitarized; the Palestinians would have to recognize Israel as a "Jewish state"; no Palestinian refugees would return to Israel-proper; and no part of Jerusalem—which would not be divided—would serve as the capital of the Palestinian state. The Palestinians, who had been offered far more by outgoing prime minister Ehud Olmert, were reluctant to engage on this basis and demanded that Netanyahu first freeze Jewish settlement construction in the West Bank as a sign of good faith.

In 2009 Pres. Barack Obama led a dynamic U.S. resolve to promote comprehensive Israeli-Arab peace, which he saw as the key to stability and the restoration of U.S. standing in the region. In a seminal speech made at Cairo University on June 4, he set down conditions for the resumption of Israeli-Palestinian negotiations, including a freeze on the construction of Jewish settlements in the West Bank, and urged the Arab world to encourage peacemaking by taking initial steps toward normalization with Israel. But the mooted freeze-for-normalization deal failed to materialize, and in late October, after months of intensive shuttle diplomacy, special U.S. Middle East envoy George Mitchell acknowledged that little progress had been made.

Promising peace negotiations under the previous Israeli government had broken down in December 2008 when Israel launched a major military operation against the radical Hamas government in the Gaza Strip. Determined to put an end to eight years of Hamas



Demonstrators in Jerusalem hold up cardboard cutouts of Gilad Shalit, a captive Israeli soldier, during a December protest held outside Prime Minister Benjamin Netanyahu's office to demand Shalit's release. Shalit had been held prisoner by Hamas militants since June 2006.

rocketing of Israeli towns and villages in the Gaza periphery, the Israeli Defense Forces (IDF) struck with overwhelming power, first bombing Hamas military and government targets from the air and then sending in ground forces and using heavy fire to advance in booby-trapped urban areas.

According to Palestinian sources, 1,417 Palestinians, 926 of them non-combatants, were killed in the 22 days of fighting; Israel put the Palestinian death toll at 1,166 and claimed that at least 709 were militiamen. Although Hamas fighters launched hundreds of rocket attacks during the operation, Israel lost only 10 soldiers and 3 civilians.

The disparity between the death tolls and the widespread destruction in Gaza led to claims that the IDF's response had been disproportionate and indiscriminate. Israel argued that its soldiers, faced with the problem of fighting militants who were embedded in heavily populated urban areas and deliberately using civilians as human shields, had operated strictly within the laws of war and had made strenuous efforts to warn civilians to move out of harm's way before impending attacks.

In early April the UN Human Rights Council established a fact-finding commission under South African judge Richard Goldstone to investigate violations of human rights and humanitarian law in the Gaza fighting. The commission heard testimony mainly from Palestinians, as Israel—charging that the commission's mandate was inher-

ently biased—refused to cooperate. On September 15 the commission issued a 575-page report stating that it had found evidence that international human rights and humanitarian law had been seriously violated. It also concluded that Israel had “committed actions amounting to war crimes, and possibly crimes against humanity.”

Netanyahu accused the commission of having applied “twisted standards” and of having played into the hands of radicals who hoped to defeat Israel by delegitimizing it on the international stage. He warned that if Israel was denied the right to defend itself against future rocket attacks, it would not be able to take risks for peace. The U.S. characterized the Goldstone report as biased and deeply flawed, but it urged Israel to conduct an independent investigation of its own, partly as a means of removing the report from the international agenda and paving the way for renewed Israeli-Palestinian peacemaking.

Although the Gaza operation hurt Israel's international image, it also seemed to establish a strong deterrent balance, at least in the short term. Nine months after the war, there was virtually no rocket fire from Gaza. Behind the scenes Israel and Hamas—through German mediation—were negotiating a deal for the release of Gilad Shalit, the Israeli soldier held prisoner by Hamas militants since June 2006.

Although both Hamas and Hezbollah used the lull to build up huge rocket ar-

senals, Israeli leaders were far more concerned by the strategic threat posed by Iran. Addressing the UN General Assembly on September 24, Netanyahu urged the international community to prevent the “tyrants of Tehran” from acquiring nuclear weapons. In late October Barak expressed Israel's concern that Iran would exploit talks with the Western powers to gain time while continuing to pursue a clandestine nuclear weapons drive.

Nevertheless, despite differences over the efficacy of diplomacy with Iran, Israel and the U.S. continued to coordinate defensive measures in the event of a military showdown with Tehran. In the Negev desert in late October, in by far the largest and most sophisticated joint exercise of its kind, the IDF, the U.S. European Command, and the U.S. Missile Defense Agency tested the interoperability of four state-of-the-art defense systems against incoming ballistic missiles: the U.S. high-altitude THAAD, the ship-based Aegis, the lower-altitude Patriot (PAC-3), and the Israeli high-altitude Arrow 2.

On the economic front, 2009 saw Israel emerging from the global economic crisis relatively unscathed. The government passed a two-year budget with increased spending to counteract growing unemployment, and the Bank of Israel lowered interest rates to encourage business activity. By the beginning of the fourth quarter, Israel seemed to have turned the corner. The Tel Aviv Stock Exchange had gained more than 60% over the lows of December 2008; the Composite State-of-the-Economy Index had risen for a fourth consecutive month; and the Bank of Israel was optimistically forecasting growth of 3% for 2010. Nevertheless, there were two main concerns: a weak U.S. dollar was hurting Israeli exports, and the national debt-to-GNP ratio for the end of 2009 was projected to top 84%. (LESLIE D. SUSSER)

ITALY



Area: 301,336 sq km (116,346 sq mi)

Population (2009 est.): 60,325,000

Capital: Rome

Chief of state: President Giorgio Napolitano

Head of government: Prime Minister Silvio Berlusconi

Tiziana Fabi—AFP/Getty Images

A devastating earthquake and allegations of sexual impropriety leveled against the country's billionaire prime minister, Silvio Berlusconi, riveted Italians in 2009. On April 6 an earthquake with a magnitude of 6.3 devastated a mountainous stretch of the Abruzzi region. The tremor severely damaged the 13th-century city of L'Aquila, located only about 100 km (60 mi) northeast of Rome. Aftershocks from the country's worst earthquake in 30 years rippled through central Italy for more than a month, fraying both public and political nerves. In all, at least 294 people died, and an estimated 60,000 were left homeless.

Two days after the quake, Prime Minister Berlusconi seized the media limelight by visiting homeless victims and promising a swift and thorough reconstruction of the affected areas. At Berlusconi's insistence, the Group of Eight summit that had been scheduled to take place on Maddalena Island, off the coast of Sardinia, was moved to L'Aquila. The summit was held there in July under makeshift conditions to focus global attention on the catastrophe. U.S. Pres. Barack Obama, visiting Italy in an official capacity for the first time, toured the city's rubble-strewn neighbourhoods, shaking hands and rallying local residents. By September vigorous assistance efforts had succeeded in moving some of the dispossessed into new homes, though thousands remained housed in temporary facilities.

Scientists remained concerned about the high potential for future seismic activity along Italy's geologically vulnerable eastern spine, the Apennine Mountains, where the quake had occurred. Though seismologists reiterated the need for stricter adherence to building codes, there was little immediate evidence that their counsel was being heeded. Italy had thousands of centuries-old structures that were difficult to modify.

Politically, Berlusconi's dominant centre-right People of Freedom Party endured a variety of controversies in its first full year of rule. Subject to numerous corruption and conflict-of-interest probes over the years, the 72-year-old Berlusconi, a longtime business and media tycoon, suddenly found himself embroiled in corrosive sex scandals.

In May, Veronica Lario, Berlusconi's wife of 19 years, announced that she



Facing allegations of sexual impropriety, Italian Prime Minister Silvio Berlusconi (left) speaks with a television presenter on May 5 following the announcement that his wife, Veronica Lario (pictured in the background), had filed for divorce.

would file for divorce, after having found out that her husband had attended the 18th birthday party of Naples model Noemi Letizia. He allegedly had given Letizia a gold and diamond necklace as a birthday gift. Noting that her husband rarely attended his own family's festivities, Lario said that she could not remain with a man "who consorts with minors." Letizia responded by saying that Berlusconi was merely a friend and benefactor whom she knew as "Papi," a version corroborated by an unapologetic Berlusconi. He insisted that he had attended Letizia's celebrations as a favour to her father, a businessman friend.

Soon after the Letizia controversy, 42-year-old escort Patrizia D'Addario publicly announced that she had been recruited by a middleman to spend the night with Berlusconi. She also alleged that the prime minister had later promised that she could stand for election to the European Parliament as one of his party's candidates. This time an enraged Berlusconi blamed unnamed political enemies for spreading malicious rumours and invading his privacy, dismissing D'Addario's account as defamatory gossip. In a remarkable series of rebuttals, Berlusconi also declared that, while he was "no saint," he was still "the best prime minister" Italy had ever had and a man whose status and character most Italians sought to emulate, though dips in public opinion polls suggested otherwise.

These tawdry scandals also damaged Berlusconi's already shaky reputation

among the country's Roman Catholic leaders, producing a rare public skirmish between the government and the Vatican. Essays critical of Berlusconi's moral judgment by Dino Boffo, the editor of *Avvenire*, the newspaper of the Italian Bishops' Conference, led to a fierce counterattack by *Il Giornale*, a daily owned by Berlusconi's brother, pointing out that Boffo was once embroiled in a sexual harassment case. The embittered Boffo eventually resigned, and Berlusconi met hastily with Pope Benedict XVI in an effort to mend the growing rift.

Berlusconi experienced a major setback in October when the Constitutional Court ruled that a 2008 law granting the prime minister and other leading officials immunity from prosecution while in office was unconstitutional. Although he had threatened to resign if the law was overturned, Berlusconi pledged instead to continue as prime minister and to defend himself in court, where he was expected to face trial in a few outstanding corruption and tax-fraud cases. The trials were expected to last into 2010 and beyond.

A September suicide bombing that killed six Italian paratroopers stationed in Afghanistan intensified the debate over Italy's participation in NATO-led efforts to pacify that country. The government, however, said that it would honour its commitments. In October Berlusconi angrily denied reports that Italy had paid Taliban leaders and other warlords in order to keep the peace in areas of Afghanistan where Italian soldiers were deployed.

Meanwhile, a rift between two key Berlusconi allies became nearly unbreachable. The recommendation of Gianfranco Fini, president of the lower house of parliament, to make legal immigrants eligible for Italian citizenship and to grant them voting rights was bitterly rejected by Umberto Bossi, the leader of the Northern League, a party that had been outspoken in its resentment of immigrants. Bossi replied that so-called easy citizenship would never happen.

The ongoing government debate over immigration policy came as Italian naval patrols continued to turn away new waves of would-be arrivals on Italian shores. Over the course of the year, several rickety vessels packed with migrants were intercepted and forced

away, despite protests from the European Union and humanitarian officials. Most of these vessels came from Libya and Morocco. In March, Berlusconi traveled to Tripoli to mark Libyan ratification of a 2008 cooperation deal that had called for the widening of business ties between the two countries in exchange for Libya's promising to help reign in Italy-bound migrants. In June, Libyan leader Col. Muammar al-Qaddafi paid his first visit to Rome, where the two nations agreed on further measures to police immigration.

The immigration controversy was fueled by the poor performance of Italy's economy, which was in recession partly because of the global economic crisis. In September the European Commission dampened hopes of an immediate recovery by announcing that it expected a 5% drop in Italy's 2009 GDP rather than the 4.4% decrease forecast earlier in the year. The Commission could not foresee a recovery before mid-2010. The IMF's assessment was similar; it predicted a 5.1% drop in GDP in 2009, followed by a marginal 0.1% recovery in 2010. Meanwhile, on its business-confidence index for April, the Rome-based Institute for Studies and Economic Analyses recorded a level of 59.8 for Italy, the lowest for the country since the institute was founded in 1986.

Unemployment also continued to loom large. The Organisation for Economic Co-operation and Development (OECD) predicted that Italy's jobless figures would reach into the double digits if the economy failed to regain momentum. What most troubled the OECD was rising unemployment among 15- to 24-year-olds, which had increased by 5% in 2008 to 26.3%, meaning that more than a quarter of the country's youth were out of work.

Some social critics suggested that Letizia's alleged affair with Berlusconi represented the revival of a trend for young women to seek dalliances with successful men in the political, sports, and entertainment worlds as a means to escape poor job prospects. Others blamed Italian television for objectifying women.

Despite the precarious economy, Italian politics appeared all but bereft of a functional opposition. Walter Veltroni, the centre-left leader of the Democratic Party who had once been anointed as a future prime minister, resigned from his post in February after the party suffered heavy defeats in Sardinian local elections. His successor, Dario Franceschini, made little immediate impact

and was soon replaced by political veteran Pier Luigi Bersani. This turmoil in the ranks of the opposition seemed to leave Italy's fate even more squarely in the hands of Berlusconi's People of Freedom Party and its allies.

Melancholy was echoed even in the sports world, where rabid soccer fans were forced to reckon with a national team whose performances, while successful, were generally lacklustre. Fans also watched the exodus of some of the top soccer league's best players. Zlatan Ibrahimovic of Sweden, the star of Serie A titleholder Inter Milan, explained his defection to FC Barcelona of the Spanish La Liga in terms of salary and his belief that Spain offered the opportunity for more creative play. Kaká of Brazil, AC Milan's hallmark midfielder, said much the same, though more diplomatically, as he packed his bags for Real Madrid. Owners also acknowledged that they had reduced spending as a result of the poor economy, and no Italian team made it past the quarter-finals in the European championships. In Formula 1 auto racing, Italy's best-known international brand, Ferrari, was repeatedly humbled by teams with far less know-how and cash.

(CHRISTOPHER P. WINNER)

JAMAICA



Area: 10,991 sq km (4,244 sq mi)

Population (2009 est.): 2,702,000

Capital: Kingston

Chief of state: Queen Elizabeth II, represented by Governors-General Kenneth Hall and, from February 26, Patrick Allen

Head of government: Prime Minister Bruce Golding

In January 2009, Jamaica's Office of Utilities Regulation (OUR) announced that at least 600 MW of additional power would be required over the next 10 years to meet the country's growing energy needs. The Jamaica Public Service Co., an electric utility in which the government held a 20% stake, and independent power producers currently supplied about 817 MW to the national grid. The OUR hoped that at least 15% of the total power required by 2020 could be derived from renewable energy sources.

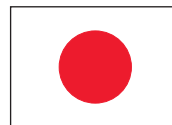
The hijacking in April of a chartered Canadian plane at Sangster international airport in the resort town of Montego Bay ended without injury after police stormed the aircraft and arrested a local man who had taken over 160 passengers and crew members hostage. The hijacker said that he wanted to be taken to Cuba. Local officials described him as a "mentally challenged" youngster.

Jamaica reaffirmed in June that it was not averse to going against the grain of international opinion by retaining the death penalty as part of the country's judicial system. In late 2008 both houses of Parliament had voted in favour of hanging as the method of execution. There were nine people on death row at midyear.

In July the Jamaican government confirmed that it had made a formal application to the IMF to borrow \$1.2 billion under a stand-by agreement. The IMF and Jamaica agreed on "key elements" of a \$1.3 billion loan in December.

(DAVID RENWICK)

JAPAN



Area: 377,930 sq km (145,920 sq mi)

Population (2009 est.): 127,556,000

Capital: Tokyo

Symbol of state: Emperor Akihito

Head of government: Prime Ministers Taro Aso and, from September 16, Yukio Hatoyama

Domestic Affairs. In Japan's general election held on Aug. 30, 2009, the Liberal Democratic Party (LDP) was forced from office for only the second time in 54 years as the opposition Democratic Party of Japan (DPJ) ascended to power under the leadership of Yukio Hatoyama. (See BIOGRAPHIES.) The DPJ achieved an even greater landslide victory than political forecasters had predicted, increasing its seat total in the 480-seat lower house of the Diet (parliament) from 115 to 308 while the LDP slid from 300 seats to just 119.

Politics during 2009 revolved almost completely around the election. Taro Aso, who began the year as prime minister, had initially hoped to call an election soon after he was chosen to replace Yasuo Fukuda as LDP leader in

Yoshikazu Tsuno—AFP/Getty Images

September 2008. Before he could do so, however, the global financial crisis hit Japan hard, causing a sharp contraction of economic activity that saw GDP shrink by 8.4% year-on-year in the first quarter of 2009. Aso's government responded to the crisis with three stimulus packages amounting to roughly \$275 billion, but this stimulus failed to reverse the unemployment rate, which crept steadily upward from 4% in mid-2008 to a postwar high of 5.7% in July 2009.

Aso postponed plans for the election while waiting for an economic turnaround to commence. The announcement in March that prosecutors were investigating a violation of the Political Funds Control Law involving DPJ leader Ichiro Ozawa gave Aso hope that the opposition might be so distracted by the scandal that it could not take advantage of the weak economic situation. Indeed, the DPJ's approval rating dropped to 18% in April as Ozawa considered how to respond. His chief secretary, Takanori Okubo, had been arrested and then prosecuted for having directed a donor, Nishimatsu Construction, to circumvent the ban on corporate donations to individual politicians by funneling money to Ozawa's fund-raising organization via a pair of political front groups. Ozawa claimed ignorance and refused for two months to resign, even as his party continued to slip in the polls. Ozawa himself was never charged, but on May 11 he announced his resignation as party leader—just two days before he was scheduled to debate Aso in the Diet.

This turned out to be the nadir in the DPJ's poll standings; the party quickly began to recover once it had put the scandal behind it. Just five days after Ozawa's resignation, the DPJ held a leadership vote, in which Hatoyama bested Katsuya Okada. Both men had served as party leader before, with Okada presiding over the DPJ's defeat in the previous lower house election in 2005 and Hatoyama serving as leader from 1999 to 2002. Although Hatoyama was closely associated with Ozawa, he was able to prevail in part because the party's rank-and-file members realized that they still needed Ozawa, who continued to lead the DPJ's efforts to plot election strategy.

The DPJ defeated the combined forces of the LDP and the New Komeito party



On July 27, Democratic Party of Japan (DPJ) leader Yukio Hatoyama displays the cover of his party's manifesto for the upcoming general election. After leading the DPJ to a landslide victory on August 30, Hatoyama took office as Japan's prime minister in September.

in the Tokyo assembly elections on July 12. With Tokyo voters having demonstrated that they were willing to elect little-known DPJ candidates over veteran LDP assemblymen, it was clear by July—when Aso finally announced that the general election would be held on August 30 (by law the election had to be held by September)—that the LDP would be facing an uphill battle. Projections published in late July by *Aera*, one of Japan's leading weekly news magazines, indicated that the DPJ was on track to win 247 seats—7 more than needed for a majority in the lower house.

As the election campaign got under way, however, the DPJ's appeal for a "change of government"—the slogan plastered on every campaign poster—attracted many more supporters than expected. Particularly popular were the DPJ's promises to fix the country's pension system and to increase the child allowance payment to \$276 per month for every child under the age of 13. The DPJ proposed to pay for these measures by slashing what it characterized as pork-barrel spending by the LDP on public-works projects.

The DPJ's ensuing triumph in the general election was truly historic. Although in the previous 54 years the LDP had been pushed out of office once before—for 11 months in 1993–94—that brief interlude had been brought about by a split in the party. Almost all

LDP incumbents had held onto their seats in the 1993 election. This time, voters cast out more than 150 LDP and New Komeito incumbents to hand the opposition party its commanding win.

Hatoyama officially took office on September 16. He named Okada as foreign minister and found places in his new cabinet for representatives of all of the various groups that made up the DPJ, including former Socialists who had helped form the party in 1996. He named Naoto Kan as national strategy minister, a new cabinet post in which Kan would have the responsibility for establishing policy priorities; the creation of this post was part of the DPJ's efforts to streamline a policy-making process that it argued had been inefficient under the long rule of the LDP. Ozawa was not offered a portfolio but was instead named DPJ secretary-general.

While most of the portfolios went to DPJ leaders, Hatoyama reserved two spots in his cabinet for members of the People's New Party and the Social Democratic Party—two small political parties that had joined the DPJ in a coordinated campaign to oust the LDP. Hatoyama chose to do so even though those parties' votes were not needed to pass legislation in the lower house; their votes were, however, needed in the upper house, where the two parties held nine seats. If the DPJ did well in the upper-house elections scheduled for July 2010, Hatoyama would have the leeway to form a new DPJ-only cabinet.

The new government wasted no time before taking decisive actions. Land, Infrastructure, Transport, and Tourism Minister Seiji Maehara announced on September 17 that he was suspending construction already under way on the \$5.2 billion Yamba Dam in Gunma prefecture. Because the LDP had many political backers in the construction industry and in rural areas who had long been involved in dam building, Maehara's announcement was viewed as a direct assault on the LDP's old patronage system. The ministry later suspended work on another 47 central-government-funded dams.

The government also announced that it would be trimming the third stimulus package from \$147 billion to \$115 billion, cutting back on what it considered to be wasteful spending, and signaled a

similar commitment to restraint as it turned to the fiscal 2010 budget process. Finance Minister Hirohisa Fujii indicated that he would be asking the ministries to reduce their spending requests from \$995 billion to \$963 billion and vowed to keep debt issuance at a level of \$461 billion (7.9% of GDP). The government did increase spending in certain areas. In October, Health, Labour, and Welfare Minister Akira Nagatsuma announced that he would be increasing the child-allowance budget from \$11.2 billion to \$30.2 billion, a move that would enable monthly child-allowance payments to be raised to \$141. The government maintained that it would take additional steps in 2010 to boost the allowance payments to the sum promised by the DJP during the campaign.

The Economy. Of the world's major economies, Japan's was most deeply affected by the global recession. The economy took its biggest hits in the final quarter of 2008, when GDP contracted by 3.3%, and the first quarter of 2009, when it shrank by another 4%. By the second quarter of 2009, however, the economy had begun to show some signs of life, posting a positive growth figure of 0.7% that raised hopes that the country had put the worst behind it. Adding to the cautious optimism was a downtick in the unemployment rate from a record 5.7% in July to 5.5% in August.

Nevertheless, most economists continued to worry about the ability of the Japanese economy to return to robust growth. The recession was stanchied with the help of massive deficit spending, which was projected to total \$521 billion in fiscal year 2009 (9% of GDP), but with Japan's public debt already totaling 170% of GDP, there was tremendous pressure on the DPJ government to move toward greater fiscal restraint. The decision to trim the third fiscal stimulus package and put a limit on bond issuance in the 2010 budget suggested that the government was responding to that pressure.

Also working against a resumption of robust growth was the steady strengthening of the yen. The currency's value went from ¥105 to the dollar for most of 2008 to ¥90 to the dollar by November 2009. With the Chinese renminbi pegged to the dollar throughout most of this period, the strengthening of the yen against the dollar meant that the Japanese currency was also strengthening against the renminbi. The combination of the economic crisis and adverse currency movements severely

weakened Japanese exports, which fell by 26% in the first quarter of 2009. Although Japan was able to recoup some of that decline in the second quarter—when exports were up 6.3%—the currency environment gave little reason to expect exports to become the engine of sustained growth for Japan.

Japanese monetary policy remained unchanged in 2009 after the Bank of Japan (BOJ) lowered the uncollateralized overnight call rate to 0.1% in late 2008 to deal with the onset of the economic crisis. Despite the signs that some growth had resumed in 2009, the BOJ decided at its October 30 meeting to keep the rate at 0.1%, stating that it would “maintain the extremely accommodative financial environment for some time by holding interest rates at their current low levels and providing ample funds sufficient to meet demand in financial markets.”

Japanese firms were also hit hard by the recession. Toyota Motor Corp. reported multibillion-dollar losses in the early part of the year, projecting at one point that it would lose \$5 billion for the year. By the third quarter, however, Toyota reported that it was earning profits again and reduced its projected losses for the year to \$2.2 billion. Improvements of this kind helped the benchmark Nikkei 225 index recover from a crisis-induced trough of just above 7,000 in early March to levels of around 10,000 between August and October.

Foreign Affairs. On the foreign policy front, developments continued to revolve around Japan's relations with the U.S. During the first half of the year, the Japanese adjusted to the transition in the U.S. from the administration of Pres. George W. Bush to that of newly inaugurated Pres. Barack Obama, while later in the year the U.S. was forced to accommodate the priorities of a new party in power in Japan.

As the year began, Prime Minister Taro Aso remained frustrated with the U.S.'s decision in 2008 to remove North Korea from its list of state sponsors of terrorism despite the absence of progress on a major subject of Japanese concern—the fate of Japanese citizens who had been abducted by North Korean agents during the 1970s and '80s—and continuing concerns regarding North Korea's nuclear weapons program. With Obama announcing his intention to move U.S. foreign policy away from a confrontational approach to one that placed an emphasis on engagement with countries that had been accused of human rights abuses, Japan

made efforts early in the year to ensure that the new administration understood its worries over North Korea. In February, U.S. Secretary of State Hillary Clinton made Japan her first overseas destination, and Obama hosted Aso in his first meeting with a foreign leader in Washington, D.C. During her visit Clinton met with families of the Japanese abductees and pledged to push North Korea “to be more forthcoming with information” regarding the kidnappings.

Subsequent decisions by the North Koreans to detain two American journalists in March, launch a long-range missile in April, and conduct a second nuclear test on May 25 (the first test had occurred in October 2006) led Japan and the U.S. to agree to work more closely together to pressure the North Koreans to change their behaviour. The two countries pushed for a new UN resolution following the missile launch but faced opposition to such a move from Russia and China; initially the UN Security Council issued only an official statement condemning the launch, but in the wake of the second nuclear test, the Security Council unanimously passed a resolution on June 12 that imposed additional sanctions on North Korea. In response to the earlier condemnation by the UN, North Korea in April announced its withdrawal from the six-party talks on denuclearization. In July, Japanese diplomat Yukiya Amano (*see* BIOGRAPHIES) was elected director general of the International Atomic Energy Agency (IAEA). Amano expressed his hope that the six-party talks would be revived and that North Korea would allow IAEA inspectors to return to the country.

The DPJ victory on August 30 posed other challenges for the U.S.-Japan alliance. The DPJ had campaigned on a platform that called for improved relations with China and a “more equal” partnership with the U.S. In its early days in office, Hatoyama's administration declared its intention to end Japan's naval refueling mission in the Indian Ocean, which involved the use of Japanese vessels to refuel U.S. ships engaged in the war in Afghanistan. The new administration also indicated its desire to renegotiate a deal on relocating a U.S. military base in Okinawa that the two governments had reached earlier in the year. When the leaders of the two countries met during Obama's visit to Japan on November 13–14, they signaled agreement on the refueling mission. Japan would indeed suspend the mission, but it would at the same time offer \$5 billion in aid to

Afghanistan. The Okinawa base relocation dispute proved too difficult to resolve, so the two leaders announced that they would set up a "high-level working group" to reconcile their differences. (LEONARD SCHOPPA)

JORDAN



Area: 88,778 sq km (34,277 sq mi)
Population (2009 est.): 5,981,000 (including about 2,000,000 Palestinian refugees, most of whom hold Jordanian citizenship; excluding roughly 450,000 Iraqi refugees)
Capital: Amman
Head of state and government: King 'Abdullah II, assisted by Prime Ministers Nader Dahabi and, from December 14, Samir al-Rifai

The spectre of Jordan's becoming an alternative homeland for Palestinians from the Israeli-occupied West Bank returned to trouble the kingdom's political scene throughout 2009. In early January, amid Israel's 22-day war on Hamas militants in the Gaza Strip, King 'Abdullah II voiced concern over the future of the Palestinians and spoke of a "conspiracy" against the Palestinian people. His statements were interpreted as a warning against an earlier Israeli scenario that entailed passing administrative control of the Gaza Strip to Egypt and forcibly transferring Palestinians in the West Bank to Jordan, thus achieving a purely Jewish state. Concern over this prospect was triggered anew by the victory of the right-wing Likud party leader Benjamin Netanyahu in Israel's February elections. An estimated 60% of Jordan's population was of Palestinian origin, and a transfer of the West Bank's 2.3 million Palestinians to Jordan by force posed a daunting prospect.

In May members of the Knesset (Israeli parliament) presented a draft law proposing Jordan as the alternative homeland for Palestinians. This sparked protest demonstrations in Amman, while the Jordanian government summoned the Israeli ambassador to convey its rejection of the proposal. Tension continued as rumours circulated that the Jordanian government had approved a secret U.S. plan to rescind the rights of Palestinian refugees to return

Salah Malkawi/Getty Images



During a visit to Jordan in May, Pope Benedict XVI prays on the bank of the Jordan River, believed to be the site where John the Baptist baptized Jesus.

to their homeland. This coincided with the Jordanian government's adoption of a decentralization plan to divide the kingdom into three administrative regions, a plan that was associated—in the rumours—with a political scheme to create an alternative Palestinian state in Jordan. At a speech in August, King 'Abdullah denied the rumours and warned unnamed parties against their "private and suspicious agendas," emphasized Jordan's commitment to and support of Palestinian rights, and denied bowing to external pressure.

Jordan's economy continued to suffer the effects of the global financial crisis, with the budget deficit climbing to \$534.2 million, compared with the \$103.1 million budget surplus in the first eight months of 2008. Economic growth fell by half. In September Jordan signed grant agreements with the U.S. Agency for International Development (USAID), bringing U.S. economic assistance to Jordan for 2009 to \$513.5 million. Jordan likewise received substantial economic assistance from the EU. Reportedly dissatisfied with the pace of economic reforms, King 'Abdullah on November 23 dissolved the parliament midway through its term and called for new elections, and in December he replaced the country's prime minister, Nader Dahabi, with a former palace aide, Samir al-Rifai.

In May Pope Benedict XVI visited Jordan in an effort to improve ties with the Muslim world; there he was boycotted by Islamists for refusing to apologize for previously quoting a text criticizing Islam. In September Jordan announced plans to embark on an ambitious \$2 billion project to build a canal that would replenish the dwindling Dead Sea with water from the Red Sea.

(AMIRA HOWEIDY)

KAZAKHSTAN



Area: 2,724,900 sq km (1,052,090 sq mi)
Population (2009 est.): 15,881,000
Capital: Astana
Head of state and government: President Nursultan Nazarbayev, assisted by Prime Minister Karim Masimov

As the Central Asian state whose economy was most closely integrated into the world financial system, Kazakhstan in 2009 directly experienced the negative effects of the global financial crisis. As an anti-crisis measure, in early February the national currency, the tenge, was devalued; according to Kazakh media, prices in the country immediately rose by 20%. In March, Kazakh Pres. Nursultan Nazarbayev called for acceleration of the two-year anti-crisis program adopted by the government in October 2008; the program emphasized support for the country's financial sector, including mortgage restructuring, and higher priority for the construction industry. In late August the former CEO of the Alyans Bank was arrested on a charge of having embezzled \$1.1 billion; the former chief of another major bank had fled the country in February to avoid prosecution on a similar charge. Some political observers suggested a link between the actions against the bankers and the financial crisis.

In addition to coping with an economy weakened by the economic downturn, in 2009 Kazakhstan's government prepared to assume the annual chairmanship of the Organization for Security and Co-operation in Europe (OSCE) in 2010. Kazakhstan would be the first Commonwealth of Independent States member—and the first Asian state—to assume the position. In

spite of Kazakhstan's promise to strictly adhere to its OSCE commitments, however, questions arose during 2009 about specific actions taken by Kazakh authorities. In June the OSCE representative on freedom of the media called on Nazarbayev to veto a bill that would restrict Internet freedom (and limit media freedom in general) by expanding the list of justifications for suspending the operations or distribution of any media outlet. In spite of the protest and recommendations for revisions that would have brought the draft law in line with international standards, Nazarbayev signed the law. A survey published by an international group monitoring freedom of religion (Forum 18) found that Kazakhstan continued to violate its human rights commitments by placing legal restrictions on freedom of belief, expression, and association.

On September 3, leading human rights activist Yevgeny Zhovtis, who had been convicted for vehicular manslaughter as a result of a July traffic accident, was sentenced to four years of detention in a resettlement colony. The sentence caused an outcry in domestic and international human rights communities, and even the former head of the national traffic police asserted that the sentence was too harsh.

(BESS BROWN)

KENYA



Area: 582,646 sq km (224,961 sq mi)

Population (2009 est.): 39,802,000

Capital: Nairobi

Head of state and government: President

Mwai Kibaki, assisted by Prime Minister

Raila Odinga

Kenya made little progress in breaking free from political stalemate in 2009. Prime Minister Raila Odinga had only limited success in pushing forward his reform agenda and in April accused Pres. Mwai Kibaki of attempting to undermine the coalition government made up of Odinga's Orange Democratic Movement (ODM) and Kibaki's Party of National Unity. Claiming that cabinet ministers belonging to the ODM were being left out of decision making—particularly with regard to



Drought-stricken cows lie in a paddock at a slaughterhouse east of Nairobi, Kenya, in September.

Thomas Mukoya—Reuters/Landov

setting the legislative agenda in the parliament—Odinga announced a boycott of cabinet meetings. Two weeks later the Women's Development Organisation, backed by the prime minister's wife, Ida Odinga, launched a unique strategy to protest the political deadlock by declaring a weeklong boycott on sex. In July there were signs of rapprochement between the factions when Kibaki toured Nyanza province, Odinga's political stronghold, and met with Odinga at the prime minister's home. In November the Kenyan government published a new draft constitution that would curtail presidential powers and allow the prime minister to oversee routine government business; the draft constitution was to be subjected to a referendum, which was expected to take place in March 2010.

Calls for judicial and electoral reform were largely ignored, despite strong prodding by the UN and other international agencies as well as by U.S. Secretary of State Hillary Clinton during her visit to Kenya in early August. Corruption scandals mounted, with numerous government officials facing accusations of graft in connection with the grain, oil, and tourism industries. Human rights violations were also rampant. In February the UN special rapporteur on extrajudicial killings, Philip Alston, issued a hard-hitting report that condemned Kenya for not reining in police death squads responsible for killing an estimated 200 members of the outlawed Sabaot Land Defence Force militia and some 500 members of the banned Mungiki sect. Alston also called on Kibaki to dismiss Kenya's police commissioner, Mohammed Hussein Ali, for permitting systematic police violence and urged the resignation of Attorney

General Amos Wako, whose 18 years in office had yielded few prosecutions of suspects in extrajudicial killings.

Efforts to investigate and prosecute cases stemming from the widespread violence that followed Kenya's disputed December 2007 presidential election were halfhearted, largely because some perpetrators occupied key positions in the government. In February the parliament voted against a special tribunal composed of Kenyan and international judges. In July the cabinet also decided against a special tribunal, opting to use local courts instead. National and international civil rights organizations campaigned for the International Criminal Court (ICC) to intervene. Meanwhile, former UN secretary-general Kofi Annan submitted to the ICC a list of names of persons suspected of having instigated the postelection violence.

The global recession impeded export growth and reduced tourism receipts, remittances, and private capital flows. GDP growth dropped from 6% in 2004–07 to 2.5% in 2009. Crop production declined steeply as Kenya suffered from the worst drought to hit East Africa since 2000; production of corn (maize), the country's staple food crop, dropped by nearly 28%. The UN World Food Programme estimated that nearly four million Kenyans—some 10% of the population—required emergency assistance, which was slow to materialize. In the northern pastoral districts, massive cattle deaths caused widespread hunger and spawned interethnic hostilities. Throughout the drought-affected areas, rising prices of food and water bred antigovernment sentiments, which led many observers to fear the possible resurgence of armed militias.

(LARAY DENZER)

KIRIBATI



Area: 811 sq km (313 sq mi)

Population (2009 est.): 99,000

Capital: Government offices on three islets of South Tarawa

Head of state and government: President Anote Tong

Predictions by the Asian Development Bank of economic deterioration in Kiribati proved correct in 2009. The worsening situation led to large drawdowns from the Revenue Equalization Reserve Fund to finance budget deficits. The fund was already shrinking; its investments in offshore financial markets posted negative returns, and this led to warnings that government expenditures would need to be cut to ensure that the fund could continue to finance development in Kiribati. One bright spot was the performance of Kiribati Shipping Services Ltd., which signed an agreement to provide much-needed and profitable regular shipping services for its small neighbours, including Tuvalu, Nauru, and the French collectivity of Wallis and Futuna.

In June, Pres. Anote Tong signed into law an act creating the Phoenix Islands Protected Area (PIPA), which covered more than 400,000 sq km (about 150,000 sq mi) and was the largest marine reserve in the world. The PIPA was largely uninhabited, and its remote location ensured that the unique marine wilderness had one of the most unspoiled coral reefs in the world. The government was hoping to secure a United Nations Educational, Scientific and Cultural Organization World Heritage site listing for the pristine area.

In another environmental success story, Kiribati's waste-recycling program, begun with funds from non-governmental organizations, eliminated large amounts of garbage along roads around the capital and reached the point at which it was to be spun off as a sustainable private business. The government appointed a four-person committee to review a series of immigration permit decisions that had resulted in rapid growth of the immigrant business community and had begun to create some domestic political tension. (CLUNY MACPHERSON)

KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF



Area: 122,762 sq km (47,399 sq mi)

Population (2009 est.): 24,162,000

Capital: Pyongyang

Head of state and government: Supreme Leader/Chairman of the National Defense Commission Kim Jong Il

Despite leadership uncertainties and growing hardship for the average North Korean, the regime struck a provocative and defiant pose toward the world in 2009. The country's leader, the reclusive 68-year-old Kim Jong Il, who had recovered from a suspected stroke, made up for lost time with a record 150-plus public appearances during the year. He also seemed to be grooming his third son, Kim Jong-Un (believed to be about 27), to be his successor, but Chang Song-Taek, Kim Jong Il's brother-in-law, appeared poised to serve as a caretaker if the younger Kim was not ready to rule.

Kim Jong Il celebrated his renewed vigour with a long-range missile test and satellite launch in April; the effort failed. The following month North Korea appeared to conduct its second underground nuclear test, which seemed to have been more successful than its first test, in 2006. Most analysts believed, however, that it would be at least a decade before the country could marry its missile and nuclear programs. North Korea also began rebuilding a nuclear reactor that it had partially dismantled as part of a 2005 nuclear accord and resumed plutonium production. In December a U.S. envoy visited the country bearing a letter from U.S. Pres. Barack Obama in an attempt to revive the moribund nuclear talks, but North Korea appeared to be in no hurry to return to the negotiating table. Days later Thai authorities interdicted a 35-ton North Korean arms shipment believed to have been bound for the Middle East. Under UN Security Council Resolution 1874 (2009), North Korea was prohibited from exporting heavy weapons.

Meanwhile, North Korea undertook the first reform of its currency in almost 20 years by ordering on November 30 that old currency be exchanged for new at the rate of 100 to 1, a move that reportedly resulted in widespread

anger and confusion. Not only did the denominations mostly stay the same and the designs look somewhat similar, but the total amount of the old currency that each person could exchange for the new was severely restricted.

Despite promises of a "strong and prosperous nation" by 2012, haphazard reforms and a recent sharp decline in humanitarian assistance suggested the real possibility of renewed famine. North Korea appeared before the UN Human Rights Council for its first "universal periodic review" on December 7. The council made 167 recommendations, and the country agreed to respond to many of them, including better monitoring of food distribution. (PETER M. BECK)

KOREA, REPUBLIC OF



Area: 99,678 sq km (38,486 sq mi)

Population (2009 est.): 48,333,000

Capital: Seoul

Head of state and government: President Lee Myung-Bak, assisted by Prime Ministers Han Seung-Soo and, from September 29, Chung Un-Chan

By the end of 2009, South Korea had come through the global economic downturn in surprisingly good shape, but the deadlock and retribution prevalent in the country's politics remained unaffected by national mourning over the deaths of two previous presidents. Relations with the United States continued to warm, while ties with North Korea remained frosty. Meanwhile, two South Korean athletes made their mark on the world stage.

After three straight quarters of year-on-year decline, the South Korean economy came back to life in the second half of the year. Unemployment peaked at a modest 4% in June. The Hyundai-Kia Automotive Group led the way in economic growth, with the partners expanding their global market share from 6.5% to 7.8% in the first nine months of 2009.

Hyundai-Kia and South Korea's three other biggest conglomerates—Samsung, LG, and SK—also made preparations for power to be passed to the next generations of their founding families. Hyundai Group chairwoman Hyun Jeong-Eun groomed her daughter to

Korean Central News Agency—Korea News Service/AP



North Korean leader Kim Jong Il (seated centre) is flanked by Hyundai Group chairwoman Hyun Jeong-Eun (left) and her daughter, Chung Ji-Yi. The two women met with Kim in August.

take over in what was anticipated to be Korea's first mother-daughter corporate succession. The two met with North Korean leader Kim Jong Il in August to discuss North-South cooperative projects.

Koreans mourned the passing of two former presidents within three months of each other. Roh Moo-Hyun jumped from a cliff to his death in May, despondent over the widening corruption investigation that targeted his family members. Roh's predecessor in office, Kim Dae-Jung, succumbed to multiple organ failure in August. Both politicians were longtime democracy activists who also tried to promote reconciliation and cooperation with North Korea. (See OBITUARIES.)

International developments included the selection of South Korea to host the November 2010 Group of 20 summit and the decision of Pres. Lee Myung-Bak to redeploy several hundred troops and reconstruction personnel to Afghanistan. Lee also continued to improve relations with the United States. He paid a visit to the White House in June, and U.S. Pres. Barack Obama made a reciprocal visit in November. Meanwhile, Pyongyang gave Seoul the cold shoulder for much of the year, but rumours swirled that a North-South summit could take place in 2010.

Politics remained a blood sport in South Korea. Even though the ruling Grand National Party (GNP) enjoyed a clear majority in the National Assembly, the opposition parties physically pre-

vented several votes from taking place. In July the opposition blocked GNP members from the legislative chamber to prevent a controversial media-reform bill from coming to a vote, and the bill was passed only after GNP members sneaked into the chamber through a side door. Lawmakers also clashed over plans to relocate the central government from Seoul to the countryside and to revive four of Korea's major rivers in what would be the country's biggest hydro-engineering project. The GNP passed the annual budget in a last-minute vote on December 31, over opposition protests. Han Myung-Sook, who was the first woman to have served as South Korea's prime

minister (2006–07), was indicted for having received a \$50,000 bribe from a job seeker. The opposition Democratic Party insisted that the investigation was politically motivated.

Two South Koreans made waves in the sports world. In March, Kim Yu-Na (see BIOGRAPHIES) became the first South Korean to win a world figure skating title. Kim was favoured to win gold in the 2010 Winter Olympics in Vancouver. Golfer Yang Yong-Eun pulled off one of the year's greatest upsets, beating Tiger Woods at the Professional Golfers' Association championship in August. Yang became the first Asian-born male golfer to win a major tournament. (PETER M. BECK)

KOSOVO



Area: 10,908 sq km (4,212 sq mi)

Population (2009 est.): 1,805,000

Capital: Pristina

International Authority: Final authority resides with the UN interim administrator, Lamberto Zannier (Italy), in conjunction with the EU special representative in Kosovo, Pieter Feith (The Netherlands)

Chief of state: President Fatmir Sejdiu

Head of government: Prime Minister Hashim Thaci

In an annual assessment report, the European Commission in 2009 emphasized that Kosovo had made some progress in public administration and judicial reform but very little in fostering a market economy. The report noted that freedom of expression was not fully guaranteed and that efforts to provide an institutional framework for reconciliation between the majority Albanians and minority communities were lacking. Progress was reported in education; the first attempts were made to tone down nationalism and hate mongering in history schoolbooks.

Kosovo held its first elections since it declared independence from Serbia in February 2008. Some 45% of the 1.5 million registered voters cast ballots, electing mayors and members to city councils in 36 municipalities. Prime Minister Hashim Thaci's Democratic Party of Kosovo won the majority of votes, and its coalition partner, the Democratic League of Kosovo, won in the capital, Pristina.

By year's end 64 countries, including the United States and most European countries, had recognized Kosovo, but Serbia attempted to block further recognition by arguing before the International Court of Justice (ICJ). In December the ICJ heard testimony by Serbia, Kosovo, and 27 UN member states that either supported or opposed Kosovo's independence.

Kosovo joined the IMF and the World Bank in June. The country's trade deficit from January to July was about \$1.25 billion. Exports consisted mainly of scrap metal, beverages, and furniture. Remittances from Kosovo's diaspora fell 8%; these sums constituted 14.1% of Kosovo's GDP, 2.7% more than exports. Unemployment remained the highest in Europe, at 45%. The IMF forecast GDP growth of 3.8% for 2009, down from 5.4% in 2008.

(MILAN ANDREJEVICH)

KUWAIT



Area: 17,818 sq km (6,880 sq mi)

Population (2009 est.): 3,442,000

Capital: Kuwait

Head of state and government: Emir Sheikh Sabah al-Ahmad al-Jabir al-Sabah, assisted by Prime Minister Sheikh Nasir al-Muhammad al-Ahmad al-Jabir al-Sabah

Yasser Al-Zayyat—AFP/Getty Images



Aseel al-Awadhi (second from right) attends an orientation session on May 25 for new members of the Kuwaiti National Assembly. Al-Awadhi was one of the first four women ever elected to the 50-member legislative body and one of two who did not wear a Muslim head scarf.

On March 18, 2009, continued tensions in Kuwait between the parliament and the cabinet led the emir, Sheikh Sabah al-Ahmad al-Jabir al-Sabah, to dissolve the National Assembly—the third such dissolution since 2006—and call for new elections. The elections, which were held on May 16, resulted in a historic outcome; in the balloting four highly educated women won election to the National Assembly in spite of objections from conservative Islamists. Although Kuwaiti women were given the right to vote and to run for office in 2005, none had previously been able to win a National Assembly seat. Meanwhile, representatives from the Shi'ite community, which constituted about one-third of the Kuwaiti population, rose from five to nine; by contrast, Sunni Islamists (Salafists) saw their representation in the National Assembly decline significantly, from 21 seats to 11. The emir also reappointed his nephew, Sheikh Nasir al-Muhammad al-Ahmad al-Jabir al-Sabah, prime minister for the sixth time since 2006.

During 2009 some leading Kuwaitis were advocating for the appointment of a prime minister from outside the ruling family as a means of providing more stability. Since 1992 the role of the National Assembly had been slowly changing from a consultative body to a genuine legislature. A critical issue was the total accountability of the entire cabinet to the National Assembly; the prime minister had always been a member of the al-Sabah family, which, as the ruling family, was not held accountable.

Kuwait suffered the effects of the global financial crisis. The government was obliged to shore up Gulf Bank, the country's second largest bank, and fully guarantee all bank deposits. The Kuwait stock exchange and real-estate prices tumbled, but by the beginning of the third quarter of 2009, the Kuwaiti economy was showing signs of recovery.

Tense relations between Kuwait and Iraq continued over border issues, shared oil fields, and war reparations owed by Iraq to Kuwait. While Kuwait insisted upon fulfillment of Iraq's international obligations, including payment of reparations, Iraq sought the cancellation of about \$25 billion of the UN-mandated reparations for destruction wrought by Saddam Hussein's 1990 invasion of Kuwait. Efforts were made by the UN to help find a solution to the impasse; among the most promising plans was the proposal to let Kuwait invest the money owed to it within the Iraqi infrastructure. (LOUAY BAHRY)

KYRGYZSTAN



Area: 199,900 sq km (77,182 sq mi)

Population (2009 est.): 5,345,000

Capital: Bishkek

Head of state: President Kurmanbek Bakiyev

Head of government (appointed by the president): Prime Ministers Igor Chudinov and, from October 21, Daniyar Usenov

In 2009 the July 23 presidential election dominated the Kyrgyz political scene. Incumbent Pres. Kurmanbek Bakiyev won an overwhelming majority (official figures awarded him 86% of the vote) in spite of opposition efforts to unseat him by rallying behind a single candidate, Almazbek Atambayev. Bakiyev's victory was followed by opposition charges of massive electoral fraud, including claims that Atambayev had actually received 60% of the vote. Unsponsored protests and marches resulted in numerous arrests. At his inauguration Bakiyev appealed for tolerance and civil accord and promised broad political reform, starting with public administration. The reform process included the appointment of a new cabinet of ministers and prime minister in late October and the dismissal of a number of presidential advisers.

After a February 3 meeting with Russian Pres. Dmitry Medvedev, Bakiyev announced that the agreement that permitted U.S. and NATO forces fighting in Afghanistan to use Kyrgyzstan's Manas airfield would be terminated. At the same time, Bakiyev received a promise of \$2 billion in financial assistance from Russia, primarily to finance construction of the Kambarata hydropower station (a project strongly opposed by neighbouring Uzbekistan). The Kyrgyz parliament voted to end U.S. and NATO use of the base, but the promised Russian aid was slow to materialize. On June 22 an agreement was signed under which the U.S. would continue to use Manas as a transit shipment centre for nonmilitary deliveries to forces in Afghanistan. The Russian Foreign Ministry commented that such an agreement was Kyrgyzstan's sovereign right. Negotiations between Kyrgyzstan and Russia over the basing of a Russian battalion in southern Kyrgyzstan remained inconclusive.

Although Kyrgyzstan was affected by the global financial crisis, it was one of the few countries in the Commonwealth of Independent States to maintain a positive growth rate in 2009. In September, however, a mission from the IMF warned that the country was likely to face greater difficulties in 2010 because the Kyrgyz government was countering the effects of the crisis by devoting essential funds to supporting the national budget. Prime Minister Igor Chudinov noted in March that the country's capital inflow was down, along with the import of goods and the level of demand. As a result of the worldwide financial crisis, Kyrgyzstan faced

difficulties with both energy and food security. With no mortgage lending system, however, the main impact of the crisis on the Kyrgyz economy was generated by the effects of the crisis on neighbouring countries, particularly Kyrgyzstan's main trading partners, Kazakhstan and Russia. (BESS BROWN)

LAOS



Area: 236,800 sq km (91,429 sq mi)

Population (2009 est.): 6,320,000

Capital: Vientiane

Chief of state: President Choummaly Sayasone

Head of government: Prime Minister Bouasone Bouphavanh

In January 2009 a master plan for the economic development of Laos's nine northern provinces was handed over to the Lao government. This blueprint, commonly known as the Northern Plan, called for the development by 2020 of "backbone industries" in northern Laos; these industries included mining, energy, agriculture, and tourism. The plan was drafted by the Northern Laos Industrial Economic Development and Cooperation Planning Preparation Group in cooperation with authorities in China's Yunnan province and received substantial financial support from the Chinese government. It appeared likely that Chinese private and state companies would play a leading role in implementing many of the plan's proposals.

China continued to invest heavily in several of Laos's key economic sectors. Chinese investments in the country were valued at about \$3.5 billion by late 2008. The fast-growing Chinese presence, however, raised concerns among local residents and international organizations. In recent years the Lao government had granted a large number of land and mining concessions to Chinese companies. Many observers worried about the social, economic, and environmental impacts of these companies' activities on Laos's rural areas and urged the government to explore the implications of its policies—first and foremost, from the point of view of the residents who were most directly affected by them.

The global financial crisis was deeply felt in Laos. The Sepon copper and gold mine located in southeastern Laos laid off hundreds of workers in December 2008; the mine's heavily indebted owner, the Australian company OZ Minerals, Ltd., sold the mine in April 2009 to the Chinese state company China Minmetals Corp. The economic slowdown also affected the tens of thousands of Lao migrant workers in Thailand; in January the Lao Ministry of Labour and Social Welfare estimated that approximately 14,000 of these workers were at risk of losing their jobs because of the economic downturn.

Laos hosted the 2009 Southeast Asian Games, which were held in Vientiane on December 9–18. This event reflected the country's further integration into the Association of Southeast Asian Nations. (VATTANA PHOLSENA)

LATVIA



Area: 64,559 sq km (24,926 sq mi)

Population (2009 est.): 2,256,000

Capital: Riga

Chief of state: President Valdis Zatlers

Head of government: Prime Ministers Ivars Godmanis and, from March 12, Valdis Dombrovskis

The economic recession and its consequences at home and abroad were Latvia's principal concern in 2009. Though the Ministry of Finance estimated that GDP could fall by about 18% for the year and unemployment climbed to nearly 20%, there were signs that the decline was leveling off during the second half of the year.

The principal source of political discord and popular discontent was balancing the budget so as to avoid bankruptcy and to meet the preconditions for borrowing \$10 billion from the IMF, the EU, the World Bank, and other sources. This required restructuring the economy, including raising taxes, curbing spending, cutting welfare payments and public workers' salaries, systematically repaying loans, and meeting the requirements for the adoption of the euro by 2014.

Unable to cope effectively with mounting public dissatisfaction and political intrigues, the coalition government of Prime Minister Ivars Godmanis fell on February 20. Pres. Valdis Zatlers entrusted Valdis Dombrovskis of New Era, heretofore a vocal opposition party, to form the new government. Needing parliamentary support for the unpopular decisions that would have to be made, Dombrovskis opted for a coalition cabinet comprising members of some of the parties represented in the previous two governments. The result was an inharmonious government whose stability was tested not only by the opposition but

On June 18 fighting breaks out between women at a union-organized rally in Riga, Latvia, where demonstrators protested against government budget cuts that included a 10% reduction in old-age pensions.



Ilmars Znotins—AFP/Getty Images

also by the coalition parties, especially the People's Party, which focused more on refurbishing its tainted reputation than on solving the country's problems. After the 2010 budget was adopted on December 1, the chances that the government would last until the parliamentary elections in autumn 2010 seemed to improve.

On June 6, voters elected representatives to the European Parliament and members of the newly created regional governments. While the People's Party registered serious losses, the moderate left Harmony Centre coalition and the centre-right Civic Union enjoyed significant gains.

Latvia continued to fulfill its international obligations despite belt-tightening at home. It completed its peace-keeping mission in the Balkans in October and beefed up its forces in Afghanistan. In autumn Latvia successfully fielded Andris Piebalgs, a respected EU energy commissioner, for another term in the European Commission. (DZINTRA BUNGS)

LEBANON



Area: 10,400 sq km (4,016 sq mi)

Population (2009 est.): 4,224,000 (including registered Palestinian refugees estimated to number about 400,000)

Capital: Beirut

Chief of state: President Michel Suleiman

Head of government: Prime Ministers Fouad Siniora and, from November 9, Saad al-Hariri

On June 7, 2009, parliamentary elections took place in Lebanon; 71 deputies were elected from the pro-Western March 14 bloc, and 57 deputies were elected from the pro-Syrian March 8 bloc. Amal movement leader Nabih Berri was again chosen as speaker of the parliament.

In late June, Saad al-Hariri (*see* BIOGRAPHIES), son of former prime minister Rafiq al-Hariri, was nominated by a majority of deputies-elect to form a new cabinet. In mid-September, however, Hariri declared his inability to form a national unity government and stepped down as prime minister-designate, blaming Hezbollah and its Christian allies (Michael Aoun's bloc) for this failure. Shortly thereafter, however,

Pres. Michel Suleiman asked him to try again. Hariri was able to form a long-awaited national unity government on November 9.

In early August Druze leader Walid Jumblatt withdrew from the March 14 bloc and declared his independence from both major blocs. He stated that he regretted his previous animosity toward the Syrian regime and his alliance with the U.S. Analysts reasoned that the American opening toward the Syrian regime and Britain's dialogue with Hezbollah had reshuffled the local agenda and changed the orientation of some political actors.

Lebanon's external debt and fiscal deficits remained high at above \$50 billion, but the country reduced the debt-to-GDP ratio from 180% to 154% by the end of 2009. Budget deficit was 26.2% of spending (\$2.23 billion). Industrial exports decreased by 25% in July because of the global financial crisis. In spite of increased spending on electricity—which accounted for \$1.4 billion annually and continued to drain the budget—revenues in the first half of 2009 reached \$4.27 billion, up 23.4% from the same period in 2008. The main sources of revenue were customs duties, income taxes, and telecom services. Lebanon's defense and security spending was expected to increase by 22% in 2009. Defense spending, which accounted for 42% of total expenditures, was expected to drop from 15.7% of government spending in 2008 to 13.5% in 2009.

The banking sector continued to show significant resilience to the ongoing global financial crisis. Total assets increased by \$13 billion in 2008, up by 13%; bank profitability also went up by 10%. Primary liquidity stood at 51.5% at the end of 2008, against 28% in the Middle East and 30% globally.

The IMF revised its estimate of Lebanon's GDP growth in 2009 from 4% to 7% (other financial institutions put the inflation rate at 4%). An IMF report said that Lebanon averted a full-blown crisis because banks could resort to their large liquidity buffers to hold on to government debt. The IMF warned, however, that "the wrong set of circumstances could easily translate into severe financial troubles" and urged the government to reduce the public debt and impose fiscal discipline. The World Bank put the per capita income in 2008 at \$10,880, which made Lebanon ranked 94th among world countries and 6th among Middle Eastern and North African countries. (MAHMOUD HADDAD)

LESOTHO



Area: 30,355 sq km (11,720 sq mi)

Population (2009 est.): 2,067,000

Capital: Maseru

Chief of state: King Letsie III

Head of government: Prime Minister Bethuel Pakalitha Mosisili

In April 2009 gunmen opened fire on the Maseru home of Lesotho Prime Minister Bethuel Pakalitha Mosisili in what was clearly a botched assassination attempt. At least three assailants were killed by the police, and a South African and a Mozambican were arrested. Government officials accused the main opposition party, the All Basotho Convention, of having been behind the attack, but that remained unproved. It was clear that discontent continued in the small mountain kingdom over the way the multimember proportional voting system had been interpreted after the 2007 general election to give the alliance between the ruling Lesotho Congress for Democracy and the small National Independence Party the majority of the seats in the parliament. Though the Southern African Development Community was asked to review the system, its mediation did not solve the problem.

The South Africa-Lesotho Joint Bilateral Commission announced in April that the South African government had approved 7.4 billion rand (about \$950 million) for the second phase of the massive Lesotho Highlands Water Project, but the economic downturn in South Africa put this at risk, while a South Africa decision on textiles threatened to undermine Lesotho's clothing-manufacturing sector, which had employed almost 40,000 people in more than 20 factories. There were fears that the Southern African Customs Union might collapse—which seemed likely after Lesotho and other countries, but not South Africa, signed Economic Partnership Agreements with the European Union—and that presented the unsettling prospect that Lesotho's very fragile economy would be put under further pressure. In October Lesotho's Child Grants Programme was launched to supplement the income (\$48 quarterly) of households with orphaned children. (CHRISTOPHER SAUNDERS)

LIBERIA



Area: 97,754 sq km (37,743 sq mi)

Population (2009 est.): 3,955,000

Capital: Monrovia

Head of state and government: President Ellen Johnson-Sirleaf

In Liberia the year 2009 began inauspiciously with a massive plague of *Achaea catocaloides rena* caterpillars. Described as the worst pest infestation in the country in 30 years, the plague caused widespread panic among villagers in northern and central Liberia, many of whom fled their homes. On January 26 Pres. Ellen Johnson-Sirleaf declared a national emergency and invited assistance from international agencies. A team of agricultural experts concluded that while Dahoma trees had suffered severe damage, food crops such as corn (maize) and millet had survived mostly intact. A second infestation in March was contained. The slow disbursement of relief funds to the affected areas raised questions of corruption in government and led to the resignation of the minister of agriculture in April.

Liberia in early 2009 faced a massive infestation of Achaea catocaloides caterpillars, shown here devouring leaves in Shankpalai in January. Although the damage to food crops proved to be less severe than initially feared, the government declared a state of emergency to fight the devastating outbreak.



Zoom Dosso—AFP/Getty Images

Liberia's economy grew; public services noticeably improved; and progress was made in the regulation of the rubber, timber, and diamond trades. In its annual "Doing Business" survey, the World Bank named Liberia best global and regional reformer, citing it as a model for how other postconflict countries should use the private sector to rebuild markets. Nevertheless, more than 10,000 UN peacekeepers remained in the country—a constant reminder of the fragile political situation.

In February, Johnson-Sirleaf apologized to the Truth and Reconciliation Commission (TRC) "for being fooled" into providing financial support to now-imprisoned former president Charles Taylor at the beginning of the country's 14-year civil war in 1989. The TRC later recommended that she, along with influential former warlords and their supporters, be banned from holding elective office for 30 years. Immediate local and international response, however, demonstrated widespread support for the president. During the August visit of U.S. Secretary of State Hillary Clinton to Monrovia—the second to last stop on her seven-country African tour—she emphasized her unstinted support for Johnson-Sirleaf and praised her achievements in economic reconstruction.

(LARAY DENZER)

LIBYA



Area: 1,777,060 sq km (686,127 sq mi)

Population (2009 est.): 6,420,000

Capital: Tripoli (policy-making body intermittently meets in Surt)

Chief of state: (de facto) Col. Muammar al-Qaddafi; (nominal) Secretaries of the General People's Congress Muftah Muhammad al-Sanusi Kaiba and, from March 5, Mubarak 'Abd Allah al-Shamikh

Head of government: Secretary of the General People's Committee (Prime Minister) Al-Baghdadi 'Ali al-Mahmudi

Only a ruler such as Libyan Col. Muammar al-Qaddafi, who marked 40 years in power in September 2009, could have proclaimed himself "king of kings of Africa." The nationally celebrated anniversary was the subject of international media scrutiny, as it was also an occasion to mark the abortion of the reform narrative previously advocated by Qaddafi and his son Sayf al-Islam. Sayf al-Islam—viewed by the West as a possible heir-in-waiting or a catalyst for change—had previously campaigned for a Libyan constitution, which he said would pave the way for the country's first general elections before September 2009. These promises soon faded following his 2008 decision to withdraw from politics. While Qaddafi remained in power, he appeared to have abandoned his anticorruption, reform-driven discourse, including his promise to share the country's oil revenues with the Libyan population. In April Qaddafi nationalized the private al-Libiya satellite television station (and its two sister newspapers, *Oea* and *Cyrene*). Al-Libiya, affiliated with Sayf al-Islam, was nationalized after one of its shows criticized Egypt; Sayf al-Islam later moved the channel to London.

Sayf al-Islam's exit from politics was short-lived. In August Libya and Scotland reached a deal to release 'Abd al-Basit al-Megrahi, the convicted bomber of the 1988 Pan Am disaster over Lockerbie, Scot., which killed 270 people. Scottish officials said that Megrahi's release was arranged on compassionate grounds, as he suffered from terminal cancer. Sayf al-Islam, however, who appeared to be instrumental in Megrahi's release, told the Libyan media that

Ben Curtis/AP



A display by ceremonial horsemen was among the spectacles presented at a celebration of the 40th anniversary of the Sept. 1, 1969, coup that brought Libyan head of state Muammar al-Qaddafi to power.

Megrahi's case was repeatedly raised in talks with the British government pertaining to gas and oil. Although British officials denied this, the release and possible "deal" triggered speculations regarding the U.K.'s oil and gas interests in Libya.

In 2009 Libya produced 1.8 million bbl of oil daily, compared with 1.3 million bbl in 2003, the year before the U.S. lifted its sanctions on Libya. While international companies raced to explore investment opportunities in Libya, Qaddafi's visits to Rome in June and New York City in September—where he addressed the UN General Assembly for the first time—marked Libya's return to the international community. During his speech, which greatly exceeded the 15 minutes allotted to him, Qaddafi tore a copy of the UN charter, criticized the UN Security Council's veto-power system, and called for a one-state solution for Israelis and Palestinians. (AMIRA HOWEIDY)

LIECHTENSTEIN



Area: 160 sq km (62 sq mi)

Population (2009 est.): 35,700

Capital: Vaduz

Chief of state: Prince Hans Adam II

Head of government: Otmar Hasler and, from March 25, Klaus Tschütscher

In legislative elections held in Liechtenstein on Feb. 8, 2009, the two parties in the previous coalition government changed position; the Patriotic Union (VU), which had been the second largest parliamentary party, won 13 seats with 47.6% of the vote, while the Progressive Citizens' Party (FBP), formerly the largest party, won 11 seats with 43.5%. The remaining seat was taken by the green Free List. Voter turnout was 84.6%. The VU's Klaus Tschütscher was sworn in as prime minister on March 25.

Prince Alois—who in 2004 had assumed the day-to-day governing duties of his father, Prince Hans Adam II, the head of state—set a tone of moderation in offering to cooperate with other countries to combat tax evasion and fraud. He agreed to follow the rules of the Organisation for Economic Co-operation and Development and suggested a partial amnesty in which people holding funds in Liechtenstein's banks could repatriate the money to their home countries and face limited penalties. He signed separate agreements easing bank secrecy with Germany in July and with Britain in August.

In contrast, Hans Adam set off a furor on August 15, Liechtenstein's National Day, when he claimed that during World War II bank secrecy laws in Liechtenstein and Switzerland had saved the lives of German Jews who bought their safety with money they had deposited in the countries' banks. The Jewish community in Germany was outraged. Stephan Kramer, secre-

tary-general of the Central Council of Jews in Germany, responded that "this was not some search-and-rescue mission by the Liechtenstein banks or the Liechtenstein state. . . . This was [the German Jews'] money in their bank accounts." (ANNE ROBY)

LITHUANIA



Area: 65,300 sq km (25,212 sq mi)

Population (2009 est.): 3,339,000

Capital: Vilnius

Chief of state: Presidents Valdas Adamkus

and, from July 12, Dalia Grybauskaitė

Head of government: Prime Minister Andrius Kubilius

In 2009 Lithuania celebrated the 1,000th year of its first mention in historical records, the annals of a Benedictine abbey at Quedlinburg, Ger. Festivities marking the event were held on July 6, the anniversary of the 13th-century coronation of King Mindaugas, in Vilnius's newly rebuilt Palace of the Grand Dukes. Among the dignitaries in attendance were the papal legate Angelo Cardinal Sodano, Denmark's Queen Margrethe, Norway's King Harald, Sweden's King Carl Gustaf, the presidents of Poland, Ukraine, Georgia, Latvia, Finland, and Iceland, and the prime minister of Estonia.

On May 17 the country elected its first woman president; running as an independent, Dalia Grybauskaitė (see BIOGRAPHIES), former member of the European Commission, won 69.1% of the vote in an election with a 51.8% turnout. She was sworn in on July 12. In the European Parliament election held on June 7, the Homeland Union (Conservatives of Lithuania) won four seats (with 26.9% of the vote), including the reelection of Vytautas Landsbergis, former president of Lithuania. The Lithuanian Social Democratic Party captured three seats (18.6%); the For Order and Justice Party, two seats (12.2%); the Labour Party, one seat (8.8%); the Lithuanian Poles' Electoral Action, one seat (8.4%); and the Liberal Movement, one seat (7.4%).

Lithuania's economy was severely affected by the global banking crisis, particularly by the significant reduction in local businesses' access to credit. As a result, GDP fell 20.2%, exports plunged

32.2%, and unemployment soared to 13.8%. The output of the construction industry declined by about 48% in the second quarter compared with the corresponding period of 2008. The economy registered overall growth in the third quarter, however, with a gain of 13% over the second quarter. The conservative government continued to cut public spending and also sold \$1.5 billion in state bonds in the United States through the British banks Barclays and HSBC. This demonstrated growing confidence that the economic crisis might soon be over in Lithuania.

(DARIUS FURMONAVICIUS)

LUXEMBOURG



Area: 2,586 sq km (999 sq mi)
Population (2009 est.): 498,000
Capital: Luxembourg
Chief of state: Grand Duke Henri
Head of government: Prime Minister Jean-Claude Juncker

In legislative elections held in Luxembourg on June 7, 2009, Prime Minister Jean-Claude Juncker's Christian Social People's Party secured 26 seats in the 60-seat Chamber of Deputies by winning 38% of the vote. The Luxembourg Socialist Workers' Party took 13 seats with 21.6% of the vote, followed by the Democratic Party (9), the Greens (7), the Alternative Democratic Reform Party (4), and the Left party (1). The results of the elections ensured that Juncker would retain his position as head of government for another five years.

In October, however, Juncker expressed his interest in becoming president of the EU. This followed news that former British prime minister Tony Blair had decided to make a bid for the job. Juncker's announcement elicited criticism from some observers—particularly in Britain—who argued that the leader of such a tiny country as Luxembourg would not wield enough influence to serve effectively as EU president. In response, Juncker memorably declared, "I am not a dwarf." Belgian Prime Minister Herman Van Rompuy was ultimately selected for the post in November.

Luxembourg's economy continued to flourish during the year, owing in large

Francois Lenoir—Reuters/Landov



Prime Minister Jean-Claude Juncker of Luxembourg, in his role as chairman of the euro zone finance ministers, reports to the European Parliament Committee on Economic and Monetary Affairs in Brussels on September 29.

part to the banking and financial services sector, which accounted for roughly 28% of GDP. Diverse industries included chemicals and rubber as well as steel. Luxembourg's GDP per capita was the third highest in the world, trailing only that of Qatar and Liechtenstein.

(ANNE ROBY)

MACEDONIA



Area: 25,713 sq km (9,928 sq mi)
Population (2009 est.): 2,052,000
Capital: Skopje
Chief of state: Presidents Branko Crvenkovski and, from May 12, Gjorge Ivanov
Head of government: Prime Minister Nikola Gruevski

Unlike the 2008 parliamentary elections in Macedonia, the 2009 presidential and municipal elections were largely free of violent incidents. The country held elections on March 22 and runoffs on April 5. Of a total of seven presidential candidates, Gjorge Ivanov of the ruling Internal Macedonian Revolutionary Organization—Democratic Party for Macedonian National Unity (VMRO-DPMNE) and Ljubomir Frckovski of the Social Democratic Union of Macedonia (SDSM) contested the runoff, which Ivanov won with 63% of the vote.

Incumbent Pres. Branko Crvenkovski chose not to run for a second term in office. Instead he returned to lead the SDSM after the end of his mandate.

In the municipal elections VMRO-DPMNE won 55 of the 85 mayoral positions, including that of the capital, Skopje. The Democratic Union for Integration (DUI/BDI), an ethnic-Albanian party, won 14 mayoral races, and the SDSM won 9.

On July 10 Prime Minister Nikola Gruevski reshuffled his government following the resignations of Deputy Prime Minister for European Integration Ivica Bocevski, Education Minister Pero Stojanovski, and Agriculture Minister Aleksandar Spasenovski and the dismissal of Finance Minister Trajko Slaveski. Bocevski was succeeded by Vasko Naumovski; Nikola Todorov became education minister; Ljupco Dimovski took over as agriculture minister; and Deputy Prime Minister Zoran Stavrevski also became finance minister.

The UN-mediated talks between Macedonia and Greece over the former country's name continued in 2009. Several proposals by UN mediator Matthew Nimetz failed to secure the approval of both sides. The impact of the name dispute on Macedonia's Euro-Atlantic integration led to dissatisfaction among ethnic-Albanian politicians. Senior DUI/BDI members threatened that the party might leave the government if the dispute was not settled.

A major incentive for Macedonia to resolve the name issue came on October 14 when the European Commission recommended that the country begin negotiations in 2010 to join the EU. On November 30 the EU announced that, beginning on December 19, citizens of three Balkan countries—Macedonia, Serbia, and Montenegro—would be allowed to travel without a visa within the EU's Schengen zone.

Interethnic relations were strained following the publication in September of the *Macedonian Encyclopedia* by the Macedonian Academy of Sciences and Arts (MANU); ethnic Albanians considered its portrayal of their community to be provocative and insulting. Gruevski called for a dialogue about the controversial text, while the MANU withdrew the publication in order to amend it.

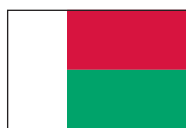
Owing to the global economic crisis, Macedonia's GDP was expected to shrink by up to 1% in 2009. Significant drops were probable in industrial output and foreign trade.

On April 6 former deputy prime minister Vasil Tupurkovski was sentenced

to three years' imprisonment. He had been convicted for having misappropriated nearly \$3 million of a Taiwanese grant in 1999.

On September 5 a tour boat sank on Lake Ohrid, resulting in the deaths of 22 people, including 15 Bulgarian tourists. Transport and Communications Minister Mile Janakievski's resignation later that day on "moral grounds" was rejected by Gruevski on September 9. (STEFAN KRAUSE)

MADAGASCAR



Area: 587,051 sq km (226,662 sq mi)

Population (2009 est.): 19,625,000

Capital: Antananarivo

Chief of state and head of government:

President Marc Ravalomanana, assisted by Prime Minister Charles Rabemananjara; President Andry Rajoelina, assisted by Prime Ministers Monja Roindefo from March 17, Eugène Mangalaza from October 10, Cécile Manoroanta from December 18, and, from December 20, Albert Camille Vital

The early months of 2009 in Madagascar saw more than 100 people killed in weeks of violent street protests against Pres. Marc Ravalomanana, who was ac-

cused of having ruled in an authoritarian way and having mispent public money. The protests culminated in what was widely regarded as a coup in March, when soldiers pledged their support to Andry Rajoelina, a former mayor of Antananarivo who had led the opposition to Ravalomanana. Ravalomanana resigned and handed power to the military; he then fled to the African mainland. The military transferred power in a matter of hours to Rajoelina, who was quickly sworn in as president. The international community refused to accept the new government because it had come to power illegitimately, and Madagascar was suspended from both the African Union and the Southern African Development Community. In August international mediators led by former Mozambican president Joaquim Chissano met with Rajoelina and Ravalomanana and their predecessors, Didier Ratsiraka and Albert Zafy, in Maputo, Mozam. An agreement was reached on a power-sharing government for a transitional period of 15 months, during which legislative and presidential elections would be held. Ravalomanana, who had been convicted of abuse of power in a judgment handed down in Madagascar in June, would be given amnesty from prosecution. The four met again to allocate positions in the new government but were unable to agree. Rajoelina then unilaterally appointed what he claimed was a national unity government, with himself remaining

president, but his actions were widely criticized. Additional talks were held, and on October 6 it was announced that an agreement had been reached on positions in the new government. Although an agreement was signed on November 7—under which Rajoelina was to remain as president but rule with two co-presidents—Rajoelina did not participate in the final round of power-sharing talks held in early December, and he formally abandoned the power-sharing deal altogether on December 20. (CHRISTOPHER SAUNDERS)

MALAWI



Area: 118,484 sq km (45,747 sq mi)

Population (2009 est.): 15,029,000

Capital: Lilongwe; judiciary meets in Blantyre

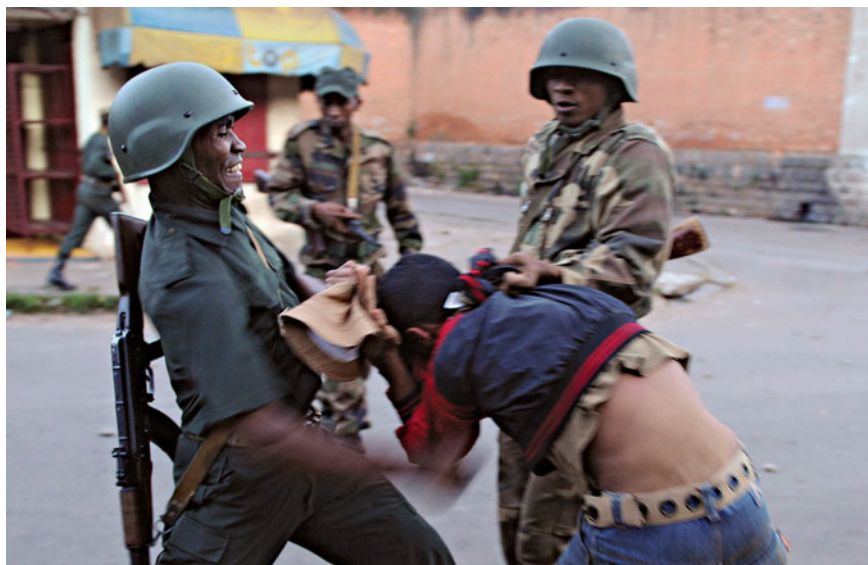
Head of state and government: President Bingu wa Mutharika

In Malawi's general elections held on May 19, 2009, Pres. Bingu wa Mutharika was reelected to a second five-year term in office, winning nearly 66% of the vote. He defeated six candidates, including opposition leader John Tembo, who finished a distant second in the polls with 30.69%. Mutharika's Democratic Progressive Party claimed 114 of the 193 parliamentary seats, while Tembo's Malawi Congress Party (MCP) earned 26 seats and the MCP-allied United Democratic Front won 17.

The political participation of women was by far the most significant ever. Mutharika's running mate, former foreign affairs minister Joyce Banda, became the first woman in Malawi to hold the office of vice president. The Ministry of Women and Child Development ran the 50/50 Campaign with the goal of attaining 50% female representation in the parliament. A record 220 women stood as candidates in the general elections, including one who ran for president, and although the ministry's campaign fell short of its goal, women secured 41 parliamentary seats, which represented 21% of the new legislature.

Under Mutharika, Malawi had become one of the world's fastest-growing economies. At the beginning of the year, GDP growth for 2009 was forecast to exceed 8%. Helping to boost the economy was the government's Agricultural

Police loyal to Madagascar Pres. Marc Ravalomanana subdue an opposition protester on February 16. A month later the military ousted Ravalomanana and installed Andry Rajoelina as president.



Walter Astrada—AFP/Getty Images

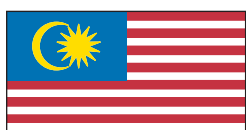
Amos Gumulira—AFP/Getty Images



Joyce Banda, the running mate of Malawian Pres. Bingu wa Mutharika, campaigns in Lilongwe on May 14. Mutharika was reelected, and on May 22 Banda was sworn in as vice president, the first woman to hold that office.

Input Subsidy Program, which benefited two million small-scale producers of corn (maize), tobacco, coffee, and tea. In June the government announced a record corn harvest that was expected to more than meet internal consumption needs. (LARAY DENZER)

MALAYSIA



Area: 329,876 sq km (127,366 sq mi)

Population (2009 est.): 27,468,000

Capital: Kuala Lumpur; administrative centre, Putrajaya

Chief of state: Yang di-Pertuan Agong (Paramount Ruler) Tuanku Mizan Zainal Abidin ibni al-Marhum Sultan Mahmud

Head of government: Prime Ministers Datuk Seri Abdullah Ahmad Badawi and, from April 3, Datuk Seri Najib Tun Razak

Battered from without by global economic instability and from within by ethnic and political tensions, Malaysia on April 3, 2009, installed a new prime minister, Najib Razak, following the resignation of his unpopular predecessor,

Abdullah Badawi. Abdullah selected Najib, who had served as deputy prime minister from 2004, to succeed him after unprecedented electoral losses in 2008 led to severe pressure within his own party, the dominant United Malays National Organization (UMNO), for Abdullah to resign. The new prime minister quickly addressed several issues rending Malaysia's ethnically and religiously diverse population. One of his first actions was to free 13 prisoners held under the country's controversial Internal Security Act, including two ethnic Indians who had led mass protests against the government in 2007. In contrast to Abdullah, who disallowed public discussion of "sensitive" social and religious matters, Najib emphasized the necessity of such discussion to Malaysia's future peace and prosperity. That need was highlighted in August when Muslims protesting the construction of a Hindu temple in Shah Alam, Selangor state, paraded a severed cow's head through the city, offending many Hindus, to whom cows are sacred.

In another surprising move, Najib undertook to reform the New Economic Policy (NEP), the pro-Malay affirmative action program introduced by former prime minister Abdul Razak, Najib's father, in 1971. The NEP had long been criticized as discriminatory and obstructive to foreign investment, but UMNO-led governments had eschewed reform of the policy. In June Najib an-

nounced that public companies were no longer required to set aside a third of their equity for indigenous partners. In addition, foreign firms were permitted to hold major stakes in securities and fund management companies.

In parliamentary and state by-elections held during the year, the governing coalition mostly held its ground at the polls, though not without resorting to such familiar tactics as political patronage and the muzzling of opposition newspapers. Meanwhile, opposition leader Anwar Ibrahim awaited trial on a sodomy charge that observers suggested may have been trumped up as a means of slowing the opposition's advance.

Malaysia's economy was hit hard by the global recession. GDP shrank at a rate of 5% between January and June—a far slide from the 6.7% growth during the same period in 2008. In May the value of Malaysian exports posted a year-on-year decline of almost 30%; the drop was reflected in higher-than-average unemployment in manufacturing. Unemployment was expected to level off at about 5% nationally. Of the roughly two million foreign workers in Malaysia, the government planned to return 400,000 of them to their home countries by 2010. Malaysia's central bank predicted that the economy would strengthen in the second half of the year, buoyed by more stable global conditions and two economic stimulus packages amounting to more than \$18 billion. (JANET MOREDOCK)

Muslims in Shah Alam, Malay., protest against the construction of a Hindu temple in a Muslim neighbourhood by marching through the streets on August 28 carrying the severed head of a cow, which is held sacred in Hinduism.



AP

MALDIVES



Area: 298 sq km (115 sq mi)

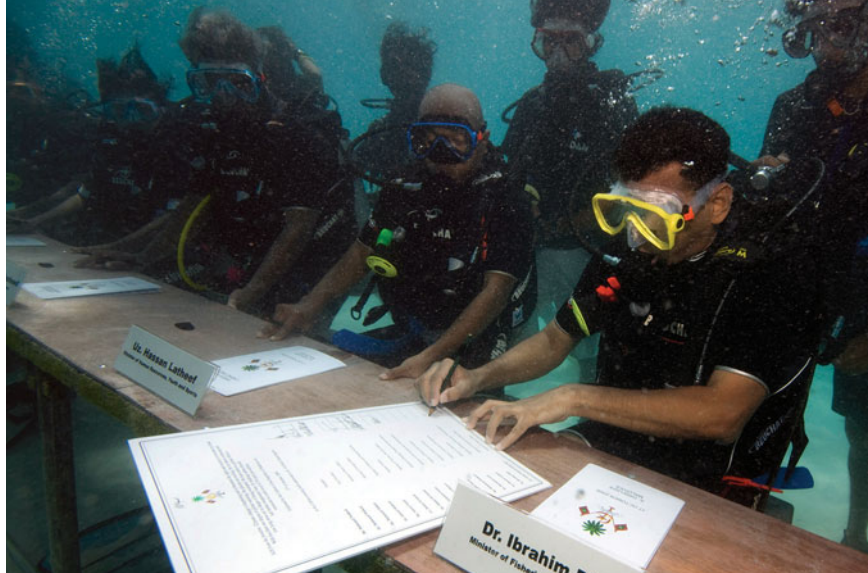
Population (2009 est.): 315,000, excluding about 100,000 foreign workers employed on the resort islands

Capital: Male

Head of state and government: President Mohamed Nasheed

Efforts to consolidate democracy in Maldives continued throughout 2009. On May 9, in the first-ever multiparty elections to the People's Majlis (parliament) held under the new constitution, 211 candidates from 11 political parties and 254 independent candidates contested for 77 seats. The Dhivehi Rayyithunge Party, led by former president Maumoon Abdul Gayoom (who lost the 2008 presidential election), won 28 seats to become the single-largest group in the Majlis, followed by Pres. Mohamed Nasheed's Maldivian Democratic Party (MDP) with 25 seats. Ten seats were won by three other parties—the People's Alliance, the Dhivehi Qaumeey Party, and the Republican Party—and 13 seats went to independent candidates. No party could secure an absolute majority. In the absence of a majority for his MDP, President Nasheed faced parliamentary hurdles for implementing his policies and programs. The first three-month-long session of the Majlis ended in September without a single bill's being passed. Reiterating his commitment to uphold the people's right to dissent, Nasheed said that his government would not defend human rights abuses.

Privatization and decentralization dominated the government's agenda, and bills aimed at these objectives were introduced in the Majlis. As part of administrative restructuring, the government proposed merging 20 atoll units into seven provinces, a measure that some parties opposed. The privatization program sought to bring about \$500 million in foreign investment and technology for developing utility services and other infrastructure. The government, which inherited a budget deficit of about \$170 million, was unable to fund such projects, and negative growth was recorded for two consecutive quarters. Part of the government's austerity measures included cutting the salaries



At a Maldives cabinet meeting on October 17, Minister of Fisheries and Agriculture Ibrahim Didi, wearing scuba gear, signs a formal document calling for an international reduction in carbon dioxide emissions. The low-lying island country held the meeting underwater to draw attention to the risks of global warming.

Mohammed Seeneen/AP

of political appointees and reducing their overseas and local travels. Nasheed himself canceled many of his overseas trips, including one to a conference in Copenhagen on climate change.

President Nasheed used international forums to highlight the grave threat facing Maldives as a result of sea level rise. He considered climate change to be a human rights issue, because peoples' right to life was threatened. In March Maldives declared its intention to become the first carbon-neutral country in the world, a goal it planned to achieve within a decade. On October 17, in an effort to draw the attention of the world to the need to reduce global warming, Nasheed and his cabinet members donned wet suits and scuba gear and held a meeting underwater.

(PONMONI SAHADEVAN)

MALI



Area: 1,248,574 sq km (482,077 sq mi)

Population (2009 est.): 13,443,000

Capital: Bamako

Chief of state: President Amadou Toumani Touré

Head of government: Prime Minister Modibo Sidibé

Progress toward the peaceful reconciliation of the Malian government and the

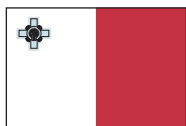
Tuareg people continued in 2009. On January 21, however, the army claimed that it had destroyed the main base of a dissident Tuareg group led by Ibrahim Ag Bahanga in Tinsalak, near the Niger frontier. Spokesmen for the rebel group challenged the report, stating that they had left the base six months earlier. There was also reason to believe that many of Bahanga's men had, in fact, already joined other Tuareg bands who returned to the negotiating table on February 17. On that day an estimated 700 Tuaregs turned in their arms at a ceremony in the northeastern town of Kidal.

Pres. Amadou Toumani Touré called for regional cooperation in the fight against insurgents allied with al-Qaeda. In early May Algeria sent the first of several shipments of military equipment to be used in joint operations against the insurgents. On May 31 a Malian al-Qaeda group executed British hostage Edwin Dyer, who had been kidnapped in Niger four months earlier. The Malian army captured an al-Qaeda base on June 16 in an attack that killed more than a dozen militants and five soldiers. On July 20 the main Tuareg former rebel group, Alliance for Democracy and Change, announced that it would join with Mali's army to fight al-Qaeda.

On August 27 President Touré refused to sign the country's new family law bill after strong opposition to some of its provisions dealing with women's rights angered conservative Islamic leaders. The measure was sent back to the parliament for revisions.

(NANCY ELLEN LAWLER)

MALTA



Area: 316 sq km (122 sq mi)
Population (2009 est.): 414,000
Capital: Valletta
Chief of state: Presidents Eddie Fenech Adami and, from April 4, George Abela
Head of government: Prime Minister Lawrence Gonzi

The government of Malta inaugurated 2009 with the announcement of a \$110 million project for the capital, Valletta, in preparation for its becoming the European Capital of Culture in 2018. The City Gate project was entrusted to the world-renowned Italian architect Renzo Piano. His designs, which included a new parliament building, were unveiled on June 27.

On April 1 the parliament unanimously elected George Abela, a lawyer, as the eighth president of Malta. This was the first time the government had nominated a member of the party in opposition, in this case the Labour Party, for the presidency. The nomination was seen as a symbol of national unity.

Elections were held on June 7 for representation in the European Parliament. On a turnout of less than 80%, the Labour Party won a landslide 55% of the vote, electing three of the five seats allocated to Malta (and earning the right to elect an additional seat upon the ratification of the Lisbon Treaty). Interestingly, a hunters federation revealed that it had instructed its members to vote for the Labour Party, and 94% of those members voting had complied.

The influx of immigrants from Africa remained controversial. The Italian and Maltese governments engaged in a "war of words" in the summer after the few surviving migrants from a dinghy that had run out of fuel were rescued in Italian waters. The Italians insisted that Malta, which had earlier intercepted the dinghy, should give up some of its search and rescue (SAR) region. The Maltese government refused outright, saying that its SAR, inherited from British colonial times, was "not for sale." In other news, in January Charles Camilleri, the internationally renowned Maltese composer, died at age 77.

(ALBERT GANADO)

MARSHALL ISLANDS



Area: 181 sq km (70 sq mi)
Population (2009 est.): 53,800
Capital: Majuro
Head of state and government: Presidents Litokwa Tomeing, Ruben R. Zackhras (acting) from October 21, and, from November 2, Jurelang Zedkaia

The Marshall Islands Nuclear Claims Tribunal, which was established to compensate those who were made ill or whose property was damaged by the 67 nuclear weapons tested (1946–58) by the U.S. in the Marshall Islands (43 on Enewetak atoll, 23 on Bikini atoll, and 1 some 37 km [85 mi] from Enewetak), ran low on funds and stopped making payments in July 2009. The fund, established by the U.S. Congress in 1983 as part of the Compact of Free Association, underestimated the magnitude of claims that would be made. A public advocate who represented claimants noted that \$23 million in personal injury awards and \$2.2 billion in land-damage and nuclear-cleanup awards remained unpaid. Meanwhile, the Compact trust fund, which provided 60% of the country's budget, lost 25% in the global financial crisis.

Another area of tension between the U.S. and Marshall Islands governments was the amount of compensation provided to the Marshall Islands and the landowners at the missile-testing site at Kwajalein atoll. Though the U.S. agreed to provide to the Marshalls, in return for the use of land, some \$70 million annually until 2023 and free access to the U.S. for Marshallese nationals, the landowners—who had been receiving inflation-adjusted rental fees of \$15 million annually—were demanding a rise to \$19 million when the current agreement ended in 2016.

After having survived a no-confidence vote in October 2008 and another in April 2009, Pres. Litokwa Tomeing was ousted from office on October 21 by a narrow 17–15 margin in the 33-member Nitijela (parliament). Tomeing, who was elected president in January 2008, was criticized for his handling of the dispute with the U.S. Another traditional chief, Nitijela Speaker Jurelang Zedkaia, was named to succeed him on November 2.

(CLUNY MACPHERSON)

MAURITANIA



Area: 1,030,700 sq km (398,000 sq mi)
Population (2009 est.): 3,129,000
Capital: Nouakchott
Chief of state: Chairman of the High Council of State Gen. Mohamed Ould Abdel Aziz and Presidents Ba Mamadou dit M'Baré (interim) from April 15 and, from August 5, Ould Abdel Aziz
Head of government: Moulaye Ould Mohamed Laghdaf

In 2009 the African Union refused to lift sanctions imposed on the leaders of the August 2008 coup that overthrew Sidi Mohamed Ould Cheikh Abdallahi, Mauritania's first democratically elected president, until late June, when marked progress had been made toward the establishment of a civilian government. On June 4, 2009, opposition leaders signed an agreement with the government that called for an interim unity government until the July 18 presidential elections. Coup leader Gen. Mohamed Ould Abdel Aziz was declared the winner with an absolute majority of 52%, with 16% for his closest rival, Messaoud Ould Boulkheir. Members of the opposition immediately challenged the results (more than one-third of the ballots had been invalidated by government officials). Sid'Ahmed Ould Deye, chairman of the Electoral Commission, resigned on July 23 owing to serious doubts about the validity of the vote.

In February the government pledged to speed up the process of providing new identity cards for the thousands of Mauritanian refugees repatriated from Senegal. On March 25 Gen. Ould Abdel Aziz promised reparations to families of victims killed in the violence against black Mauritians 20 years prior.

On March 6 Israel was asked to close its embassy in Nouakchott. Relations had cooled since Israel's January offensive in the Gaza Strip. Mauritania was one of only three Arab League states to have formal diplomatic relations with Israel.

Following a series of attacks, Gen. Ould Abdel Aziz pledged to combat terrorism by strengthening the army. On August 17, U.S. Peace Corps officials said that they had withdrawn more than 100 volunteers from Mauritania.

(NANCY ELLEN LAWLER)

MAURITIUS



Area: 2,040 sq km (788 sq mi)

Population (2009 est.): 1,276,000

Capital: Port Louis

Chief of state: President Sir Anerood Jugnauth

Head of government: Prime Minister Navin Ramgoolam

In 2009 Mauritius began enforcing the Equal Opportunities Act (EOA), which was passed by the legislature in late 2008 and guaranteed universal protection under the law against all forms of discrimination based on gender, ethnicity, religion, sexual orientation, age, status and physical abilities. The EOA had been created in an effort to redress ongoing social inequalities faced by many ethnic and religious minorities, including Creoles, Tamils, and Muslims, in the employment sector and other areas of the Mauritian private sector.

A plan to preserve about 650,000 sq km (250,000 sq mi) of marine habitat surrounding the Chagos Archipelago was revealed in February. The plan included the habitat of the archipelago's largest island, Diego Garcia, a British protectorate from which some 2,000 residents had been displaced 40 years earlier to clear the island for use as a military base by the United States. In 2008 British lawmakers argued that islanders and their descendants should be allowed to return, and the reef conservation plan included the repatriation of Chagossians to serve as the nature reserve's wardens.

Amid the ongoing economic downturn and increased job losses in the textiles and manufacturing sectors, Mauritius deepened ties with China. In February the two countries cemented development deals amounting to more than \$270 million. (MARY EBELING)

MEXICO



Area: 1,964,375 sq km (758,450 sq mi)

Population (2009 est.): 107,551,000

Capital: Mexico City

Head of state and government: President Felipe Calderón Hinojosa

Mexico faced daunting economic and social challenges in 2009. The global financial crisis struck the country particularly hard. Although Mexico had in recent years somewhat reduced its heavy trade dependence on the U.S., the U.S. market was still the destination for approximately four-fifths of all Mexican exports. As a consequence, the country's manufacturing sector was badly affected by the sharp decline in U.S. import demand during the year. The automobile and auto parts sector, which constituted Mexico's most important source of manufactured exports, especially suffered because of the broader crisis in the North American automotive industry. Overall, Mexican exports declined by approximately one-third between 2008 and 2009.

The Mexican economy also suffered from a substantial falloff in foreign direct investment flows and from lower prices for petroleum and other (mainly mining) commodity exports. Oil and gas revenues had in recent years consistently funded 30–40% of the federal government's total budget and 25–35% of government revenues transferred to states and municipalities. Mexican officials successfully hedged the price of oil and gas exports for the 2008–09 fiscal year at a premium over prevailing international petroleum prices, but lower international prices (though partially offset by a significant devaluation of the peso) had a negative fiscal impact on all levels of government.

Mexican emigration to the U.S. was slowed by tougher U.S. immigration controls and by reduced demand for labour in sectors that typically employed large numbers of immigrant workers, such as construction. As a result, the flow of migrant remittances to Mexico (which, after petroleum, were the country's largest source of legal export earnings) fell by more than 10% between 2008 and 2009. The number of households reporting the receipt of remittances declined by approximately one-fifth between 2005 (when 1.41 million households reported receiving remittances) and 2009.

Mexico's economic woes were exacerbated during the year by the outbreak of H1N1 flu in early April. The world's first confirmed case of the H1N1 virus was reported in the state of Veracruz. In June the World Health Organization declared the H1N1 flu a global pandemic, and by late December it had claimed the lives of at least 12,000 people worldwide. (See Special Report on page 194.) The Mexican government responded aggressively to the threat by closing schools and universities, sports arenas, cinemas, museums, and churches nationwide, as well as all restaurants and other public venues in Mexico City. Although some experts judged that public health agencies had been slow in genomically identifying the new virus, the government generally received positive evaluations for its efforts to contain the crisis. Neverthe-

A woman in Mexico City protests the government's decision to disband one of Mexico's state-run power companies, Luz y Fuerza del Centro, in October.



Eduardo Verdugo/AP

less, disrupted production and a vertiginous drop in tourist revenues (the country's third largest source of foreign exchange) further damaged an economy already deep in recession.

For all these reasons, Mexico's GDP shrank by 5.3% between October 2008 and October 2009, the worst performance in the Americas. The decline in capital inflows sharply undercut the value of the peso, which fell by 25% between 2008 and April 2009. In early 2009 the country's central bank, Banco de México, was forced to use some \$15 billion in reserves to cushion the peso's drop. Consumer price inflation was 3.6% for the year. Government sources announced that the unemployment rate topped 6% and the underemployment rate jumped to 13%—the highest levels since Mexico's severe 1994–95 financial crisis.

The administration of Pres. Felipe Calderón took several steps to address the deteriorating economic conditions. First, the government undertook countercyclical spending (especially funding for transportation and energy infrastructure projects and for medical care, welfare benefits, and temporary employment schemes) amounting to approximately 3% of GDP. Second, it bolstered its existing international reserves by negotiating a \$30 billion currency swap with the U.S. Federal Reserve and a flexible credit line of \$47 billion with the International Monetary Fund. Third, the government sought to protect social spending by securing special loans from the Inter-American Development Bank and the World Bank to support two major social welfare programs: Seguro Popular, a government-subsidized voluntary health insurance program designed in part to provide coverage for Mexico's large number of informal-sector workers, and Oportunidades, a conditional cash-transfer program benefiting poor families. Finally, the Calderón administration proposed making substantial cuts in public-sector employment and emergency tax increases in order to protect social spending.

Despite these initiatives and Calderón's continued personal popularity, voters punished the governing National Action Party (PAN) in the July midterm elections. Their discontent reflected both the country's serious economic difficulties and continued high levels of drug-related violence, which claimed 3,247 victims between January and June. (See Special Report on page 176.) Although the Calderón adminis-

tration had since 2006 committed enormous financial and human resources (including approximately 45,000 army troops) to the battle against drug-smuggling cartels, the Mexican public had grown increasingly weary of the protracted struggle and the human rights violations that sometimes accompanied army actions. The administration retained broad support for its efforts, but only about half of respondents to public opinion surveys believed that the government would win the fight.

Of Mexico's three largest political parties, the centre-right PAN suffered the greatest reverse in the midterm elections. Its share of seats in the federal Chamber of Deputies dropped from 41.2% to 28.6%. The proportion of seats held by the centre-left Party of the Democratic Revolution, which had lost credibility because of the disruptive tactics its losing presidential candidate employed in 2006 and because of protracted internecine struggles, fell from 25.2% to 14.2%. The principal winner was the Institutional Revolutionary Party (PRI), which raised its share of seats to 47.4% and won five of six gubernatorial races as well as many important mayoralties. Among the other parties, the Mexican Green Ecologist Party (PVEM) secured 4.4% of the seats, the Labour Party 2.6%, the New Alliance Party 1.6%, and Democratic Convergence 1.2%. The PRI (allied with the PVEM) thus gained a majority in the Chamber of Deputies and greatly enhanced its political momentum.

(KEVIN J. MIDDLEBROOK)

MICRONESIA, FEDERATED STATES OF



Area: 701 sq km (271 sq mi)

Population (2009 est.): 111,000

Capital: Palikir, on Pohnpei

Head of state and government: President Emanuel Mori

A significant dispute emerged in the Federated States of Micronesia (FSM) between Pres. Emanuel Mori and the FSM Congress over the fiscal year 2010 budget, which commenced on Oct. 1, 2009. Mori argued that Congress had the right to disburse only local funds,

whereas Speaker Isaac V. Figir argued that to deny Congress the right to distribute all state funds (including those received under the U.S. Compact of Free Association) was "undemocratic" and tantamount to selling sovereignty for money. Mori's attempt to limit congressional oversight might have arisen from ineffective oversight of past external funding.

The FSM applied to the UN for recognition of its claim to an extended continental shelf boundary. The FSM sought rights to this additional territory in the hope that it might contain valuable submarine mineral resources. Faced with intensified environmental degradation from climate change, the FSM took an active role in environmental politics. As lead entity in the Alliance of Small Island States, it was pushing for a 45% reduction in greenhouse-gas emissions by 2020 and, with Mauritius, filed an application for an amendment to the Montreal Protocol to limit the use of hydrofluorocarbons.

(CLUNY MACPHERSON)

MOLDOVA



Area: 33,843 sq km (13,067 sq mi), including the 4,163-sq-km (1,607-sq-mi) area of the disputed territory of Transdniestria (Transnistria; Pridnestrovie)

Population (2009 est.): 3,604,000 (excluding about 750,000 Moldovans working abroad but including the more than 500,000 persons in Transdniestria)

Capital: Chisinau

Chief of state: Presidents Vladimir Voronin and, from September 11, Mihai Ghimpu (acting)

Head of government: Prime Ministers Zinaida Greceanii, Vitalie Pîrlog (acting) from September 14, and, from September 25, Vlad Filat

In 2009 Moldova endured its most tumultuous year since Soviet rule came to an end in 1991. As outgoing Pres. Vladimir Voronin neared the completion of his maximum two terms in office, he stated that he expected to retain political power after stepping down, publicly declaring that he saw himself as akin to a "Moldovan Deng Xiaoping." Voronin's efforts to control the choice of his successor were

Gleb Garanich—Reuters/Landov



In the wake of parliamentary elections held in Moldova on April 5, protesters upset over vote-fraud allegations march in Chisinau.

thwarted, however, in the parliamentary elections held on April 5, when his Party of Communists of the Republic of Moldova (PCRM) secured 60 of the 101 seats in the legislative body—one seat shy of the 61 it needed to meet the three-fifths majority required for a political party to select a new president. Riots occurred in the wake of the elections as protesters upset over vote-fraud allegations and police harassment of the opposition stormed the parliament building and presidential palace, causing major damage. Voronin eventually dissolved the legislature and called for repeat elections to be held on July 29.

A major breach in the Communist ranks occurred weeks before the new elections took place when Marian Lupu, a leading PCRM official and former parliamentary speaker, left the PCRM to lead the Democratic Party, which became allied with several pro-EU opposition parties. On July 29 the PCRM managed to win only 48 parliamentary seats, while the four main opposition parties—the Liberal Democratic Party, the Liberal Party, the Democratic Party, and Our Moldova Alliance—captured a total of 53 seats and subsequently formed a governing coalition known as the Alliance for European Integration (AIE). On September 25 the AIE's nominee for prime minister, Vlad Filat, was approved by Parliament and sworn into office. Because

the AIE had not won 61 seats, however, it was prevented from installing as president its preferred choice for the post, Lupu. After a second parliamentary vote on December 7 was boycotted by the PCRM, parliamentary speaker Mihai Ghimpu remained as acting president until the deadlock could be resolved.

(TOM GALLAGHER)

MONACO



Area: 2.02 sq km (0.78 sq mi)

Population (2009 est.): 35,400

Chief of state: Prince Albert II

Head of government: Minister of State
Jean-Paul Proust

The relationship between Monaco's Prince Albert II and former South African swimmer Charlene Wittstock continued in 2009. She appeared with him at charity galas, on vacation in Saint-Tropez, and at official functions. Despite reports in 2008 in the U.K.'s *Daily Mail* of plans for a royal wedding, by the end of 2009 no arrangements had been announced.

The prince actively pursued his mission as an advocate for the environment. In January he participated in a three-week expedition to visit several scientific bases in Antarctica. In September he gave a speech at the UN calling for international action to protect the Arctic from climate change, and Chicago's Field Museum of natural history announced that it had received a grant of nearly \$600,000 from the Prince Albert II of Monaco Foundation to preserve biodiversity and avoid deforestation in Amazonian Peru. In October the prince presented awards for "extraordinary efforts dedicated to preserving planet Earth." Later that month he was honoured by the Scripps Institution of Oceanography, La Jolla, Calif., where he was awarded the Roger Revelle Prize. Closer to home, in late 2008 he called off plans to expand the territory of Monaco by reclaiming more land from the sea. Citing concerns about possible negative effects on the marine ecosystem, Prince Albert said that it would be "irresponsible to go ahead without sufficient environmental safeguards."

(ANNE ROBY)

MONGOLIA



Area: 1,564,116 sq km (603,909 sq mi)

Population (2009 est.): 2,704,000

Capital: Ulaanbaatar

Chief of state: Presidents Nambaryn Enkhbayar and, from June 18, Tsakhiagiin Elbegdorj

Head of government: Prime Ministers
Sanjaagiin Bayar, Norov Altankhuyag (acting)
from October 28, and, from October 29,
Sükhbaataryn Batbold

Mongolian politics was dominated in 2009 by the May 24 presidential election, which was won by the Democratic Party (DP) candidate, Tsakhiagiin Elbegdorj. He received 51.2% of the vote, defeating the incumbent, Nambaryn Enkhbayar of the majority Mongolian People's Revolutionary Party (MPRP). Enkhbayar's defeat was an upset for the MPRP and its chairman, Prime Minister Sanjaagiin Bayar, who had served as Enkhbayar's campaign manager.

Meanwhile, in January the General Election Commission had released the results from the June 2008 election for three of the last four seats in the national assembly, the Mongolian Great Khural. Three of the "new" Great Khural members were then sworn in. The winner of the remaining seat, a DP candidate who was imprisoned in January on fraud charges and later acquitted on appeal, took the oath in October.

In January President Enkhbayar met Russian Prime Minister Vladimir Putin in Davos, Switz., and in March Prime Minister Bayar met Putin in Moscow. Putin's one-day visit to Mongolia on May 13 prompted hostile comments in the press; some accounts portrayed him as an "enemy of the people." The visit to Mongolia in August by Russian Pres. Dmitry Medvedev, to celebrate the anniversary of the Mongolian-Soviet victory over Japanese forces in the 1939 Battle of Khalkhyn Gol, was marred by Medvedev's claim that the "settlement" in 2003 of Mongolia's debt for aid from the Soviet Union was "only for 98%" with "some questions left over."

After five years of contention, in July the Great Khural authorized the government to conclude an agreement with the Ivanhoe Mines and Rio Tinto companies to exploit the rich gold and copper deposits at Oyuutolgoi. There had been serious disagreements about

windfall taxes and what Mongolia's stake in the mine should be, since the country was unable to invest in the project without borrowing funds. Government ministers signed the Oyuutolgoi contract in October.

Prime Minister Bayar discussed industrial investment schemes, including nuclear power projects, on visits in March to France, Belgium, and Germany and in April to Inner Mongolia, China. In July UN Secretary-General Ban Ki-Moon visited Mongolia, and Bayar went to Japan to seek aid for Mongolia during the economic downturn. In September President Elbegdorj visited India and the U.S.

In the first half of 2009, there was a budget deficit of about \$183 million, largely due to a 28.8% fall in tax revenue. The balance of trade in the first six months of the year was down nearly 40% compared with the same period in 2008, the value of mineral exports having suffered from the downturn in world prices. The consumer price index rose by 4.2% from January to June 2009.

At the end of October, ill health obliged Bayar to resign the prime ministership (but not the chairmanship of the MPRP). External Relations Minister Sükhbaataryn Batbold was named the new prime minister, and Gombojavyn Zandanshatar was appointed to succeed him as external relations minister.

(ALAN J.K. SANDERS)

MONTENEGRO



Area: 13,812 sq km (5,333 sq mi)

Population (2009 est.): 630,000

Capital: Podgorica (Cetinje is the old royal capital)

Chief of state: President Filip Vujanovic

Head of government: Prime Minister Milo Djukanovic

In the parliamentary elections of 2009, the second such elections held in Montenegro since it declared independence in 2006, the ruling Coalition for a European Montenegro, headed by Prime Minister Milo Djukanovic, won 48 of the 81 seats. The victory also extended the rule of Djukanovic, who had been in power for nearly 20 years (as either prime minister or president). Voter turnout in the March election was 66%.

Savo Prelevic—AFP/Getty Images



A supporter of Milo Djukanovic holds up a portrait of the Montenegrin prime minister during an election rally in Podgorica on March 27.

Parliament adopted more than 100 laws in an effort to build the country's legal framework, and it also worked toward achieving a political consensus on European integration issues. In December 2008 Montenegro had officially submitted its application for membership in the EU and was expecting admission in 2012. Several polls indicated that a majority of Montenegrins backed integration. In its annual report the European Commission noted that Montenegro had made progress in addressing the political criteria needed for EU membership but warned that the government needed to "intensify its efforts so as to consolidate the rule of law" and to "fight against corruption and organized crime." In November the EU lifted visa restrictions for Montenegro. In December NATO offered the country a formal plan to join the alliance, but only 30% of Montenegrins favoured joining NATO.

The global economic downturn significantly affected Montenegro. The IMF and the World Bank predicted that the country's GDP would contract by 2.7% in 2009 and that the economy would remain in recession through 2010. In June more than 11,000 businesses reported debts totaling a record-breaking \$188 million. Unemployment rose slightly over the 2008 rate of 11%.

Industrial production dropped by 20% in the first half of 2009. The country's largest employer, the aluminum

plant Kombinat Aluminijuma Podgorica (KAP), owed more than \$280 million to foreign and local banks and about \$50 million to the government and state companies. KAP was the republic's largest exporter, accounting for 40% of industrial production. In addition, more than 100 smaller companies directly depended on its operations.

Service-sector employment continued to increase; in 2009 more than 70% of the labour force worked in tourism, construction, or trade. A large portion of the nearly \$560 million in foreign investment made during the first half of the year was in services. Tourism continued to grow. The government passed legislation making the country more attractive to private investors and developers, and the World Travel and Tourism Council ranked Montenegro as a top tourism destination. (MILAN ANDREJEVICH)

MOROCCO



Area: 710,850 sq km (274,461 sq mi), including the 252,120-sq-km (97,344-sq-mi) area of the disputed Western Sahara annexation

Population (2009 est.): 31,690,000, of which Western Sahara 405,000 (excluding 90,000 Saharawi refugees living near Tindouf, Alg., from 1975)

Capital: Rabat

Head of state and government: King

Muhammad VI, assisted by Prime Minister 'Abbas al-Fasi

Although Morocco's economy reflected the effects of the global downturn, it was expected to grow by 2.6% in 2009. The number of tourists rose by 9% in the first half of 2009, and consumer prices fell by 3.4%. There was also a bumper harvest, which raised the agricultural GDP—itsself 16% of the overall GDP—by 23%. Nonetheless, with unemployment at 10.5% and migrants returning from Europe, popular discontent led public-sector unions to organize strikes in January and February in favour of a 20% wage increase. In July pilots in Royal Air Maroc, the national airline, went on strike over working conditions.

On June 12, Moroccans went to the polls to elect local councils. At 52%, the turnout was a great improvement over the 37% that was recorded for the 2007

legislative elections (although it was still down 2% from the 2003 local elections). The government coalition, led by Istiqlal, and Morocco's Islamist party, the Justice and Development Party (PJD), did poorly, being outpaced by the new Authenticity and Modernity Party, originally part of the government coalition and led by former deputy interior minister Fouad 'Ali al-Himma. It won 18% of the vote, compared with Istiqlal's 16.6% and the PJD's 5.5%. A major registration drive had swelled the electorate by 1.5 million, and 3,406 of the victorious candidates were women, compared with just 127 in 2003.

The government continued to encroach upon individual freedoms, with the sentences on those arrested for the 2003 bombings in Casablanca being increased on appeal. In August, copies of the political weeklies *TelQuel* and *Nichane* were seized and sales of the French newspaper *Le Monde* were banned after they reported the results of a public opinion poll on the monarchy, despite its favourable conclusions. Hundreds of Shi'ites were arrested in April, and the Iraqi School in Rabat, which was suspected of encouraging Shi'ism, was closed after Morocco broke off diplomatic relations with Iran in February over Tehran's threats to Bahrain. The government also attacked those who did not comply with standards of public morality, apparently arresting as many as 20 homosexuals.

In September a 24-member network that recruited militants to fight U.S. forces in Iraq and Afghanistan was arrested. In June the UN Security Council approved informal talks between Morocco and the Polisario Front, after four previous rounds of talks in 2007 and 2008 at Manhasset, N.Y., had been unsuccessful. (GEORGE JOFFÉ)

MOZAMBIQUE



Area: 799,379 sq km (308,642 sq mi)

Population (2009 est.): 22,894,000

Capital: Maputo

Head of state and government: President Armando Guebuza, assisted by Prime Minister Luisa Diogo

In January 2009 heavy floods in central Mozambique forced 50,000 people into

resettlement centres. Two months later low levels of rainfall raised fears that there would be a drought in the provinces of Tete, Gaza, and Sofala, but El Niño rains later alleviated the situation. A cholera epidemic began in late 2008, and from January to March 2009 serious outbreaks occurred in every province except one, resulting in 12,000 known cases of infection and 157 deaths. Government agencies moved more quickly to implement relief measures and restore normalcy than they had during the flood and cyclone seasons in the previous two years.

Despite the natural disasters and epidemic, the 2009 quality-of-life index published by the United Nations Development Programme (UNDP) indicated that Mozambique had made the most progress among less-developed countries, having scored nearly 50% higher than in 1990. Attendance in primary schools had risen more than 33% from 2000 to 2006, although gender disparities continued, especially in northern and central rural areas. UNICEF reported a significant reduction in mortality rates among children under the age of five.

The economy proved resilient to the world economic crisis; growth declined to 4.5%, and inflation dropped below 6%. The government received three large-scale loans from the IMF, the World Bank, and the European Union, Denmark, and The Netherlands for railway, port, and communications projects. On the negative side, Transparency International and the Ibrahim Index of African Governance agreed that government corruption was more pervasive than it had been during the previous five years.

Meanwhile, a note of serendipity was struck when a team of environmental scientists and bird experts reported the results of its expedition to a hitherto-unmapped forest area on the peak of Mt. Mabu that had been revealed by Google Earth. The team discovered three new species of butterfly, one new species of snake, and seven species of globally threatened birds.

Campaigning for the October 28 presidential and parliamentary election began in mid-September. The incumbent, Pres. Armando Guebuza, ran for reelection as the Mozambique Liberation Front (Frelimo) candidate against Afonso Dhlakama, leader of the opposition Mozambique National Resistance/Electoral Union (Renamo/UE), and Daviz Simango, who earlier in the year had led a splinter group from Re-

namo to found the Mozambique Democratic Movement (MDM). Bitter rivalry between Renamo and MDM leaders weakened their chances for electoral success. With 75% of the votes, Guebuza won by a landslide, but the low turnout of only 44.6% of the registered voters indicated a lack of popular enthusiasm for the ruling party. Frelimo took 191 of the 250 seats in the parliament, Renamo 51, and the breakaway MDM only 8. Guebuza was reelected to a second term, and it was widely believed that his decisive victory might be used as a mandate to amend the constitution to allow him to run for a third term. (LARAY DENZER)

MYANMAR (BURMA)



Area: 676,577 sq km (261,228 sq mi)

Population (2009 est.): 48,138,000

Capital: Naypyidaw (site near Pynmana)

Head of state and government: Chairman of the State Peace and Development Council Gen. Than Shwe, assisted by Prime Minister Thein Sein

The year 2009 was one of stasis for military-ruled Myanmar. The regime headed by Gen. Than Shwe announced no legislative preparations ahead of scheduled elections in 2010, and more than 2,100 political dissidents remained in prison. In May pro-democracy leader Aung San Suu Kyi was arrested and placed on trial for having breached the terms of her house arrest order, which had been in effect since 2003; the arrest occurred following an uninvited visit by an American man, John Yettaw, to Suu Kyi's residence in Yangon (Rangoon). After a three-month trial marred by flagrant breaches of judicial process, Suu Kyi was found guilty and sentenced to three years' hard labour in prison; Than Shwe immediately commuted the sentence to 18 months of additional home detention.

In July UN Secretary-General Ban Ki-Moon visited Myanmar but was refused permission to meet with Suu Kyi or other imprisoned dissidents. Months later U.S. Sen. Jim Webb visited the country and met with Than Shwe and other State Peace and Development Council (SPDC) leaders as well as with

Suu Kyi; he also secured the release of Yettaw, who had been sentenced to seven years' hard labour.

During the year the U.S. government concluded a policy review of Myanmar, began high-level engagement talks, and discussed the loosening of sanctions against the country. Fears of Myanmar's close ties with North Korea—and especially concerns about possible nuclear proliferation—were partly behind the thaw in U.S. policy.

In August the military attacked the ethnic Kokang enclave in northern Myanmar, causing 30,000 civilians to flee into China, which lodged a formal protest. Tensions with more than a dozen other armed groups increased as the SPDC called on the groups to disarm ahead of the elections.

Myanmar's economy continued to suffer as urgently needed reforms were postponed. The Economist Intelligence Unit estimated real GDP growth at 0.3%. Foreign exchange reserves grew to \$3.6 million, largely owing to continued strong natural gas sales to Thailand. According to the International Monetary Fund, the fiscal deficit declined to 3.4% of GDP. Inflation eased from 27% to 14%, although this was dependent on continued foreign supplies of food aid. Food security worsened, especially in the Irrawaddy Delta and western and northern Myanmar, leading to fears of major food shortages. China announced plans to construct two energy pipelines to transport natural gas and crude oil from western Myanmar to China's Yunnan province; the pipelines were to be completed by 2014. (DAVID SCOTT MATHIESON)

NAMIBIA



Area: 824,116 sq km (318,193 sq mi)

Population (2009 est.): 2,109,000

Capital: Windhoek

Chief of state and head of government:

President Hifikepunye Pohamba, assisted by Prime Minister Nahas Angula

In the run-up to Namibia's presidential and National Assembly elections in November 2009, there were numerous confrontations between supporters of the ruling South West Africa People's Organization (SWAPO) and those of the

breakaway Rally for Democracy and Progress (RDP). SWAPO remained the dominant party, while the RDP appeared to have made little impact on voters. Though Pres. Hifikepunye Pohamba was confirmed as SWAPO's candidate for the presidential election, he found himself challenged by members of his own party, some of whom were aligned with former president Sam Nujoma, who remained influential behind the scenes. The main opposition party, Congress of Democrats, remained divided into rival factions.

In two days of balloting on November 27–28, Pohamba was easily reelected with 76.4% of the vote. The second-place candidate, former foreign minister Hidipo Hamutenya of the RDP, garnered only 11.1%. The breakdown was similar in the vote for the National Assembly, with SWAPO taking 75.3% and 54 of the 72 seats, ahead of the RDP with 11.3% and 8 seats.

In June a SWAPO-backed communications bill proposed in the parliament was fought by the opposition, which claimed that the government was introducing "Zimbabwe-type" powers of intercepting electronic communications, but since SWAPO held a two-thirds majority, the bill was later approved. The government continued to be sympathetic to Zimbabwean Pres. Robert Mugabe and refrained from criticizing continued human rights abuses in that country. There were many allegations of corruption and fraud leveled at Namibian government officials throughout the year, the most notable of which involved a contract for Chinese-made scanning equipment intended for the Ministry of Finance.

In August, on the 10th anniversary of the attempt by people in the Caprivi region to secede from Namibia, there was considerable focus on the fact that more than 100 of those involved remained on trial a decade later.

(CHRISTOPHER SAUNDERS)

NAURU



Area: 21.2 sq km (8.2 sq mi)

Population (2009 est.): 9,800

Capital: Government offices in Yaren district

Head of state and government: President Marcus Stephen

Pres. Marcus Stephen declared Sept. 1, 2009, a national holiday in Nauru to mark the commencement of a cellular phone service in the world's smallest independent republic. Digicel became the island's first provider of GSM (global system for mobile) telecommunications. The event was very significant for the remote community, and Stephen spoke for many residents when he said that it was a "truly exciting time" to have a mobile phone and Internet service in Nauru.

Stephen assumed an important leadership role in the region when he was installed as the chancellor of the University of the South Pacific (USP) on September 11. The 12 member countries that supported the USP sent representatives to the event, which took place during the graduation ceremony at the university's main campus in Suva, Fiji.

On the world stage, in December Nauru established formal relations with Abkhazia and South Ossetia, reportedly in exchange for some \$50 million in aid from Moscow. Nauru joined Russia, Venezuela, and Nicaragua as the only governments to officially recognize the two breakaway Georgian republics. (A.R.G. GRIFFITHS)

NEPAL



Area: 147,181 sq km (56,827 sq mi)

Population (2009 est.): 28,563,000

Capital: Kathmandu

Head of state: President Ram Baran Yadav

Head of government: Prime Ministers

Pushpa Kamal Dahal (also known as Prachanda) and, from May 25, Madhav Kumar Nepal

Nepal's political course took a new turn in May 2009 when Pres. Ram Baran Yadav reinstated the chief of Nepal's army; Prime Minister Pushpa Kamal Dahal—the former Maoist insurgency leader known as Prachanda—had fired the army chief for having refused, in defiance of the 2006 peace agreement, to integrate former Maoist fighters into the armed forces. Prachanda resigned, accusing the president of having flouted the constitution. Later that month, with the support of 22 political parties in the parliament, Madhav Kumar Nepal, the

leader of the Communist Party of Nepal (Unified Marxist-Leninist), was elected the new prime minister. The Communist Party of Nepal (Maoist), the largest parliamentary party, joined the opposition bench, and political deadlock ensued. The Maoists resorted to a series of agitations demanding the restoration of what they called "civilian supremacy." The troubles culminated on December 20–22 in a three-day nationwide general strike, which was punctuated by violent clashes between Maoist protesters and police.

In July the tenure of the UN Mission in Nepal was extended to Jan. 23, 2010. The UN achieved a major breakthrough in July when Nepal began discharging the 4,008 former Maoist child soldiers and noncombatants who had been detained in military camps. (See also Special Report on page 180.)

Despite relative peace in most of the hill area, violence was increasing, along with the number of armed groups, in parts of the eastern hill area and in the southern plains. Although the government announced a special security plan in July, the situation had not improved by year's end.

Along with political disasters, natural disasters also caused heavy damages in Nepal. An outbreak of diarrhea from April to September killed 464 people, and in October landslides and floods affected more than 16,000 families and left 143 dead. (KESHAB POUDEL)

NETHERLANDS, THE



Area: 41,543 sq km (16,040 sq mi)

Population (2009 est.): 16,522,000

Capital: Amsterdam; seat of government, The Hague

Chief of state: Queen Beatrix

Head of government: Prime Minister Jan Peter Balkenende

In 2009 the worldwide financial crisis that began in 2008 continued to affect The Netherlands. The country experienced a rise in unemployment and a rapid increase in the number of bankruptcies. As the government faced substantial financial shortfalls, the national debt rose significantly; while the country had enjoyed a budget surplus of 1% of GDP in 2008, a deficit of more than

4% was anticipated for 2009. Having acted in the fall of 2008 to protect individuals' savings accounts and to secure commercial interests, the government continued its policy of economic intervention. Aiming to stimulate economic growth, it invested in education, the building of new homes, and the upkeep of schools and infrastructure; it also supported new energy-saving measures. In addition, the government instituted policies intended to make part-time work more widely available and to reduce unemployment among younger workers.

Violence marred the celebration on April 30 of the national holiday known as Queen's Day. While the royal family was being driven along a parade route in the town of Apeldoorn, an individual in a small automobile drove toward the royal vehicle at high speed. The automobile collided with traffic barriers and members of the public, causing the vehicle to veer off course and ultimately to crash into a monument. Eight people, including the assailant, were killed, and nine were seriously injured. The exact motives of the would-be assassin remained unclear.

In the area of foreign relations, the Dutch government found itself in the midst of controversy over treaties it had made with Belgium in 2005. One of the treaties' provisions concerned the Western Schelde estuary, which lies within The Netherlands but gives the Belgian city of Antwerp access to the North Sea. The 2005 agreement stipulated that the Dutch would deepen the estuary in order to accommodate the largest oceangoing vessels 24 hours a day. The dredging work was to begin in 2007 and to be completed in 2009. While the Belgian government had agreed to a two-year delay, patience ran thin when the Dutch Council of State blocked the start of the work, citing possible environmental consequences. The initial agreement had proposed to mitigate the negative environmental effects of dredging by returning polders (areas of reclaimed land) along the estuary to their natural flooded state; this strategy, however, was opposed by many local residents.

In early 2009 Geert Wilders, leader of the Dutch Party for Freedom (PVV), which enjoyed success in the European elections in June, was ordered to stand trial for allegedly inciting hatred and discrimination and insulting a group (Muslims) based on religion. The trial was scheduled to begin in January 2010. (JOLANDA VANDERWAL TAYLOR)

NEW ZEALAND



Area: 270,692 sq km (104,515 sq mi)

Population (2009 est.): 4,317,000

Capital: Wellington

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Anand Satyanand

Head of government: Prime Minister John Key

Employment initiatives and fiscal policies to cushion the recession dominated the first full year of New Zealand Prime Minister John Key's fledgling government; its 2009 program included a multi-sector job summit to generate ideas on how to stimulate employment and a budget that addressed a "road to recovery." Unemployment reached 6% in June and was projected to peak at 7–8% in 2010. To preserve and create jobs, the government offered subsidies to businesses that adopted an average workweek of four and a half days, funded infrastructure projects, and initiated the construction of a bikeway network intended eventually to span the country.

With New Zealand facing reduced tax revenues and mounting welfare expenditures, Finance Minister Bill English's May 28 budget anticipated a deficit of some U.S.\$4.8 billion in 2009–10 and deficits exceeding U.S.\$5.5 billion in each of the following two years. Planned borrowing of about U.S.\$25 billion from 2009 to 2013 would effectively double government debt. Proposed tax cuts were deferred, and government contributions to a superannuation scheme initiated by the previous, Labour-led administration were suspended until 2020. Gov.-Gen. Sir Anand Satyanand and the members of Parliament voluntarily declined pay raises.

In April former prime minister Helen Clark resigned from Parliament, after having served as a member for 27 years, to lead the United Nations Development Programme. After 14 years as coleader of the Green Party, Jeanette Fitzsimons stepped down from her post in June and was succeeded by Metiria Turei.

Decisions in a few prominent criminal cases were major news items. Samoan-born Taito Phillip Field, who in 1993 had become the first Pacific Islander elected to the New Zealand Parliament, was sentenced in Auckland to six years'

imprisonment on bribery and corruption charges arising from his exploitation of Thai workers whom he had assisted on immigration matters. Field had been expelled from the Labour Party caucus in 2007 but remained in Parliament as an independent until he was defeated in 2008. A high-profile homicide retrial resulted in the acquittal of David Bain for the 1994 murders in Dunedin of his father, mother, sisters, and brother—murders for which he had been previously convicted. Bain had served 12 years in prison before the London-based Privy Council overturned his conviction in 2007. In New Zealand's biggest-ever fraud case, Michael Swann and Kerry Harford were each sentenced to several years in prison for defrauding the Otago District Health Board of U.S.\$10.5 million over six years; they had issued 198 fraudulent invoices for computer services that were never provided. Only U.S.\$4.3 million in assets was recovered.

New Zealand's military commitment in Afghanistan was increased in 2009. Joining the 150 New Zealand noncombatants already stationed there were 70 elite Special Air Service (SAS) combat troops, to serve in three rotations over 18 months. In the highest categories of the New Zealand Order of Merit, titular honours, which had been abolished in 2000, were reinstated. Former prime minister Jennifer Shipley became a "dame," but actor Sam Neill declined the title "sir." In response to a 2007 law on child discipline, a nonbinding citizen-initiated referendum was held on whether parents should be legally allowed to slap their children; 87.6% voted against considering a "smack" a criminal offense. The major political parties, however, declined to act on the matter.

Parliament approved a controversial measure reforming Auckland's government by creating a "super city" with a single mayor and council, effective in 2010. A Green Party proposal to legalize the use of marijuana for medicinal purposes was voted down 86–34. The use of handheld cell phones in motor vehicles was prohibited, and the city of Wanganui banned the wearing of gang insignia in public.

In other news, Cilla McQueen was appointed poet laureate for 2009–11. Maori singer Sir Howard Morrison (*see* OBITUARIES) died on September 24 at age

74. Although he had been a solo performer in later years, he had initially sung with a quartet, which in 1961 toured Australia as a support act for the Everly Brothers, Shelley Berman, and the Kingston Trio.

(NEALE MCMILLAN)

NICARAGUA



Area: 130,373 sq km (50,337 sq mi)

Population (2009 est.): 5,743,000

Capital: Managua

Head of state and government: President Daniel Ortega Saavedra

In 2009 the Sandinista National Liberation Front (FSLN) consolidated its rule in Nicaragua, taking advantage of continuing divisions between the country's opposition political parties. In January the Supreme Court overturned the 2003 corruption conviction of former president Arnoldo Alemán, who despite his conviction and subsequent house arrest had remained leader of the Constitutionalist Liberal Party (PLC); observers attributed the Supreme Court's decision to the long-standing pact between the FSLN and the PLC, noting that PLC members subsequently voted with the FSLN in electing a Sandinista

to lead the National Assembly. In October the Supreme Court ruled as unconstitutional the existing constitutional ban on consecutive presidential reelection, opening the way for Pres. Daniel Ortega to seek another term in office in 2011.

In the face of the global economic crisis, the government's decision to offset social expenditures with cuts to capital expenditures helped keep Nicaragua's budget within IMF parameters. Allegations of electoral fraud and corruption, however, resulted in reduced foreign assistance from the U.S. and Europe. Although polling showed strong public discontent with the leaders of every major political party, support for the Sandinistas' health, education, food, and housing initiatives had grown, particularly in the country's rural areas.

The worldwide economic downturn led to a contraction in Nicaragua's economy, with GDP estimated to decline by 3.7% in 2009 and exports projected to drop by 17%. Inflation stood at just 2.8%, down from a high of 13.8% in 2008. Lower inflation allowed for a loosening of monetary policy and increased access to credit.

In July the International Court of Justice at The Hague ruled in favour of Nicaraguan sovereignty over the disputed San Juan River border with Costa Rica, though the court permitted Costa Rica continued free commercial navigation on the river. Nicaraguans living along the Caribbean coast demonstrated growing disaffection toward politics with an unusually

high rate of voter abstention in the regional elections held in January. In April the Miskito Council of Elders in the North Atlantic Autonomous Region claimed independence from Nicaragua. A lawsuit brought before the Supreme Court by women's organizations—and supported by the Nicaraguan Centre for Human Rights and Nicaragua's Office of the Human Rights Ombudsman—sought to overturn the controversial 2006 ban on abortion, which prohibited even therapeutic abortions (those performed when a pregnancy threatened the life of a mother). The Vatican had signaled an interest in the decriminalization of therapeutic abortion, but the Roman Catholic Church in Nicaragua remained adamantly opposed to such a move.

(JUSTIN WOLFE)

On July 19, Sandinista supporters in Managua, Nic., celebrate the 30th anniversary of the revolution, led by the Sandinista National Liberation Front, that toppled the government of Anastasio Somoza Debayle in July 1979.



Miguel Alvarez/AP

NIGER



Area: 1,189,546 sq km (459,286 sq mi)

Population (2009 est.): 15,306,000

Capital: Niamey

Head of state and government: President Mamadou Tandja, assisted by Prime Ministers Seyni Oumarou, Albadé Abouba (acting) from September 23, and, from October 2, Ali Badjo Gamatié

The prevailing issue in Niger during 2009 was Pres. Mamadou Tandja's quest to extend his rule. The National Assembly had rejected President Tandja's request to hold a referendum on the issue, so he appealed to the Constitutional Court, which ruled on May 26 that the referendum would be illegal without the approval of the National Assembly. Within hours, the president dissolved the legislative body, and on June 5 a presidential decree was issued that called for a referendum on a new constitution to be held on August 4. The new constitution not only would provide for a three-year extension of President Tandja's rule but would also eliminate presidential term limits. On June 12 the Constitutional Court annulled the presidential decree; President Tandja urged the court to rescind its ruling, but it was upheld on June 26. Later that day Tandja assumed emergency powers, and three days later he dissolved the Constitutional Court. His actions were met with international condemnation and public demonstrations. Opposition parties called for a boycott of the referendum, which contributed to a massive win for the president. The legislative election to replace the National Assembly, held on October 20, was also boycotted by the opposition and resulted in victory for the ruling party. On the day of the election, Niger was suspended from the Economic Community of West African States for having ignored the organization's call to postpone the poll.

On April 6, Tuareg rebels of the Movement of Nigerians for Justice (MNJ) agreed to end their guerrilla war. The Niger government indicated that it would begin negotiations with the MNJ over shares in the northern region's mineral wealth.

In January the French mining company Areva was awarded the license to exploit Niger's uranium resources and

began work on the Imouraren mine in early May. On July 3, Algeria, Niger, and Nigeria signed a pact to build a pipeline to deliver Nigerian gas across the Sahara to Europe.

(NANCY ELLEN LAWLER)

NIGERIA



Area: 923,768 sq km (356,669 sq mi)

Population (2009 est.): 154,729,000

Capital: Abuja

Head of state and government: President Umaru Musa Yar'Adua

In late 2009 Nigeria experienced a constitutional crisis owing to Pres. Umaru Musa Yar'Adua's prolonged absence from the country. Yar'Adua left Nigeria on November 23 to seek medical treatment in Saudi Arabia for a heart condition. A campaign was launched by influential politicians and lawyers calling for more transparency about his ability to govern or his resignation, but at the end of the year, Yar'Adua remained secure in his post.

Nigerians interpreted U.S. Pres. Barack Obama's choice of Ghana for his first African state visit as a pointed rebuff to Nigeria's failings in the realms

of governance, transparency, and security. U.S. Secretary of State Hillary Clinton took up these issues during her two-day visit to Nigeria on August 12–13, challenging the country's leaders to intensify the fight against corruption, reform the electoral system, implement more equitable development, and end sectarian violence in the Niger delta. Clinton cited a World Bank report that concluded that corrupt practices in Nigeria had accounted for the loss of \$300 billion over the previous 30 years. Meanwhile, UN data showed that the country's poverty rate had risen from 46% to 76% over the previous 13 years.

Turbulence in the Niger delta remained a major stumbling block to internal peace. In May the government launched a sweeping military offensive against rebel groups in the region; though the operation killed and wounded hundreds, it failed to subdue the militants, who later in the year were able to strike beyond the delta, setting fire to an oil depot and several tankers in Lagos, the country's financial centre. On August 4 the government announced a 60-day amnesty for any militant who agreed to surrender his weapons in exchange for a daily stipend, education, and retraining. Estimates of the number of militants who accepted the amnesty varied from 7,000 to 15,000.

In July, Henry Okah, a leader of Nigeria's main militant organization, the Movement for the Emancipation of the Niger Delta (MEND), was released from

Bodies lie in a street in the northern Nigerian town of Maiduguri in July following days of intense fighting between Islamist militants and security forces that left between 800 and 1,000 people dead.



Gbenga Akinbule/AP

prison. Yar'Adua held a highly publicized meeting with Okah in October; the closed-door meeting, which Yar'Adua had requested, occurred after MEND had reportedly threatened to resume hostilities in the delta following the end of a 60-day amnesty. Details of the meeting were not immediately disclosed, though a government spokesman called the talks "fruitful" and a spokesman for MEND described them as "the beginning of the dialogue MEND has been advocating."

In the north a number of outbreaks of sectarian unrest occurred. In February and again in December, Christians and Muslims clashed in the city of Bauchi. The most serious conflict involved Muslim militants belonging to the group Boko Haram, a fundamentalist sect opposed to Western education. Authorities accused the militants of having attacked police stations and other sites in the states of Bauchi and Yobe. Intense fighting between militants and security forces spread to other neighbouring states, forcing thousands from their homes and leaving between 800 and 1,000 people dead—most of them members of Boko Haram. The sect's leader, Mohammad Yusuf, was taken into police custody but was later found shot to death. Human rights activists pointed out that extrajudicial executions by the police occurred frequently in Nigeria and said that Yusuf's killing demonstrated the urgent need for police reform. (LARAY DENZER)

NORWAY



Area: 385,179 sq km (148,718 sq mi), including the overseas Arctic territories of Svalbard (61,020 sq km [23,560 sq mi]) and Jan Mayen (377 sq km [145 sq mi])
Population (2009 est.): 4,828,000
Capital: Oslo
Chief of state: King Harald V
Head of government: Prime Minister Jens Stoltenberg

In 2009 Norway sought to insulate its economy from the effects of the global financial crisis. Relying on the country's \$400 billion Government Pension Fund-Global (the former Petroleum Fund of Norway), the Norwegian government was able to guarantee com-

mercial bank loans and implement an economic stimulus plan, which provided for increased spending on social welfare and infrastructure projects. Public spending was credited with securing many jobs and helping to keep the unemployment rate at about 3%. Citing higher inflation, the central bank raised its key interest rate to 1.5% in October. GDP declined by an estimated 1.9% in 2009. An initial government forecast of 0.7% GDP growth in 2010 was later revised upward to 1.4%.

The question of whether to allow oil drilling in the Arctic waters around Norway's Lofoten and Vesterålen islands was hotly debated during the year. Norwegian oil companies, facing dwindling North Sea reserves, were eager to start drilling in the area, where large deposits of oil and gas were thought to be located under the seabed. Seismic surveys to determine potential deposits were conducted in the summer, though the results were not to be released publicly until 2010. The surveys sparked strong protests from fishermen's organizations and environmentalists, who were adamantly opposed to opening the pristine region to exploration and drilling, citing the disruption that would be caused to the cod-fishing industry—on which generations of area residents had depended for their livelihoods—and the catastrophic environmental damage that could occur, particularly in the event of an oil spill. The oil companies countered by arguing that fisheries had thrived for decades in close proximity to drilling installations in the southern part of the North Sea and that new technologies would help to minimize the ecological impact. Environmentalists insisted, however, that the risk was too great to take.

The issue of drilling was a major political topic heading into the September 14 parliamentary elections, with the main opposition parties expressing support for drilling and the Socialist Left Party (SV)—one of the partners in Prime Minister Jens Stoltenberg's red-green coalition—standing firmly against it. The coalition government claimed a narrow victory at the polls, ensuring that it would remain in power for another four years by securing 86 of the 169 parliamentary seats. Stoltenberg's Norwegian Labour Party captured 35.5% of the vote and 64 seats, while the two other parties in the coalition, the SV and the Centre Party, each garnered 6.2% and 11 seats. The opposition was dominated by the pop-

ulist Progress Party (22.9% and 41 seats) and the Conservative Party (17.2% and 30 seats). In the aftermath of the elections, Stoltenberg indicated that the coalition government would wait to make a final decision on drilling near Lofoten and Vesterålen until more scientific evidence had been presented on the environmental consequences for the region. (HILDE SANDVIK)

OMAN



Area: 309,500 sq km (119,500 sq mi)
Population (2009 est.): 2,845,000
Capital: Muscat
Head of state and government: Sultan and Prime Minister Qaboos bin Said (Qabus ibn Sa'id)

Oman reached out to Iran in 2009; Sultan Qaboos visited Iranian Pres. Mahmoud Ahmadinejad in Tehran within weeks of Iran's June 12 election. To a greater extent than any of the five other Gulf Cooperation Council countries, Oman refrained from openly challenging or even criticizing Iran over that country's nuclear-development program or controversial foreign policies. Instead, Oman continued its long-standing approach of seeking to engage Tehran diplomatically, and the two countries entered into several memorandums of understanding. The more important ones pertained to increased bilateral cooperation in energy affairs, and Oman agreed for the first time to purchase Iranian gas exports.

Oman weathered the global economic slowdown better than most of its neighbours. The reasons were several: the cushion provided by the earlier robust level of revenues accrued from exceptionally high oil prices, increased oil production to about 805,000 bbl per day, sustained income from exports of natural gas, and conservative local practices of lending and investment. A new oil field was discovered off the Musandam Peninsula in an area straddling Oman's maritime border with Iran. Of particular importance was the continued vibrancy of spending by foreign tourists, especially other Gulf nationals, who were visiting the sultanate in far greater numbers than before because, for economic reasons, they were less willing

Behrouz Mehri—AFP/Getty Images



Sultan Qaboos bin Said of Oman (left) is formally welcomed to Tehran by Iranian Pres. Mahmoud Ahmadinejad on August 4. The sultan's three-day visit to Iran was his first in 30 years and the first by any head of state since Ahmadinejad's controversial reelection in June.

than in earlier years to vacation farther afield. The country's booming tourism industry was developing a variety of new tourist destinations. High-speed ferryboat service was inaugurated to transport vehicles and passengers to the remote but scenic Musandam Peninsula and to hitherto little-explored coastal sites and islands in the southeast.

(JOHN DUKE ANTHONY)

PAKISTAN



Area: 881,889 sq km (340,499 sq mi), including the 85,793-sq-km (33,125-sq-mi) Pakistani-administered portion of Jammu and Kashmir

Population (2009 est.): 174,579,000 (including about 4,900,000 residents of Pakistani-administered Jammu and Kashmir as well as Afghan refugees)

Capital: Islamabad

Head of state and government: President Asif Ali Zardari, assisted by Prime Minister Yousaf Raza Gilani

Terrorism and counterterrorism dominated developments in Pakistan in 2009. (See Special Report on page 178.) In January, U.S. CIA drones struck South

Waziristan, killing two top al-Qaeda leaders, Usama al-Kini and Sheikh Ahmed Salim Swedan, who were on the FBI's most-wanted list in connection with the 1998 bombings of U.S. embassies in Kenya and Tanzania. Pakistan's government confronted the terrorist organization Lashkar-e-Taiba and its social arm, Jamaat-ud-Dawa, arresting 124 people and closing 20 offices, 94 religious schools, 2 libraries, and several relief camps.

In February the Supreme Court upheld a ban prohibiting opposition leader Nawaz Sharif from holding elected office and sustained decisions removing his brother as Punjab's chief minister. "Governor's rule" was imposed in Punjab, and in March police and military units thwarted an all-country protest calling for the reinstatement of judges who had been dismissed in 2007. Within days, however, Pres. Asif Ali Zardari, fearing intensified street violence, reinstated the judges, including Iftikhar Muhammad Chaudhry (see BIOGRAPHIES), who resumed duties as chief justice of the Supreme Court on March 22. Zardari also restored the provincial government of Sharif's brother in Punjab, and in May the Supreme Court overturned the electoral ban on Sharif.

A terrorist attack in Lahore in early March targeted Sri Lanka's cricket team, killing six police officers and wounding several players. Lashkar-e-Taiba took credit for the assault. Later in the month terrorists attacked a police centre in Manawan, near Lahore, killing eight.

In April the National Assembly approved the installation of Shari'ah (Islamic law) throughout the Swat valley of the North-West Frontier Province (NWFP)—a move that had been negotiated in February in the hopes of securing a lasting truce with militants in the area—and President Zardari signed the order. Encouraged, Swat-based Taliban forces moved into neighbouring Buner district, but Pakistani army units stemmed the advance. Troops also fought militants in nearby Dir district, and after peace efforts failed, a full-scale offensive was launched in Swat.

Zardari visited Washington, D.C., in May for trilateral meetings with U.S. Pres. Barack Obama and Afghanistan's Pres. Hamid Karzai, despite intense fighting in the NWFP. Hundreds of thousands of people fleeing the war zone required extraordinary assistance. In late May terrorists bombed the Lahore headquarters of the Inter-Services

Intelligence (ISI) agency, killing 35. Although the army declared victory in Swat, claiming to have killed 2,000 militants in the region, in June suicide bombers demolished Peshawar's posh Pearl Continental Hotel. Eleven people were reported dead. U.S. drones, active over South Waziristan, reportedly killed Taliban operatives Qari Hussain and Maulvi Sangeen Zadran. In July Islamabad arrested pro-Taliban cleric Sufi Muhammad in continuing Swat operations. More significant, in August CIA drone attacks in South Waziristan killed Baitullah Mehsud, the leader of Tehrik-i-Taliban (a coalition of Pakistani Taliban groups). Hakimullah Mehsud assumed leadership of the coalition.

In September, Tehrik-i-Taliban publicized its intention to wreak havoc everywhere in Pakistan, and the October bombing of the UN World Food Programme in Islamabad and a car bombing in Peshawar were traced to that threat. More brazen was the assault on army headquarters in Rawalpindi, in which 20 died. Still another suicide bombing in Shangla killed 41, and multiple, almost simultaneous mid-October assaults in Lahore, Peshawar, and Kohat targeted police and security installations.

The U.S. Congress in September approved a bill making available \$7.5 billion over five years to rebuild Pakistan's roads, schools, and democratic institutions. Pakistan's higher military officials, however, registered alarm at the bill's linkage of the funding to the country's war on terrorism, and Pakistan's political opposition claimed that accepting the aid would compromise Pakistan's sovereignty. The U.S. transfer of F-16 aircraft to Pakistan proceeded without interruption, despite concerns raised in the U.S. Congress over Pakistan's near completion of two additional nuclear weapons reactors.

A long-awaited invasion of South Waziristan commenced on October 17 when 30,000 Pakistani soldiers invaded Taliban strongholds in the area. A suicide bombing inside Islamabad's International Islamic University, however, forced the temporary closing of Pakistan's schools. Moreover, the assassination of an army brigadier and a suicide attack near the Kamra aeronautical complex in Attock, as well as repeated bombings (notably in Peshawar's Meena Bazaar), demonstrated the vitality of the terrorist campaign.

In November increasing weakness in the Zardari presidency added to Pakistan's instability. Despite withdrawing



At a checkpoint near Bannu, Pak., on October 19, a family of refugees escapes from Pakistan's South Waziristan region, where two days earlier government troops had attacked militant Taliban strongholds.

Ijaz Muhammad/AP

the National Reconciliation Ordinance of 2007, which had provided amnesty from prosecution to high officials and politicians, the government was unable to placate its opposition. Counterterrorist units moved aggressively in southern Punjab and Karachi, but the effort did little to shore up Zardari's fleeting popularity.

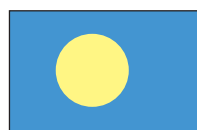
Militants, however, sustained their attacks. In November gunmen assaulted two more ranking members of the army, and suicide bombers killed a mayor from the NWFP, blew up the ISI regional headquarters in Peshawar, struck outside a bank in central Rawalpindi, targeted a police station in North Waziristan, and killed more than 30 people at a Charsadda market. A spate of seven bombings in a succeeding 10-day period killed numerous bystanders. The country's earlier acknowledgement of the Pakistani origin of the 2008 Mumbai (Bombay) terrorist attacks resulted in the late-November indictment of seven members of Lashkar-e-Taiba in connection with the attacks.

In December, Obama's decision to increase the number of U.S. troops in Afghanistan heightened debate in Pakistan. Intensification of the war in Afghanistan was rumoured to imply expanded drone attacks in Pakistan's tribal areas and possibly Balochistan. Pakistan's dissidents, however, were not deterred. Assaults on the naval headquarters in Islamabad and, once again, the army headquarters in Rawalpindi killed at least 38, including a major general and a brigadier. Militants also struck in Peshawar at a district and sessions court complex and a nongovernmental organization assisting the blind, while bombs

destroyed much of Lahore's Moon Market. The casualty toll rose still higher with the bombings of ISI headquarters in Multan, of the market in Punjab's Dera Ghazi Khan, and of Shi'ite religious processions in Karachi and Pakistan-administered Kashmir. Moreover, implementation of Obama's new strategy was demonstrated by the ratcheting up of drone attacks in Bajaur as well as in South and North Waziristan. Believed to have been among the casualties was senior al-Qaeda leader Saleh al-Somali. Given the public and official outrage in Pakistan over the intensified drone attacks, James Jones, Obama's national security adviser; Gen. David Petraeus, head of the U.S. Central Command; and Adm. Mike Mullen, chairman of the U.S. Joint Chiefs of Staff, made separate visits to Islamabad to try to ease deepening strains in U.S.-Pakistan relations.

(LAWRENCE ZIRING)

PALAU



Area: 488 sq km (188 sq mi)

Population (2009 est.): 20,400

Capital: Melekeok (on Babelthup)

Head of state and government: Presidents Tommy Remengesau, Jr., and, from January 15, Johnson Toribiong

Palau emphasized its close links to the United States in 2009. As a mark of Palau's recognition of the importance of its U.S. ties, Pres. Johnson Toribiong

agreed that several Chinese Uighurs detained at a U.S. military prison at Guantánamo Bay, Cuba, could be temporarily resettled on the islands. The plan was not universally popular in Palau. Fermin Nariang, editor of the Palau newspaper the *Island Times*, said that he had been stopped in the streets of Koror by citizens asking, "If the whole world does not want these folks, why are we taking them?" Palauans were also concerned that the Muslim Uighurs might face unacceptable culture shock and that the country's tourism might be harmed by the presence of former detainees on the islands.

Environmental issues remained important. President Toribiong told the UN General Assembly in September that Palau was creating a sanctuary to protect great hammerheads, leopard sharks, and oceanic whitetip sharks. The country acknowledged the difficulty, however, of patrolling waters the size of Texas or France with a single boat. An animal rights group asked Palau to remove fruit bats from local restaurant menus; after having been featured on an American reality TV show, the consumption of fruit bats cooked in coconut milk became so popular with tourists that the species' survival was said to be threatened.

(A.R.G. GRIFFITHS)

PANAMA



Area: 75,417 sq km (29,119 sq mi)

Population (2009 est.): 3,454,000

Capital: Panama City

Head of state and government: Presidents Martín Torrijos and, from July 1, Ricardo Martinelli

General elections consumed Panama during the first half of 2009. The elections, held on May 3, pitted Balbina Herrera, a former legislator and minister of housing, against wealthy businessman Ricardo Martinelli (see BIOGRAPHIES) in the presidential race. Herrera was the standard-bearer of the governing Democratic Revolutionary Party (PRD). Martinelli led a coalition of opposition parties headed by the Democratic Change party. The campaign was devoid of much substance and centred largely on personal attacks

between the candidates. Herrera was accused of being a radical leftist who had received support from Venezuelan Pres. Hugo Chávez. Martinelli exploited Herrera's past links to former Panamanian strongman Manuel Noriega, and his campaign emphasized the need for change after five years of PRD-led government. For her part, Herrera accused Martinelli of being mentally unstable (rumours had abounded for years that Martinelli was bipolar) and tried to use Martinelli's wealth and business practices against him. In the end the desire for change—despite the country's strong economic performance during the previous three years—led to a landslide victory for Martinelli, who captured 60% of the votes. His coalition also won a majority of seats in the legislature. Martinelli's victory ran counter to the recent leftist political trend in Latin America.

While Panama's economy was affected by the sharp decline in global trade, economists predicted that it would still post modest growth in 2009. Significant public spending helped boost the economy. The \$5.3 billion canal-expansion project was well under way, with completion slated for 2014. The government reported that GDP grew 2.4% during the first half of the year. Unemployment stood at 6.6% in August, up 1% from the same month a year earlier. The U.S.-Panama free-trade agreement remained unratified by the U.S. Congress, despite support from the administration of Pres. Barack Obama; some U.S. representatives insisted that Panama first tighten its banking laws to discourage tax evasion and money laundering.

(ORLANDO J. PÉREZ)

PAPUA NEW GUINEA



Area: 462,840 sq km (178,704 sq mi)

Population (2009 est.): 5,941,000

Capital: Port Moresby

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Paulias Matane

Head of government: Prime Minister Sir Michael Somare

In 2009 Papua New Guinea (PNG) pressed forward with a plan to exploit its natural gas reserves. Two proposals were put forth to construct pipelines

from wells to liquefaction plants. One, by InterOil of Houston, would pipe gas from the upper Purari River to Port Moresby for conversion to liquefied natural gas (LNG). The other, by energy giant ExxonMobil, would pipe gas from the Southern Highlands to a liquefaction plant in the capital region. After debate between Prime Minister Michael Somare (supported by the energy minister, William Duma) and the prime minister's son, Arthur Somare (minister for public enterprises and chairman of the ministerial gas committee), the cabinet decided to adopt the scheme engineered by ExxonMobil, even though InterOil already operated an oil refinery at Port Moresby's Fairfax Harbour and was preferred by Prime Minister Somare. The LNG was then to be shipped to Chinese, Japanese, and Taiwanese customers already signed up under a \$15 billion deal.

Investigations continued into an airline crash in August in which a chartered Airlines PNG twin-engine plane crashed in the jungle near Kokoda. All 11 passengers and 2 crew members were killed in what was the worst civil air disaster in PNG history. The disaster was as important to Australia as to PNG, for large numbers of Australians walk the historic Kokoda Trail, site of decisive military campaigns during World War II. Following the crash, many Australians helped remove wreckage and assisted with the investigation of the accident. This collaboration was seen as furthering the close relationship between PNG and Australia.

(A.R.G. GRIFFITHS)

PARAGUAY



Area: 406,752 sq km (157,048 sq mi)

Population (2009 est.): 6,349,000

Capital: Asunción

Head of state and government: President Fernando Lugo

In 2009 extraordinarily high political expectations and challenges faced Paraguayan Pres. Fernando Lugo, the former Roman Catholic bishop whose inauguration on Aug. 15, 2008, ended 61 years of rule by the Colorado Party. Lugo had sworn to tackle such intractable issues as land reform (1% of

Paraguay's population controlled 77% of the arable land) and poverty relief (42% of Paraguayans lived in poverty), as well as fight corruption and crime and improve access to health care. His efforts to deliver on those promises, however, were hobbled during the year by the global recession, the fracture of his political alliance, and resistance from Colorado Party functionaries embedded in the government. In addition, Lugo was beset by a series of scandals. Two women filed paternity suits against him after he admitted to having fathered a child with a third woman while he was still a bishop. Allegations of nepotism on the part of his sister and Paraguay's acting first lady, Mercedes Lugo, also emerged, serving to undercut the president's reformist image.

Lugo did achieve three notable successes in 2009. On April 28 he and Bolivian Pres. Evo Morales signed an agreement ending a border dispute that dated from the 1932–35 Chaco War. In July Lugo finalized a deal with Brazilian Pres. Luiz Inácio Lula da Silva in which Brazil, after years of resistance, agreed to triple the annual revenue it paid to Paraguay for energy from the Itaipú hydroelectric dam, which was jointly operated by the two countries; a 1973 treaty had obligated Paraguay to sell power to Brazil at fixed far-below-market rates. The Lugo administration also succeeded in significantly increasing financial and medical assistance to Paraguayans in poverty, overcoming efforts in Congress to deny funding.

In September, however, Lugo suffered a setback when he was forced to rescind a decree limiting pesticide use by the soybean industry. The expanding industry had displaced many of the country's rural residents, which led to violent land disputes. Clashes had also occurred over pesticide contamination and pesticide-related illnesses.

The era of former dictator Alfredo Stroessner, who ruled Paraguay from 1954 to 1989, continued to haunt the country. In May Sabino Montanaro, who had served as Stroessner's interior minister, was extradited from Honduras to face six trials for the disappearances and killings of government opponents in the 1970s and '80s. In July the bodies of two victims from the 1970s were found buried outside a police barracks in Asunción. A truth commission reported that at least 336 people had disappeared under the regime, at least 59 had been extrajudicially executed, and 18,000 had been tortured.

(ROBERT ORTEGA)

PERU



Area: 1,285,198 sq km (496,218 sq mi)

Population (2009 est.): 28,887,000

Capital: Lima

Head of state and government: President Alan García

The year 2009 proved to be one of considerable challenges for Peru. The global recession had a marked impact on the country's economy, which was heavily based on the export of mineral and agricultural products. The economy slowed significantly during the final quarter of 2008 and the first half of 2009 as foreign demand for these commodities slumped. In an effort to counter the effects of the slowdown, the administration of Pres. Alan García worked to implement a financial stimulus package of up to \$13.2 billion. The central bank also slashed its benchmark lending rate during the year to a record-low 1.25%. These measures—along with the expectation that export demand would recover—led most analysts to conclude that Peru had weath-

Peruvian Prime Minister Yehude Simon (centre) poses with Amazonian Indians on June 17 after submitting a proposal to Congress to revoke two laws that had allowed the Peruvian Amazon region to be opened to development.



ered the financial crisis better than many other countries in Latin America and had positioned itself for a relatively rapid economic rebound.

In addition to the economy, much attention in Peru was focused on the numerous protests that occurred, many of them related to the issues of land use and indigenous rights. The most notable of these was an indigenous uprising in the Peruvian Amazon region near Bagua Grande, some 1,400 km (850 mi) north of Lima. During the first week of June, members of indigenous groups opposed to two recently enacted laws allowing the country's rainforest to be opened to exploration and development blockaded highways and became involved in deadly clashes with police. The fighting claimed the lives of at least 24 protesters and 10 policemen. The political fallout from the violence was considerable. García was forced to admit that his government should have carried on consultations with the indigenous groups before promulgating the laws. Yehude Simon, who had been appointed prime minister in October 2008, resigned his post, as did several other members of García's cabinet, and on June 18 Congress rescinded the laws that had sparked the uprising.

Protests were also staged by the local populations in other parts of the Peruvian Amazon and in the Andean highlands, where many complained of government indifference regarding the destructive environmental impact of mining, logging, and other activities on these areas. In recent years local inhabitants had increasingly turned to strikes and demonstrations as a way to force their concerns to be heard. Issues they demanded the government address included deforestation that was ruining tribal hunting grounds, numerous oil spills that had contaminated rivers and water supplies, and widespread pollution that had been caused by smelting operations, especially in the highland region near the city of La Oroya.

On February 1 a free-trade agreement between Peru and the U.S. came into force. The two countries had signed the agree-

ment in 2006, and García had pushed vigorously for its implementation. In addition to its pact with the U.S., Peru was also pursuing free-trade agreements with several other countries.

In April former president Alberto Fujimori, who had been extradited to Peru in 2007 to face a series of trials on charges ranging from corruption to human rights abuses, was found guilty of having authorized military death squads that carried out killings and kidnappings during his years in office (1990–2000). Fujimori was sentenced to 25 years in prison. In September he pleaded guilty to the remaining bribery and wiretapping charges against him and received an additional six years in prison. Many observers noted that by pleading guilty Fujimori avoided a trial in which some 60 witnesses—including many former government officials—were expected to testify against him and that the testimony could have proved politically damaging to his daughter, Keiko Fujimori, in Peru's upcoming 2011 presidential election. Keiko Fujimori, a member of Congress since 2006, had already declared herself a candidate and had stated publicly that she intended to pardon her father if she won the election. (HENRY A. DIETZ)

PHILIPPINES



Area: 300,000 sq km (115,831 sq mi)

Population (2009 est.): 91,983,000

Capital: Manila (some government offices and ministries are located in Quezon City and other Manila suburbs)

Head of state and government: President Gloria Macapagal Arroyo

In one of the worst examples of political violence in the Philippines, 57 people were killed in an ambush on Nov. 23, 2009, as they traveled in a convoy that had been sent to file the election papers of Ismael Mangudadatu, a candidate for governor of Maguindanao province on the island of Mindanao. A local mayor, Andal Ampatuan, Jr., was charged with multiple counts of murder. His father—a former governor of the province and the leader of a clan that had long ruled Maguindanao—and his brother were among 24 people charged with rebellion. Ampatuan, Jr.,

Martin Mejia/AP

Bullit Marquez/AP



Residents of the Philippine town of San Pedro, south of Manila, wade through floodwaters following the destructive storm that hit the area in late September.

was accused of having led the ambush. Mangudadatu indicated that Ampatuan, Jr., had threatened to kill him if he sought the governorship, so he had sent female relatives to file the papers for his candidacy, thinking that they—along with some lawyers and supporters and 30 journalists who accompanied them—would not be harmed. The victims were mutilated and buried in mass graves that had been dug in advance of the massacre.

Pres. Gloria Macapagal Arroyo declared a state of emergency and then martial law in the province, which was not lifted until December 12. Her political party expelled the Ampatuan clan, who had helped her in previous elections. Critics urged Arroyo to ban private political militias of the kind that dominated many parts of the Philippines.

In her state of the nation speech on July 27, Arroyo said that she had no desire to try to stay in power after her term ended in 2010. She touted the resilience of the country's economy in the midst of the global financial crisis, noting that the Philippines had enjoyed uninterrupted economic growth since she took office in 2001 and that Moody's Investors Service had recently upgraded the country's credit rating. She also trumpeted the fact that since 2001 GDP had expanded from \$76 billion to \$186 billion, while public debt dropped from 78% of GDP in 2000 to 55% in 2008 and foreign debt fell from 73% to 32%. An estimated 30% of the

country's nearly 92 million people still lived below the poverty line, however.

Corazon Aquino, who served (1986–92) as president of the Philippines and was credited with restoring democratic institutions in the country after the long dictatorship of Ferdinand Marcos, died on August 1. (See OBITUARIES.) More than 100,000 mourners marched in the rain during her funeral procession in Manila, the large crowds reminiscent of the "people power" demonstrations that had helped oust Marcos from power three years after the assassination of Aquino's husband, opposition leader Benigno Aquino, Jr., in 1983.

Fighting occurred sporadically throughout the year between government forces and two groups based in the southern Philippines. One was the Moro Islamic Liberation Front (MILF), which had long sought independence for Muslim areas of the predominately Roman Catholic country; the other group was the al-Qaeda-affiliated Abu Sayyaf. The deadliest battle in years occurred when on August 12 more than 400 military troops and policemen stormed two Abu Sayyaf camps on Basilan Island. MILF militants were also involved in the fighting, which claimed the lives of 23 government troops and 31 guerrillas. On September 21 government forces captured Abu Sayyaf's main camp on the island of Jolo, killing some 19 militants.

Manila experienced its heaviest rainfall in almost half a century—424.2 mm (16.7 in) within 12 hours—on September 26. The downpour flooded 80% of

the metropolitan area, displacing 380,000 people. This storm and two typhoons that hit the Philippines in October combined to kill more than 1,000 people. (HENRY S. BRADSHAW)

POLAND



Area: 312,679 sq km (120,726 sq mi)

Population (2009 est.): 38,146,000

Capital: Warsaw

Chief of state: President Lech Kaczynski

Head of government: Prime Minister Donald Tusk

In 2009 Poland's centre-right coalition government of the Civic Platform (PO) and Polish Peasants Party (PSL) continued to enjoy a high level of popular support. The coalition held a majority in the parliament with opposition split between the conservative Law and Justice (PiS) party and the centre-left Democratic Left Alliance. In spite of this, the government had difficulties passing its legislative agenda owing to its lack of sufficient votes to override a presidential veto. The continuing power struggle between Prime Minister Donald Tusk, who led the PO, and Pres. Lech Kaczynski of the PiS had become a dominant feature of the Polish political scene.

In May some tensions emerged between the coalition partners when Tusk neglected to consult Waldemar Pawlak, the deputy prime minister and PSL leader, on government policy concerning the global economic crisis even though Pawlak held the economic affairs portfolio. The PO also unilaterally proposed legislation to eliminate government funding of political parties despite an agreement with the PSL that only legislation that the coalition partners jointly supported would be introduced in the parliament. Despite these conflicts, the coalition survived and was expected to govern until the end of its term in 2011.

In preparation for elections to the EU Parliament in June, the PO attempted to broaden the base of its electoral support, particularly on the centre-left, by inviting politicians from other parties to run for EU seats as part of the PO's slate. The PO won 44% of the vote and gained 25 of the 50 seats allocated to

Poland. Another notable achievement for the PO—and for Tusk personally—was the party's successful campaign to elect former Polish prime minister Jerzy Buzek (*see* BIOGRAPHIES) as president of the European Parliament for a two-and-a-half-year term. In September, however, a scandal erupted that caused shock waves within the PO leadership. After allegations of corruption surfaced in connection with legislation pertaining to the country's casino gaming industry, three cabinet ministers, one deputy minister, and three other high-ranking government officials were dismissed from their posts.

On the foreign policy front, Poland continued to rebuild its relations with Germany during the year and finalized its ratification of the Lisbon Treaty on EU organization. The Polish parliament had approved the treaty in 2008, but President Kaczynski had refused to sign it until an Irish referendum on the treaty had passed. After Irish voters endorsed the treaty in October, Kaczynski finally initialed the document.

In June the EU's Eastern Partnership project was launched. This joint Polish-Swedish initiative was the first major EU proposal to be presented by Warsaw and accepted by all 27 EU member states. The goal of the project was to promote greater stability and security among countries on the EU's eastern border.

In September, U.S. Pres. Barack Obama announced that plans for the deployment of a missile-defense system in Poland and the Czech Republic had been canceled. The abrupt announcement was met with overwhelming criticism in Poland and sparked an extensive debate on the state of current and future Polish-U.S. relations. In October, U.S. Vice Pres. Joe Biden traveled to Warsaw, where he met with Tusk to discuss a new U.S. proposal that involved the possible stationing of a mobile antiballistic missile system known as the SM-3 in Poland by the year 2015.

Though slowed by the global recession, Poland's economy was expected to register GDP growth of 1%, making it one of the best-performing economies in the EU. Consumer price inflation stood at 3.7% in August and was projected to stabilize at 3.4% for the year. The country's unemployment rate during the second quarter was 10.8%—0.8% higher than during the same period the previous year. The government's 2012 target date for joining the euro zone was canceled, and at least one official suggested 2014 or

2015 as a more realistic goal for adopting the euro. Despite the economic slowdown, Poland was still perceived as a relatively safe haven in terms of economic development; this view was supported by the decision of the IMF to grant Poland a flexible credit line of \$20.5 billion.

(MICHAEL WYGANOWSKI)

PORTUGAL



Area: 92,090 sq km (35,556 sq mi)

Population (2009 est.): 10,639,000

Capital: Lisbon

Chief of state: President Aníbal Cavaco Silva

Head of government: Prime Minister José Sócrates

Portugal had a politically eventful year in 2009, starting with the European Parliament elections in June and culminating in municipal elections in October. The main event was the general election held on September 27, in which there was a shift in votes away from Prime Minister José Sócrates's ruling Socialist Party (PS) to the smaller, peripheral parties. The main opposition Social Democratic Party (PSD) essentially treaded water. The PS secured 38% of the vote, giving it 97 seats in the 230-seat parliament, while the PSD took 30% of the vote, winning 81 seats, up from 75. As predicted, the PS, which had controlled 121 seats in the previous parliament, lost its absolute majority. As a result, Sócrates would have to negotiate with at least one of the opposition parties to pass legislation, which could complicate the annual budget procedure and other complex legislative initiatives. Many observers suggested that this fragility could lead to early elections, a feeling intensified by the heightened friction during the election campaign between Prime Minister Sócrates and Pres. Aníbal Cavaco Silva. The president had the power to both veto legislation and call for early elections.

In the elections to the European Parliament, the PSD won handily, capturing 32% of the vote, compared with 27% for the PS. The PS, meanwhile, won the municipal elections, garnering 38% of the vote to the PSD's 23%. The PSD took Porto and Faro, but the PS won Lisbon and Leiria.

Meanwhile, the international economic crisis and its inevitable impact on the Portuguese economy continued to dominate the political and business scenes. While GDP collapsed in the first two quarters of the year, dropping 3.7% compared with the same period in 2008, by late summer there were increasing signs that the worst of the storm had passed. It helped that inflation eased steadily, thanks to lower energy prices, and that in the run-up to the elections the government unleashed a full slate of crisis-busting efforts—enough to increase the budget deficit to nearly 6% of GDP. This prompted the EU, which limits the budget gap to 3% of GDP, to subject Portugal (and several other EU countries) to a largely symbolic excessive-deficit procedure. On the downside, the unemployment rate rose steadily to levels that had not been seen in more than a decade, hitting 9.1% in August, and fears of continued economic turmoil led consumers to put off the purchase of durable goods and homes.

Against this backdrop, the government continued to invest in alternative- and renewable-energy projects in areas such as electric automobiles, solar energy, and wave power. For example, Sócrates announced a pilot project to equip Portugal's existing gas stations with a pioneering recharging system for electric vehicles. The equipment would be installed nationwide by 2011, when electric cars were expected to be broadly available. (*See* Special Report on page 188.) In the solar sector a group of investors was reportedly mulling the construction of a gigantic field of photovoltaic panels in the sun-drenched Alentejo region that would be capable of generating 2,000 MW of electricity, enough to be viable for sale to export markets. This monumental project, which would require an investment of up to about \$8.5 billion, would be funded with subsidies from the European Union and the Portuguese government, as well as private capital, but could take up to seven years to complete.

In the summer Portugal's reputation as a quiet, safe place for a family vacation was marred by a freak accident: five people were crushed to death by a rock slide that dumped tons of debris onto a crowded beach in the southern Algarve region. Officials blamed the accident on recent earthquakes in the region, which may have loosened the rocks. In the wake of the tragedy, security measures were heightened at all of the country's beaches with cliffs.

(ERIK T. BURNS)

QATAR



Area: 10,836 sq km (4,184 sq mi)

Population (2009 est.): 1,661,000

Capital: Doha

Head of state and government: Emir Sheikh Hamad ibn Khalifah Al Thani, assisted by Prime Minister Sheikh Hamad ibn Jasim ibn Jabr Al Thani

In 2009 Qatar continued its trajectory of economic growth. Despite high inflation, Qatar remained one of the world's fastest-growing economies and continued to rank as one of its richest, as measured by income per capita. The country's enhanced material well-being was buttressed by the growth of the government's sovereign wealth fund and ongoing fiscal surpluses. In addition, Qatar remained the world leader in natural gas exports, which for the first time exceeded its foreign sales of petroleum.

In November, at the 16th annual World Travel Awards convention in London, Qatar Airways was declared the World's Leading Airline-Business Class for the second consecutive year. The airline also received accolades for its role as a bridge between Qatar and the world's leading hydrocarbon fuel-importing countries.

Plans for the construction of the strategic Qatar-Bahrain Friendship Bridge continued throughout 2009. Touted as certain to become the world's largest transportation link over water, the causeway, upon its completion, was expected to greatly reduce transit time between the two countries.

Politically, Qatar maintained its efforts to serve as a bridge between the West and the Arab and Islamic worlds by hosting international conferences on issues such as democracy, free trade, and multifaith dialogue. It also continued to serve as a mediator in intraregional conflicts involving Chad, Lebanon, Palestine, The Sudan, and Yemen and entered into an agreement with Saudi Arabia that finally delineated the two countries' shared boundaries. Other than helping to end a dispute between Chad and The Sudan, however, the results of Qatar's mediatory efforts were mixed.

Qatar also continued its role in transnational education. In 2009 Qatar added branch campuses of Australian and Canadian institutions of higher

learning in Education City, located on the outskirts of Doha. In November Qatar hosted what was touted internationally as the world's first-ever education summit. (JOHN DUKE ANTHONY)

ROMANIA



Area: 238,391 sq km (92,043 sq mi)

Population (2009 est.): 21,481,000

Capital: Bucharest

Chief of state: President Traian Basescu

Head of government: Prime Minister Emil Boc

For the first nine months of 2009, Romania had a dysfunctional coalition government under two implacable rivals, the Democratic Liberal Party (PDL) on the centre-right and the Social Democratic Party (PSD), the successor of the former ruling communists. Twenty years after the 1989 revolution that saw communism replaced by a fragile democratic system, politics remained badly polarized. Personal rivalries were reinforced by disputes over what should be the pace and extent of moving toward a fully pluralist system that would be able to check the influence of powerful economic groups. Romania was also sliding into a deep recession. The economy contracted by about 7% in 2009. Facing an impending revenue crisis, Prime Minister Emil Boc negotiated a \$27 billion loan with the IMF and other lenders. The aid, which was approved in May, was conditional on Romania's making deep cuts in the public sector, which employed one-third of the labour force. The IMF also demanded that steps be taken to increase the efficiency of the bureaucracy. These and other reforms, however, became a casualty of worsening infighting between the government partners. In September, Boc dismissed the PSD interior minister from the government over disagreements about the

conduct of the presidential elections scheduled for November 22. After losing a vote of confidence in the parliament in October, Boc remained in the post of interim prime minister because the president failed to nominate a successor who was able to command a parliamentary majority.

The bitterly fought presidential election campaign centred on the record and character of the incumbent, Traian Basescu. A powerful set of opponents, extending beyond politics to include big business and much of the media, saw him as an abrasive figure intent on broadening the powers of the presidency to secure a personal ascendancy over the political process. They rallied around the PSD leader, Mircea Geoana, who believed that the president should act as an arbiter between different interests within the political elite. Basescu and his supporters, chiefly to be found in the PDL, argued that the PSD wished to entrench the privileges of an unaccountable elite, many of whose members had been intercepting state funds over a long period. He campaigned on an agenda of reforming state institutions; the changes included strengthening the representative role of the parliament and relaunching efforts to depoliticize the justice system.

Basescu's campaign was damaged by the open hostility of the major television stations, including the main state broadcaster. It is likely that he would have lost if Geoana had not turned out

Celebrating his reelection, Romanian Pres. Traian Basescu waves his country's flag in front of a crowd of supporters on December 6.



Vadim Ghirda/AP

to be a poor campaigner. Basescu trounced him in a television debate on December 3, 72 hours before the deciding second round of voting. A bigger-than-expected turnout of 58% saw Basescu win by 50.3% to 49.7%. But for the overwhelming backing of the Romanian diaspora, especially in Western Europe, he would have lost. Although the state electoral commission confirmed the result, the PSD claimed that there had been widespread vote fraud and appealed to the Constitutional Court, many of whose members it had appointed, to overturn the result. The court found no grounds for taking this action, however, and Basescu began his second term on December 16. The pro-Basescu PDL formed a coalition government with an ethnic Hungarian party and several independent lawmakers, and the parliament approved Basescu's renomination of Boc as prime minister.

Although the new government quickly approved a draft budget for 2010, it still needed parliamentary approval, and the IMF had refused to release the third tranche of the rescue loan without firm evidence that the next government would agree to carry out necessary austerity measures. The economic outlook appeared gloomy for many ordinary citizens unless politicians could put aside their deep-seated quarrels and turn their attention to the economy.

(TOM GALLAGHER)

RUSSIA



Area: 17,075,400 sq km (6,592,800 sq mi)

Population (2009 est.): 141,852,000

Capital: Moscow

Chief of state: President Dmitry Medvedev

Head of government: Prime Minister

Vladimir Putin

Domestic Politics. In 2009 Russia continued to be governed under the unorthodox arrangement popularly known as the “tandem.” In 2008 Vladimir Putin, having served the maximum of two consecutive presidential terms permitted by the constitution, had relinquished presidential power to his handpicked successor, Dmitry Medvedev, and himself assumed the notionally less-powerful role of prime minister. Press reports made much of occasional signs of ten-

sion or disagreement between the president and the prime minister, but in general the tandem appeared to be working smoothly. Putin was believed to have remained the main strategic decision maker. Assisted by First Deputy Prime Minister Igor Shuvalov, Putin oversaw the government and the economy; he was also believed to have retained the decisive voice in foreign and security affairs. Medvedev kept a high profile, but observers pointed to the fact that he remained surrounded by Putin appointees—he had virtually no team to call his own. In addition, Medvedev lacked the resources to sponsor any legislation that did not have Putin's blessing. This was because the United Russia party, which dominated the State Duma (the lower house of parliament), remained loyal to Putin. All this was taken as proof that Medvedev did not yet have a deciding voice in either foreign or domestic politics.

Medvedev issued a number of signals during the year suggesting that he might harbour hopes of steering Russia in a more liberal and reform-oriented direction. He spoke out repeatedly against corruption in public life, criticized bureaucratic mismanagement, and stated that although the state had sharply increased its role in the economy in recent years, this should be only a temporary phenomenon. In September Medvedev published an Internet article entitled “Forward, Russia!” in which he gave a brutally frank assessment of the challenges facing Russia's society and economy and identified modernization and technological innovation as key priorities of his presidency. He invited responses to his ideas from the general public, and he built on these in his annual address to the Russian parliament in November. In that speech Medvedev repeated his call for comprehensive and ambitious modernization.

Elections were held in October in 75 regions, and according to the official results, United Russia won an overwhelming victory. There were widespread allegations of vote rigging, and three opposition parties briefly walked out of the State Duma in protest, but popular support for both Putin and Medvedev remained high; in October 78% of those polled expressed approval of Putin's performance as prime minister and 72% of Medvedev's as president. Opinion polls indicated that while many members of the population were anxious about the fall in their living standards caused by the global finan-

cial crisis, they did not blame the tandem for their hardships. This, and the results of the October regional elections, suggested that the “social contract” that some believed had been struck by the Putin leadership—whereby the authorities supposedly guaranteed a steady rise in popular living standards in exchange for the people's political passivity—could be broken with impunity by the political leadership. Even so, the Kremlin continued to show signs of extreme nervousness about the possibility of political instability.

As the financial crisis appeared to recede, Putin showed signs of increasing confidence. There was already widespread speculation that he would return to the presidency in 2012, when Medvedev's first term in office ended. In September Putin declared that he and Medvedev would not run against one another in the 2012 election but would come to an agreement beforehand. This was the strongest hint Putin had thus far given that he might be considering returning to the Kremlin. Medvedev appeared to concur, echoing Putin's comments a few days later and speaking of the “common vision” uniting him and the prime minister.

The situation regarding human rights was disappointing. On the one hand, Medvedev professed his readiness to establish a dialogue with civil society. He revived the Presidential Human Rights Council (which had been established by Putin in 2004 but later had fallen into abeyance) and appointed several outspoken critics of the regime to it. On the other hand, threats and attacks against human rights activists and journalists increased in number in 2009. January saw the murder in Moscow, less than a kilometre from the Kremlin, of Stanislav Markelov, a human rights lawyer who had defended people who complained of having been beaten and tortured by Russian special police forces in the North Caucasus republic of Chechnya and elsewhere. Also shot dead was Anastasiya Baburova, a young journalist who had been accompanying Markelov and who had tried to come to his assistance. In March the well-known human rights campaigner Lev Ponomarev was beaten outside his home in Moscow. In July the courageous human rights defender Natalya Estemirova (*see* OBITUARIES) was abducted outside her home in Grozny, the capital of Chechnya. Her body was found later that day, with bullet wounds to the head and chest, in the neighbouring republic of Ingushetiya; she

Alexey Sazonov—AFP/Getty Images



Some 300 people march in Moscow on February 15 to protest the killings of human rights lawyer Stanislav Markelov and journalist Anastasiya Baburova, who were gunned down in broad daylight near the Kremlin in January.

was said to have been investigating human rights abuses by the Chechen authorities. Less than a month later, Zarema Sadulayeva, head of a Chechen children's charity, and her husband were abducted and murdered near Grozny. Russia remained a dangerous country for journalists; five were killed in 2009. The trial of four men accused of having helped to organize the 2006 murder of Russia's best-known opposition journalist and human rights defender, Anna Politkovskaya, ended in February with their acquittal; the man whom prosecutors accused of having carried out the assassination remained at large. Critics complained that the investigation and the trial had been botched, and in June the Supreme Court ordered a new judge and jury to hear the case. The November death in pretrial detention of Sergey Magnitsky, a lawyer who had been working on behalf of a Western investment fund, provoked an outcry both in Russia and abroad.

In April, 10 years after then president Putin sent troops into Chechnya, Medvedev officially ended the "counter-terrorism operation" against insurgents in the breakaway republic. The situation in the North Caucasus, however, showed little sign of normalizing. In January a former bodyguard to Chechen Pres. Ramzan Kadyrov was shot dead in Vienna; he had earlier accused Kadyrov of torture. In March, Sulim Yamadayev, one of Kadyrov's bitter foes, was shot dead in Dubai. Kadyrov denied involvement in these assassinations. Meanwhile, in the neighbouring republics of Dagestan and Ingushetiya, the violence increased. Suicide bombings once again became common, and shoot-outs were reported on an almost daily basis. In June the president of Ingushetiya, Yunus-Bek Yevkurov, was nearly killed by a suicide bomber. In November a bomb derailed an express train traveling between Moscow and St. Petersburg, killing at least 30 people.

In 2009 Russia recorded its first annual population expansion since 1995, with an increase to 141.9 million. This was the result of an increase in the birth rate, a decline in mortality rates, and an influx of immigrants.

Economy. Russia was severely hit by the global financial crisis; falling oil prices and the general economic slowdown both took their toll. In the first

half of 2009, GDP declined by more than 10%. Since this downturn followed a decade of rapid economic growth fueled by high and rising energy prices, however, Russia entered the crisis with a strong budget, balance of payments, and reserves. Policy makers were able to cover a budget deficit on the order of 8% of GDP, mainly by drawing down the reserve fund that had been built up from oil and gas revenues in preceding years.

The impact of the recession was exacerbated by Russia's structural vulnerabilities: a dependence on oil, gas, and metals, a narrow industrial base, and a limited small- and medium-sized business sector (accounting for about 13% of GDP). Even so, the scale of the recession in Russia was greater than many had expected. It appeared that many investors, both Russian and foreign, had reacted to the crisis by reducing their investment activity in Russia because they perceived underlying weaknesses in its economic institutions—in particular, the weak rule of law and the poor protection of property rights. A World Bank report ranked Russia 120th out of 183 countries in 2009–10 for the "ease of doing business." Corruption was endemic and, despite a number of high-profile initiatives, showed no sign of decreasing.

There was much hopeful speculation by liberal intellectuals that the economic crisis would force the leadership to liberalize both economically and politically. The most astute Russian analysts saw little prospect, however, of radical reform that would introduce

real competition into either the economy or the political system. Yet fears that the crisis would push the leadership toward more interventionist policies proved unfounded; the authorities did not—as many had predicted they would—exploit the crisis to take control of large deeply indebted companies. It also became clear that foreign creditors of cash-strapped Russian energy and metals companies had little appetite for taking assets offered as collateral into their own hands, and they restructured loans on a generous basis. This proved advantageous to tycoons such as Oleg Deripaska and Roman Abramovich, who, though relatively impoverished, were not as weakened as originally anticipated. In October

Putin announced that as in previous years, there would be some privatization in 2010 and 2011, partly to pursue the reform agenda and partly to raise funds for the budget, and that foreign investors would be able to take part.

Unemployment rose from less than 6% in the summer of 2008 to 10% in March 2009. The unemployment rate then declined somewhat, for two reasons. First, some workers who had lost their jobs (including a number of previously employed pensioners) dropped out of the workforce altogether. Second, the federal and regional governments pressured employers, including foreign firms operating in Russia, such as Renault, to halt sackings. Regional unemployment data showed that the crisis was affecting the regions in very different ways. Those hardest hit were the so-called metallurgical regions, where industry was dominated by steel and nonferrous-metals production. By contrast, gas- and oil-producing regions fared relatively well. Least hard-hit were the poorest regions that had traditionally relied on the federal centres for financial subsidies, including many parts of the North Caucasus.

Many workers suffered wage arrears or shortened workweeks or were forced to take unpaid leave. There were fears that "monotowns" (industrial settlements created in the Soviet period around a single industry or factory) would become a locus of social unrest. In fact, though there were protests in such towns, they remained quite small and isolated. Putin personally stepped

in to quiet things down in Pikalevo (near St. Petersburg) in June.

By the autumn there were signs that the Russian economy was emerging from recession. Although each month's output remained below the level of the corresponding month of 2008, the changes from one month to the next became positive in June and remained so, meaning that output in the third quarter was above that in the second quarter. Moreover, oil prices, which had fallen as low as \$35 a barrel in December 2008, had by October 2009 recovered to more than \$80 a barrel.

In August an accident at Russia's largest hydroelectric power station, Sayano-Shushenskaya, in which 75 people were killed, was seen as a worrying sign of the erosion of basic infrastructure and the state's failure to tackle it. In October, 185 senior Russian scientists working in universities and research centres outside Russia published an open letter drawing attention to the catastrophic condition of the fundamental sciences in Russia, which received significantly lower levels of funding than in other developed countries, and calling on Medvedev and Putin to take immediate steps to reverse the situation.

The clearest example of disagreement within the tandem came over the approach to Russia's accession to the World Trade Organization (WTO). In June Putin surprised U.S. and EU negotiators by announcing that Russia was withdrawing its application and would seek to join the WTO only together with its customs union partners Kazakhstan and Belarus. The following month, however, Medvedev appeared to reverse this position, and Russia returned to the negotiating table.

The severity of the economic crisis brought wide—if not universal—acceptance within the elite that economic modernization was an urgent necessity. This view was endorsed by Medvedev in his "Forward, Russia!" article. The elite was sharply divided, however, over what form the reforms should take. According to a conservative wing, the financial crisis had been provoked by Western financial mismanagement; it would eventually blow over, and oil prices would rise again. Russia should sit it out and then, when times were better, pursue modernization by investing in cutting-edge technology. Representatives of this group were believed to include Deputy Prime Minister Igor Sechin (who was responsible for the energy sector) and the director general of the Russian Technologies state corpo-

ration, Sergey Chemezov. At first Putin appeared also to belong to this camp. As the crisis deepened, however, he began calling for greater social spending and intervening personally to ward off social unrest. Meanwhile, the so-called pessimist wing believed that it would not be enough to wait for oil prices to rise again; Russia's economic problems were structural and required systemic reform. Medvedev himself appeared to subscribe to this view, as did Finance Minister Aleksey Kudrin, presidential economic adviser Arkady Dvorkovich, and First Deputy Prime Minister Igor Shuvalov. The pessimists themselves were deeply divided over whether political and judicial reforms were needed as well as economic modernization.

Foreign and Security Policy. The revelation of Russia's economic vulnerability did little to reduce the assertiveness with which the country approached the outside world and, in particular, the other former Soviet states on its borders. Relations with Georgia and Ukraine remained particularly tense. The year began with a Russian-Ukrainian dispute over gas prices. As a result, Moscow halted gas deliveries to Ukraine, and supplies to southeastern Europe were disrupted for two weeks in the middle of winter. The main focus of attention throughout the year was on efforts to improve the strained relations between Russia and the U.S. Russia had been gratified by NATO's decision, announced in December 2008, not to grant membership action plans to Ukraine and Georgia, and Moscow responded positively to the expressed desire of the administration of U.S. Pres. Barack Obama to "reset" relations between the two countries. In March U.S. Secretary of State Hillary Clinton met Foreign Minister Sergey Lavrov in Moscow (causing some amusement among Russian commentators when she presented Lavrov with a red button that was supposed to read "reset" but in fact read "overload"). After Presidents Obama and Medvedev met in London in April, the two countries began serious negotiations over renewing the Strategic Arms Reduction Talks I (START I) treaty. Although the treaty expired on Dec. 5, 2009, discussions between Russia and the U.S. on a new accord continued beyond year's end. When Obama visited Moscow in July, he and Medvedev signed an agreement by which Moscow would allow the transit of supplies across Russian territory to U.S. troops in Afghanistan. Russia also responded to Obama's September decision to halt

plans to establish ballistic missile defenses in Poland and the Czech Republic by announcing that Moscow would suspend its threat to deploy short-range nuclear missiles to its Kaliningrad exclave. In October Putin paid an official visit to China, during which Russia and China signed dozens of commercial deals and concluded a major framework agreement on the delivery of Russian gas supplies to China.

The August 2008 war with Georgia had brought home to Russia the seriousness of some of the technological problems besetting its military and prompted the Kremlin to launch an ambitious program of military reform; this provoked opposition from top military leaders. In May Medvedev approved a new national security strategy that recognized that Russian security was threatened as much by internal problems as by external challenges. (ELIZABETH TEAGUE)

RWANDA



Area: 26,379 sq km (10,185 sq mi)

Population (2009 est.): 9,998,000

Capital: Kigali

Head of state and government: President
Maj. Gen. Paul Kagame, assisted by
Prime Minister Bernard Makuza

By 2009—15 years after the 1994 genocide—Rwanda had become a model of postconflict recovery. In November the restoration of diplomatic relations between Rwanda and France (severed three years earlier) settled a dispute about responsibility for the genocide. The following month Rwanda was declared free of land mines; it was the first country to realize this status. Despite the global financial downturn, Rwanda's economy showed remarkable resilience, growing at an estimated rate of 8–9% during the year; growth was fueled mainly by an expanding industrial base and excellent crop harvests. Inflation fell from 22% to 5%. Even though the country's major exports (tea, coffee, and minerals) dropped by nearly 20%, the tourist industry yielded regular foreign exchange. Rwandans abroad, led by the Rwanda Diaspora Global Network, congratulated the government for its successful rebuilding efforts and for reducing corruption. On

November 28 Rwanda was admitted to the Commonwealth, becoming the second member country (after Mozambique in 1995) with no formal historical ties to Britain.

Reports by the World Bank and the IMF were optimistic. In September the World Bank ranked Rwanda as the top global business reformer for 2010. Improvements in coffee quality and production particularly reflected the country's socioeconomic recovery, with Rwandan brands making significant inroads in overseas specialty markets.

International and local courts continued hearings on crimes connected to the 1994 genocide, with the UN extending the term of the International Criminal Tribunal for Rwanda to December 2010. Several key perpetrators were sentenced to life imprisonment, including former justice minister Agnes Ntamabyiriro, former Kigali prefect Tharcisse Renzaho, and former speaker of the parliament Alfred Mukamazamunda (in exile in Belgium and sentenced in absentia). In two cases, courts in The Netherlands and Canada each handed down long prison sentences to Rwandans charged with war crimes, but Great Britain, Switzerland, and several other European countries refused to extradite genocide suspects on grounds that they would not receive a fair trial.

Meanwhile, the government, stung by tough international criticism that it had actively encouraged rebel militias involved in hostile operations in eastern Congo, carried out a five-week joint military operation with the Democratic Republic of the Congo (DRC), beginning in January. The operation resulted in the arrest of warlord Laurent Nkunda. In August, Rwandan Pres. Paul Kagame and DRC Pres. Joseph Kabila met in Goma to restore diplomatic relations between their countries, which had been severed in 1996. (LARAY DENZER)

SAINT KITTS AND NEVIS



Area: 269 sq km (104 sq mi)

Population (2009 est.): 51,900

Capital: Basseterre

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Cuthbert Montraville Sebastian

Head of government: Prime Minister Denzil Douglas

Renewable energy made a major leap forward in Saint Kitts and Nevis when in April 2009 a company called West Indies Power started installing two 5.8-MW generators at a geothermal site at Spring Hill, Nevis. It was the first time that a geothermal source had been used to generate electricity in the Caribbean. The power was to be sold initially to a local utility, NEVLEC, and eventually exported to Saint Kitts and farther afield in the region.

In July, during a summit of the African Union held in Libya, Prime Minister Denzil Douglas announced that Saint Kitts and Nevis had been proposed as the headquarters of a Libyan Development Bank to be established in the eastern Caribbean. At the end of 2009, host Saint Kitts and Nevis led the Organisation of Eastern Caribbean States in signing the Treaty of Basseterre, which provided for the establishment of an OECS economic union.

A commission of inquiry established by Nevis Island Premier Joseph Parry to investigate the administration of former premier Vance Amory proceeded during the year, albeit with some hitches. On December 15, Prime Minister Douglas dissolved the National Assembly, paving the way for elections early in 2010. (DAVID RENWICK)

SAINT LUCIA



Area: 617 sq km (238 sq mi)

Population (2009 est.): 178,000

Capital: Castries

Chief of state: Queen Elizabeth II, represented by Governor-General Dame Pearlette Louisy

Head of government: Prime Minister Stephenson King

Saint Lucia experienced widespread industrial unrest when in May 2009 hundreds of public-sector workers, including teachers and prison officers, went on strike in support of a 7.5% pay hike. The work stoppage was organized by the umbrella Trade Union Federation. Prime Minister Stephenson King insisted that the most the government could afford was an increase of between 3% and 4%. The workers returned to work in early June following

the government's agreement to a 4.1% pay boost.

Like several other Caribbean states hit hard by the decline in the world economy, Saint Lucia was obliged to approach the IMF in July for access to about \$10.7 million under the rapid-access component of the Exogenous Shocks Facility (ESF). The program and its funds were designed to ease balance-of-payments pressures, shore up external reserves, and serve as a catalyst for further support from the international donor community. In July the IMF said that it expected Saint Lucia's GDP to contract by 2.5% in 2009 and unemployment to increase substantially.

Also in August, Prime Minister King announced that members of the former Saint Lucia Labour Party (SLP) administration could face legal action after a commission of inquiry found that the administration's mismanagement had cost taxpayers millions of dollars.

(DAVID RENWICK)

SAINT VINCENT AND THE GRENADINES



Area: 389 sq km (150 sq mi)

Population (2009 est.): 105,000

Capital: Kingstown

Chief of state: Queen Elizabeth II, represented by Governor-General Sir Frederick Ballantyne

Head of government: Prime Minister Ralph Gonsalves

In March 2009 local regulators took control of the Saint Vincent and the Grenadines-based Millennium Bank, which the U.S. Securities and Exchange Commission (SEC) accused of having defrauded more than 375 clients of \$68 million by promising high returns on certificates of deposit. The local authorities appointed accounting firm KPMG to assume control of the bank's affairs. The SEC alleged that the money placed by depositors was actually funneled into a U.S. bank account that was used as a personal "piggy bank" by the American principals.

In April, Saint Vincent and the Grenadines was accepted as a member of Venezuelan Pres. Hugo Chávez's Bolivarian Alliance for the Americas

group, promoted by Chávez as a more “socialist” path to development than U.S.-led free trade based on market principles. The move drew the ire of opposition leader Arnhim Eustace, who described it as “surprising” and “disappointing.” Saint Vincent and the Grenadines had been a member of the Caribbean Community (CARICOM) for decades, and fears were expressed that the aims of the two bodies might be contradictory.

On November 25 voters strongly rejected a proposed new constitution that would have removed the British monarch as chief of state. The prime minister had been an enthusiastic supporter of the proposal.

(DAVID RENWICK)



An injured Samoan man walks through the ruins of a village destroyed by the deadly tsunami that occurred in late September.

SAMOA



Area: 2,785 sq km (1,075 sq mi)

Population (2009 est.): 183,000

Capital: Apia

Chief of state: *O le Ao o le Malo* (Head of State) Tuiatua Tupua Tamasese Efi

Head of government: Prime Minister Tuila'epa Sailele Malielegaoi

Samoa's well-managed economy was hit by the global recession and, for the first time in 10 years, contracted; it shrank 7.6% during the first six months of 2009. Compounding the problem were falling revenues from declining imports, an inflation rate of 13%, a decline in tourism and in remittances from expatriate Samoans, and the closure of American Samoan tuna canneries. Some relief occurred when producers of the reality television show *Survivor* filmed two seasons of the program in Samoa.

On September 29 a shallow magnitude-8.0 earthquake near Samoa generated a tsunami that killed some 142 people and devastated the southeast coast of Upolu, where many of Samoa's tourist resorts were concentrated. The tsunami generated a major aid initiative from regional neighbours and diasporic Samoans.

Samoa's ruling Human Rights Protection Party (HRPP) government faced ongoing challenges over legislation designed to change the side of the road (from right to left) on which vehicles

were driven. Broad-based opposition led to the formation of a new political coalition and to ongoing legal challenges to the government. The final challenge was dismissed by courts in August, and the change occurred on September 7, without the predicted spike in road accidents.

The HRPP also faced challenges in the parliament. Shortly before the budget debate, nine independent members united to form Tautua Samoa, an opposition party; the speaker declared their seats vacant and scheduled by-elections in their electorates. The dismissed members took the matter to the Supreme Court, which ordered the members to return to the parliament and canceled the by-elections.

(CLUNY MACPHERSON)

SAN MARINO



Area: 61.2 sq km (23.6 sq mi)

Population (2009 est.): 31,500

Capital: San Marino

Heads of state and government: The republic is governed by two *capitani reggenti*, or coregents, appointed every six months by a popularly elected Great and General Council.

The global economic crisis did not spare San Marino in 2009. Tax rev-

enues fell as economic activities shrank; in a country heavily dependent on international trade, the decline in imports significantly hurt state revenues deriving from them.

While banking and manufacturing remained important sectors of the economy, the government was eager to invest more in tourism, a critical if troubled sector. The number of tourists had dropped sharply in recent years to little more than two million annual visits, a decline that was attributed in part to the republic's tarnished image in some of the international press. Tourism decreased by only 1.1% in the first half of 2009, however, after having dropped 17% in the first quarter. In response to the drop in tourism, the government earmarked new investments for the transport infrastructure, hospitality resources, the creation of new cultural events, and the revitalization of the historic centre, which, along with Mt. Titano, had been declared a UNESCO World Heritage site in 2008.

The year was also important in the normalization of the republic's standing with the Organisation for Economic Co-operation and Development. San Marino, long considered an international tax haven, was admitted to a “gray list” of countries working to achieve full compliance with international financial and banking standards. These countries were required to sign 12 bilateral agreements for economic collaboration with as many foreign partners, and San Marino reached that number by the end of the year. This

success notwithstanding, the republic's most important trading partner, Italy, still refused to sign an agreement of economic and fiscal collaboration.

(GREGORY O. SMITH)

SAO TOME AND PRINCEPE (SÃO TOMÉ E PRÍNCIPE)



Area: 1,001 sq km (386 sq mi)

Population (2009 est.): 163,000

Capital: São Tomé

Chief of state: President Fradique de Menezes

Head of government: Prime Minister Joaquim Rafael Branco

Despite a coup attempt in February 2009, the coalition government of Joaquim Rafael Branco, leader of the Movement for the Liberation of Sao Tome and Principe–Social Democratic Party, remained in power in Sao Tome and Principe with a clear majority in the legislature, though Patrice Trovada, the leader of the opposition Independent Democratic Action party, continued to claim that the coalition was unconstitutional. The government's decision in May to postpone regional and municipal elections (probably until 2010, when a legislative election was due), was much criticized, especially in Príncipe.

Though Nigeria remained Sao Tome and Principe's leading oil-production partner in the joint Development Zone, attempts were made to involve Angola, and the United States showed increasing interest in the potential for extracting oil from the Gulf of Guinea. Though allegations of corruption continued, some of them relating to the misappropriation of donor funding, in March 2009 the IMF approved a new poverty-reduction and growth facility program. Portugal remained the largest donor, and donor funding was expected to meet 80% of the country's budget. The amount of oil and gas that could be obtained from the waters off the archipelago, however, remained unclear. Additional payments of signature bonuses by the oil companies were expected, but there were disputes over the oil blocks that resulted in the delay of those payments.

(CHRISTOPHER SAUNDERS)

SAUDI ARABIA



Area: 2,149,690 sq km (830,000 sq mi)

Population (2009 est.): 25,316,000

Capital: Riyadh

Head of state and government: King 'Abd Allah

Saudi liberals were disappointed in mid-May 2009 when King 'Abd Allah canceled municipal elections that were scheduled for the year. Local elections, begun in 2004, had been considered a step toward reform. Efforts by Saudi Arabia to make the country a hub for scientific learning and research continued in 2009. In late September the state-of-the-art King Abdullah University of Science and Technology (KAUST) was opened north of Jiddah. Some conservatives criticized the coed university, which allowed men and women to take classes together.

Relations between Saudi Arabia and the neighbouring United Arab Emirates faced several challenges in 2009. In May the U.A.E. decided to pull out of the Gulf Cooperation Council monetary union after Saudi Arabia announced that Riyadh would be the centre of the GCC central bank. Riyadh also reportedly asked its neighbour to remove from its national identification card a map of the U.A.E. that included dis-

puted territory linking the U.A.E. with Qatar—land that Saudi Arabia recognized as part of its territory. In late August Saudi Arabia required U.A.E. nationals to exclusively use passports in order to enter the kingdom.

In early June, ahead of his Cairo speech addressing the Muslim world, U.S. Pres. Barack Obama briefly visited Saudi Arabia. In October, King 'Abd Allah visited Syria, the first trip to that country by a Saudi ruler since the 2005 assassination of Saudi-backed Lebanese statesman Rafiq al-Hariri, whose assassination was believed by some to have been orchestrated by Damascus.

In August, Deputy Interior Minister Prince Muhammad ibn Nayef survived an attempted assassination, the first time that a royal family member had been targeted. Al-Qaeda in the Arabian Peninsula, the Saudi arm of al-Qaeda, claimed responsibility. Some suggested that the incident might end speculation that al-Qaeda was evading direct confrontation with the royal family.

In 2009 the Shi'ite al-Houthi rebellion in northern Yemen spilled across Saudi borders and was met with Saudi air strikes and shelling. There were accusations that Iran was supporting the insurgents, and a Saudi naval blockage along Yemeni shores was meant to stop the supposed delivery of Iranian supplies to the rebels.

In April King 'Abd Allah attended the G-20 summit in London. The IMF ranked Saudi Arabia first among the Arab countries in economic position. In 2009 inflation subsided from around

Yemenis displaced by the Shi'ite al-Houthi rebellion in northern Yemen make their way toward a refugee camp in the southern Saudi province of Jizan in November.



AFP/Getty Images

9% to 5.2%. Saudi Arabia's non-oil sector expanded by 3.3%, while its oil revenue declined by 10.3%.

In June, Saudi Aramco and France Total agreed to invest \$9.6 billion to build the Jubayl oil refinery, expected to produce 400,000 bbl daily. The refinery was one of four planned refineries meant to boost domestic capacity from 2.1 million to 3.7 million bbl daily. The beginning of production from the Khurays oil field increased production capacity to 12 million bbl daily, amplifying Riyadh's leverage in OPEC. Saudi Arabia sacrificed billions of dollars in revenue in 2009 by cutting output to prop up the price of crude oil.

(MAHMOUD HADDAD)

SENEGAL



Area: 196,722 sq km (75,955 sq mi)

Population (2009 est.): 12,534,000

Capital: Dakar

Chief of state: President Abdoulaye Wade, assisted by Prime Ministers Cheikh Hadjibou Soumaré and, from April 30, Souleymane Ndéné Ndiaye

Despite fears of possible violence, calm prevailed on March 22, 2009, as voters cast their ballots to choose 20,000 councillors in Senegal's local elections, which were considered a test of the ruling Senegalese Democratic Party's (PDS) strength in the face of skyrocketing food prices and a stagnating economy. The PDS continued to dominate rural areas, but a coalition of opposition parties, Bennoo Siggil Senegaal (United to Boost Senegal), won control of councils in Dakar, Saint-Louis, and other large cities. The elections did see Pres. Abdoulaye Wade's son, Karim Wade, gain his first public position as a Dakar municipal councillor. Shortly thereafter he was appointed to a ministry post in his father's government, and many began to see him as a possible successor to his father. On June 2 Parliament voted to create the post of vice president, but President Wade did not sign it into law by year's end.

On April 24 Air Senegal International ceased operations after a dispute over control of the airline between the Senegalese government and the airline's majority stockholder, Royal Air Maroc,

had not been resolved. The demise of Air Senegal was a blow to tourism, which had already been hard-pressed by the global economic downturn.

The European Union announced in early August that it would give nearly \$16 million to Senegal to assist the estimated 460,000 people unable to afford adequate food. On September 7 the U.S. Millennium Challenge Corporation approved a five-year, \$540 million grant to Senegal for improvements in agriculture and infrastructure.

(NANCY ELLEN LAWLER)

SERBIA



Area: 77,498 sq km (29,922 sq mi)
(excluding Kosovo)

Population (2009 est.): 7,320,000

Capital: Belgrade

Chief of state: President Boris Tadic

Head of government: Prime Minister Mirko Cvetkovic

In December 2009 Serbia remained undecided on whether to open its mission to NATO, in accordance with its membership in the Partnership for Peace program. In April 2008 Serbia had signed the Stabilization and Association Agreement. Interim trade provisions in the agreement were initially blocked by The Netherlands, which demanded that Serbia first arrest two indicted war criminals: Bosnian Serb Gen. Ratko Mladic and Goran Hadzic, former leader of Croatia's Krajina Serbs. At the EU foreign ministers meeting in December, however, the Dutch government lifted its opposition after a report by the International Criminal Tribunal for the Former Yugoslavia's chief prosecutor, Serge Brammertz, stated that Serbia made "constant progress" in efforts to cooperate with the court. The move would thus enable Serbia to attract more foreign investment and expand trade with EU member states. Belgrade submitted an application for EU candidacy late in December.

In July the National Assembly passed the Act on Regional Development in an effort to equalize economic development by reducing the differences between developed and undeveloped parts of the country and to deal with

regional imbalances due to an aging population that had impact on revenue sharing and distribution. Government figures showed that average incomes in Belgrade were 19 times larger than those in the eastern town of Bor and that the amount of money that was in circulation in the capital was equal to that spent in more than 80 southern and eastern municipalities combined.

According to Eurostat, some food prices in Serbia were among the highest in southeastern Europe. The average family of three in Serbia spent more than 40% of its income on food. Gross monthly income per worker in October was about €465 (1€ = about \$1.45), a decrease of 1% year-on-year. The Serbian Chamber of Commerce reported that salaries were being paid 45 days late in the country's poorest areas, raising fears of potential social unrest.

The World Bank approved a \$400 million loan to assist the Serbian budget for 2009 and 2010. Russia approved a loan package amounting to about \$1 billion, of which \$200 million was earmarked for Serbia's budget. Part of an IMF arrangement called for a reduction in the number of national government employees (from 31,000 to 28,000) and local administrative cuts of some 10,000 workers.

Serbia's central bank reported a dramatic rise in the number of insolvent companies; some 13,000 company accounts were blocked in 2009, bringing the total to 63,000 businesses that owed €3 billion. Companies were also indebted to the government for about €655 million in unpaid taxes.

Little progress was achieved in reforming the education system in light of the increasing demands for a highly trained and diversified labour force needed to compete in the global economy. Only about 10% of the population had completed a postsecondary education.

The EU reported that civil and political rights improved and that minority rights were largely respected in Serbia. Observers expressed concern, however, over sporadic violence and deep divisions within the Muslim communities in the southwestern region of Sandzak. Tensions were also on the rise in the northern autonomous province of Vojvodina and in the predominantly ethnic Albanian region of the Presevo Valley, where activists were demanding autonomy and possible unification with neighbouring Kosovo. In December, Vojvodina's provincial assembly adopted

a statute giving the ethnically mixed region a new constitution. This would allow the province more legislative, diplomatic, and economic autonomy. The move, which was approved by Serbia's parliament, partially restored Vojvodina's autonomy, which it had lost in the late 1980s. (MILAN ANDREJEVICH)

SEYCHELLES



Area: 452 sq km (about 174 sq mi)

Population (2009 est.): 87,800

Capital: Victoria

Head of state and government: President James Michel

During a spate of piracy in the Indian Ocean and the Gulf of Aden in early 2009, which included the hijacking of two Seychellois vessels as well as several foreign vessels off the Seychelles coast, the Coast Guard arrested nine suspected Somali pirates. The accused pirates were subsequently tried in the archipelago country's courts as part of a global effort to crack down on piracy off eastern Africa, which accounted for 214 attacked ships in 2009. In support of the international effort to stem the increase in Indian Ocean piracy, the Coast Guard opened a monitoring and rescue centre in cooperation with the International Maritime Organization. In November Seychelles agreed to allow EU forces to police against pirates in waters off Seychelles.

The country entered into a joint agreement with neighbouring Mauritius concerning the continental shelf both island countries share. The agreement ensured that both countries would retain rights to deep-sea drilling, mining, and ocean-conservation efforts.

In August former Ugandan High Court judge Frederick Egonda-Ntende was sworn in as the chief justice of the Seychelles Supreme Court. Egonda-Ntende had been tapped by Pres. James Michel for the position. He replaced Justice Andrew Ranjan Perera, who had retired from the post earlier in 2009. The Seychellois government also entered into an agreement with the United Nations Development Programme to improve the transparency, accountability, and efficiency of its judiciary.

(MARY EBELING)

SIERRA LEONE



Area: 71,740 sq km (27,699 sq mi)

Population (2009 est.): 5,696,000

Capital: Freetown

Head of state and government: President Ernest Bai Koroma

Hampered by the global recession, Sierra Leone's economic growth slowed to 4% in 2009, down from 5.5% a year earlier. The country's economic outlook began to improve in the third quarter, however, with a gradual recovery in mining and agricultural exports. Two IMF missions to Sierra Leone commended the government's progress in staying on course with its monetary policies despite the challenging economic conditions worldwide.

Pres. Ernest Bai Koroma opened Parliament on October 9 with an upbeat account of his government's progress in implementing its Agenda for Change, an ambitious strategy for achieving economic diversification, boosting agricultural productivity, developing tourism, expanding education, overhauling the health care system, and increasing women's economic and political participation, among other goals. The discovery of a deepwater oil field off the coast

of Sierra Leone held the promise of relief from the country's dependence on the diamond industry. Meanwhile, former British prime minister Tony Blair visited the country in April to promote the revival of its once-vibrant tourist industry. Acknowledging UNICEF's findings that Sierra Leone had the world's highest rate of maternal and child mortality, the government had increased the number of health facilities in the country by 22% as well as recruited some 60 doctors from Nigeria to help meet a shortage of medical personnel. The government estimated that maternal mortality rates may have fallen by as much as a third in three years.

Koroma's intent to pursue an inclusive government was tested in March by outbreaks of violence in Pujehun district and in Freetown. Supporters of the main opposition Sierra Leone People's Party clashed with members of the governing All People's Congress. Government and paramilitary forces moved quickly to quell the disturbances. Following mediation that involved key political leaders and UN officials, the two parties reached an accord to seek non-violent conflict resolution.

The UN-backed Special Court for Sierra Leone concluded a trial in April with the sentencing of three leaders of the rebel Revolutionary United Front—Issa Hassan Sesay, Morris Kallon, and Augustine Gbao—to long prison terms for having committed atrocities "upon a massive scale," including the killing

An Amnesty International representative talks with women in a maternity ward in Sierra Leone's capital, Freetown, on September 20. Sierra Leone, which had the world's highest rate of maternal and child mortality, was taking steps to improve health care.



Issouf Sanogo—AFP/Getty Images

of four international peacekeepers and the sanctioning of mass rape. This was the first time that an international court had handed down sentences for attacks against international peacekeepers and held senior leaders accountable for crimes of sexual violence. The trial of former Liberian president Charles Taylor, which was expected to be the court's final trial, continued in The Hague. (LARAY DENZER)

SINGAPORE



Area: 710 sq km (274 sq mi)

Population (2009 est.): 4,954,000

Head of state: President S.R. Nathan

Head of government: Prime Minister Lee Hsien Loong

Like most other countries, Singapore was in recession in 2009, but government grants to subsidize the wage bills of employers managed to stave off some retrenchments, keeping unemployment under 5% for most of the year. The S\$20.5 billion (about U.S.\$13.8 billion) assistance package introduced in January included measures to encourage bank lending and spur employers to send workers for skills training. Thanks partly to these stimulus measures and to a faster-than-expected global recovery, economic contraction in 2009 amounted to only one-third of the level that had been feared at the beginning of the year. Still, the recession prompted a surge in the number of foreign workers applying for permanent residency in a bid to hang on to their jobs. On the property front, however, prices defied gravity, climbing back to near 2007 peaks and even setting new per-square-foot records in some districts. The price spiral, prompted by low interest rates, an influx of foreigners, and speculative buying, worried citizens and contributed to their unhappiness about the very visible increase in the foreign population in Singapore. More than one in three residents in the city-state were foreign-born in 2009. The government pledged to slow down the intake of foreigners, while at the same time it worked to raise labour productivity so that economic growth would not be overly compromised.

On the political front, Singapore witnessed a rare upheaval within its generally placid civil-society scene when a high-profile leadership tussle occurred at the Association of Women for Action and Research. A group of women, mostly hailing from the same church and apparently united in their opposition to homosexuality, ousted the incumbents, whom they accused of leading the organization away from its "original" purpose of advocating gender rights. Following weeks of strident accusations and the mass mobilization of supporters on both sides of the issue for an electoral showdown, the government finally stepped in to establish limits on civil-society activism. At the same time, the government reiterated that an existing law that criminalizes sex between men would not be repealed, although gays would be allowed to lead their private lives.

In April, in an operation that lasted 12 hours at the Singapore General Hospital, a team of doctors in Singapore became the first in Asia to perform a heart-liver transplant. A related issue involved the government's efforts to address a rise in the number of kidney-failure patients by introducing measures to reimburse organ donors for their expenses and lost income. These steps were carefully calibrated to ease the burden on donors while also discouraging organ trading. (CHUA LEE HOONG)

SLOVAKIA



Area: 49,034 sq km (18,932 sq mi)

Population (2009 est.): 5,418,000

Capital: Bratislava

Chief of state: President Ivan Gasparovic

Head of government: Prime Minister Robert Fico

The year 2009 in Slovakia was a more difficult one than expected; industrial production and exports fell dramatically amid the global economic crisis, and the unemployment rate soared to more than 12% in the second half of the year, a year-on-year increase of more than 4%. Domestic industry was also hit by a halt in January in gas supplies during the Russian-Ukrainian price dispute, which highlighted Slovakia's need for energy diversification.

Samuel Kubani—AFP/Getty Images



Slovaks show off their euros after collecting the bills from an automated teller machine in Bratislava's main square on January 1, the day that Slovakia formally joined the euro zone.

Despite the economic downturn, public support for Prime Minister Robert Fico and his Direction-Social Democracy (Smer-SD) party remained high, thanks partly to Slovakia's accession on January 1 to the euro zone. Slovakia was only the second Eastern European country—after Slovenia—to adopt the common currency. Exporters welcomed the move, particularly because it helped to promote stability amid the worldwide financial crisis. Politically, Smer-SD's popularity was demonstrated in two sets of elections: presidential polls in March and April and elections to the European Parliament (EP) in June. With Smer-SD support, Ivan Gasparovic was reelected as president, comfortably beating opposition candidate Iveta Radicova in the second-round runoff. In an effort to mobilize support, the Gasparovic campaign used anti-Hungarian rhetoric, goaded by Radicova's endorsement from the Party of the Hungarian Coalition (SMK), which represented Slovakia's largest ethnic minority.

In the EP elections, Smer-SD finished first, with 32% of the vote and 5 of the 13 seats. The three opposition parties—the Slovak Democratic and Christian Union (SDKU), SMK, and the Christian Democratic Movement (KDH)—each gained two seats. Meanwhile, Smer-SD's junior coalition partners—the Movement for a Democratic Slovakia (HZDS) and the Slovak National Party (SNS)—obtained one seat each. The latter's support appeared to be damaged by corruption scandals that led to

the replacement of several SNS ministers in 2009.

Already sore from the presidential election campaign, tensions between Slovaks and Hungarians reached a new high when on August 21 Bratislava banned Hungarian Pres. Laszlo Solyom from entering Slovakia. On that day Solyom was scheduled to travel to the Slovak border town of Komarno to attend the unveiling of a statue honouring a historic Hungarian king. The Slovak authorities found Solyom's planned visit offensive for several reasons, not least because it coincided with the anniversary of the 1968 invasion by Warsaw Pact troops (including Hungarian soldiers) that crushed Czechoslovakia's Prague Spring liberalization movement. Still, banning the president of another EU country was considered to be a major provocation, attracting international criticism and raising fears of further antagonism between the two countries.

(SHARON FISHER)

SLOVENIA



Area: 20,273 sq km (7,827 sq mi)

Population (2009 est.): 2,037,000

Capital: Ljubljana

Chief of state: President Danilo Turk

Head of government: Prime Minister Borut Pahor

Slovenia, the wealthiest of the Eastern European countries that had joined the European Union since 2004, fell into recession in the first quarter of 2009. Once the fastest-growing member of the euro zone, Slovenia became the worst-performing. Industrial production improved by August, which indicated that Slovenia was emerging from recession. It was expected that by year's end the economy would have contracted by 7.3% and unemployment would approach 10%.

On October 7 the European Commission initiated an excessive-deficit procedure for budgetary shortfalls above 3% of GDP for Slovenia and eight other EU countries. Slovenia's gap reached 5.5% by the end of 2009. Waning demand for Slovenian exports, which made up two-thirds of total GDP, lower tax income, and a government stimulus program swelled the deficit. The gov-

ernment had awarded some \$700 million in guarantees for bank loans to companies to improve liquidity.

Slovenia's long-running border dispute with Croatia neared resolution. The controversy had come to a head in December 2008 when Slovenia blocked Croatia's accession talks with the EU. Slovenia feared that documents submitted by Croatia prejudged the boundary between the two countries, which could have, among other points, restricted Slovenia's access to international waters and affected Koper, its busy Adriatic port. Slovenia ended its veto on Croatia's EU talks in September when an agreement on arbitration was announced. On November 2 a majority within the Croatian Parliament approved sending the dispute to international arbitration—a condition set by Slovenia. Two days later the countries' prime ministers signed an arbitration accord.

Slovenia led the Council of Europe from May through November. Slovenia's priorities for its presidency included bioethics, children's rights, the protection and integration into society of Roma and other minorities, and the promotion of democracy, the rule of law, and human rights in southeastern Europe. In August more than 400 politicians and economists from around the world addressed the economic crisis at the fourth Bled Strategic Forum, sponsored by the Slovenian government and the Centre for European Perspective.

On June 7, in an election with a record-low turnout (28%), voters selected seven representatives to the European Parliament and gave a boost to

the centre-right opposition. In Italy eight members of that country's native Slovenian minority were elected mayors in the Friuli-Venezia Giulia region.

Slovenia confirmed its first diagnosis of H1N1 influenza in June and its first death from the virus on November 3. More than 275 cases had been diagnosed by year's end.

Primož Kozmus, gold medalist in the hammer throw at the 2008 Summer Olympics, became the world champion in August. He was the first athlete from Slovenia to achieve both honours.

(JOSEPH VALENCIC)

SOLOMON ISLANDS



Area: 28,370 sq km (10,954 sq mi)

Population (2009 est.): 523,000

Capital: Honiara

Chief of state: Queen Elizabeth II, represented by Governors-General Sir Nathaniel Waena and, from July 7, Frank Kabui

Head of government: Prime Minister Derek Sikua

In 2009 the economy of the Solomon Islands began to derive significant benefits from the 2005 Foreign Investment Act, which allocated increased investment for fisheries, agriculture, mining, tourism, and engineering. This growth

South African Archbishop Emeritus Desmond Tutu helps to launch a Truth and Reconciliation Commission in the Solomon Islands on April 29.



George Merming/AP

offset significant declines in forestry revenues. The government granted a new gold mining license in central Guadalcanal, where significant reserves were identified. It also lodged claims with the UN for recognition of the Solomon Islands' extended continental shelf, where massive seafloor sulphide reserves were thought to exist.

The Regional Assistance Mission to Solomon Islands continued to guarantee the country's security and allowed the government of Prime Minister Derek Sikua to move forward with its reform program. A government white paper was created in an effort to generate debate on electoral reform, the development of stronger parties, and the creation of measures to limit "party hopping." A forestry bill was proposed to reduce the rate of logging to more sustainable levels.

In an attempt to confront parts of its recent past, the government released a report on the anti-Chinese riots of 2006. The Ministry for National Unity, Reconciliation, and Peace launched a Truth and Reconciliation Commission to heal some of the social divisions caused by the ethnic conflict that occurred between 1998 and 2003.

(CLUNY MACPHERSON)

SOMALIA



Area: 637,657 sq km (246,201 sq mi), including the 176,000-sq-km (68,000-sq-mi) area of the unilaterally declared (in 1991) and unrecognized Republic of Somaliland
Population (2009 est.): 9,133,000 (including roughly 3,700,000 in Somaliland); at the middle of the year, more than 500,000 refugees were in neighbouring countries and 1,300,000 were internally displaced
Capital: Mogadishu; Hargeysa is the capital of Somaliland

Head of state and government: Somalia's transitional government comprised Presidents Sheikh Aden Madobe and, from January 31, Sheikh Sharif Sheikh Ahmed, assisted by Prime Ministers Nur Hassan Hussein and, from February 14, Omar Abdirashid Ali Sharmarke

In 2009 fears that Somalia could become a breeding ground for terrorism escalated with the strengthening of al-Shabaab, an Islamist youth movement with ties to al-Qaeda. The Transitional

Federal Government (TFG), which had been shored up by support from the Ethiopian military, struggled to assert control over the country following the withdrawal of Ethiopian troops in January. The Ethiopians had originally entered Somalia in late 2006 to rout a fundamentalist Islamic movement known as the Islamic Courts Union (ICU). They remained to help Somalia's TFG battle a fierce insurgency, but many analysts said that their presence actually fueled support for hard-line Islamists. The Ethiopians left a contingent of 5,250 African Union (AU) peacekeepers in Mogadishu, the capital, who looked increasingly unable to halt the fighting. Though most analysts agreed that the peacekeepers were critical to the TFG's survival, many Somalis turned against the AU mission following an incident in February when a roadside bomb hit an AU truck and peacekeepers fired into the street, killing 39 civilians.

Following the Ethiopian withdrawal, moderate Islamist cleric Sheikh Sharif Sheikh Ahmed was elected president of the TFG. Sheikh Sharif was not a new face to Somalis—he was a top leader in the ICU, which in late 2006 brought Somalia its only window of peace in nearly 20 years—and many greeted his election with optimism. He was seen as a clear improvement over his predecessor, warlord Abdullahi Yusuf Ahmed, and he had the support of some moderate militia leaders. Yet al-Shabaab, believed to be several thousand fighters strong and in control of much of southern Somalia, opposed Sheikh Sharif.

In May Islamist groups, including al-Shabaab, battled the TFG for control of Mogadishu, raising fears that they would topple the TFG. After Sheikh Sharif appealed for help from international donors, the United States agreed to send 40 tons of weapons. U.S. Secretary of State Hillary Clinton met with Sheikh Sharif in Kenya in August and promised that additional support would be forthcoming.

In September a U.S. air strike, the latest in a series of targeted air strikes that had begun during the administration of Pres. George W. Bush, killed a top al-Qaeda operative, Saleh Ali Saleh Nabhan. He was suspected of having had a role in the 1998 bombings of U.S. embassies in Kenya and Tanzania. U.S. officials claimed that Nabhan was training al-Shabaab fighters in suicide bombing and served as a liaison to al-Qaeda in Pakistan. Days later, al-Shabaab suicide bombers killed 21 peo-

ple at an AU base in Mogadishu, including the deputy AU commander and 16 other peacekeepers. It was the deadliest attack on the AU force since 2007. In December a suicide bomber killed at least 15 people at a college graduation ceremony, including three TFG ministers.

Piracy continued to dominate international news stories on Somalia, with a record 214 attempted hijackings in 2009 (nearly twice the number reported for 2008), 47 of which were successful. The pirates were known to operate out of Puntland, in northeastern Somalia, an area with its own government thought to be complicit in piracy.

(STEPHANIE HANSON)

SOUTH AFRICA



Area: 1,220,813 sq km (471,359 sq mi)

Population (2009 est.): 49,321,000

Capitals (de facto): Pretoria (executive); Bloemfontein (judicial); Cape Town (legislative)

Head of state and government: Presidents Kgalema Motlanthe and, from May 9, Jacob Zuma

Following national and provincial elections on April 22, 2009, African National Congress (ANC) president Jacob Zuma was elected president of South Africa. In the elections the ANC won 65.9% of the national vote; the Democratic Alliance (DA), 16.66%; and the newly formed Congress of the People (COPE), 7.42%. The DA won the Western Cape with 48.78% of the vote, but the ANC took the remaining eight provinces, reducing the Inkatha Freedom Party in its former stronghold of KwaZulu-Natal to 20.52% of the vote. COPE became the major opposition party in five provinces.

In the election campaign the ANC promised to retain its targets of halving poverty and unemployment by 2014 and maintained that creating employment would be the core mandate for economic policy. The DA promised a basic income grant of 110 rand (about \$12) per month to all citizens earning less than 46,000 rand (about \$5,000) per year and that it would cut the tax on companies, support privatization, and review labour legislation. COPE concentrated mainly on what it claimed

were undemocratic practices in the ANC.

In February a framework agreement responding to the global economic crisis was reached between the government, labour, and business sectors, which reaffirmed a commitment to infrastructural spending as the core of a stimulus to growth and job creation. In his state of the nation address in June, Zuma committed the government to creating 500,000 job opportunities before the end of the year. Among changes in the postelection cabinet were the appointment of Pravin Gordhan, previously head of the South African Revenue Service, as finance minister to replace Trevor Manuel, who became head of the new National Planning Commission. By September the Congress of South African Trade Unions had become critical of Manuel's planning program, accusing him of wanting to become a "prime minister" and arguing that former trade unionist Ebrahim Patel, appointed minister of economic development, should have responsibility for macroeconomic policy. In November Gill Marcus, former chairperson of Absa bank and financial group, replaced Tito Mboweni as governor of the Reserve Bank.

The judgment that the National Prosecuting Authority (NPA) was politically motivated in its prosecution of Zuma (which catalyzed the recall of Pres. Thabo Mbeki in 2008) was overturned by the Supreme Court of Appeal in January, and charges of corruption, fraud, racketeering, and money laundering against Zuma were thus reinstated. On April 6, however, the NPA announced it was dropping the charges. It released transcripts of tape recordings between an NPA member and other parties that it said showed political interference in the decision to charge Zuma and errors of process. Zuma's supporters claimed that this vindicated their standpoint that Zuma was innocent of the charges, though the NPA made clear that the decision did not amount to an acquittal. Opposition parties subsequently protested the decision.

The Judicial Service Commission decided not to proceed with the charges raised by judges of the Constitutional Court against Western Cape Judge President John Hlophe of having improperly attempted to influence the Court. President Zuma appointed Sandile Ngcobo as chief justice to succeed Pius Langa, whose term had expired.

The contract of suspended commissioner of police Jackie Selebi was not



Construction workers strike outside the Soccer City stadium in Johannesburg after rejecting a wage deal offered by employers in July.

Karel Prinsloo/AP

renewed when it expired in July, and he was replaced by Bheki Cele, former minister for community safety in KwaZulu-Natal. Selebi's trial on charges of corruption began in October. In December 2008, Vusi Pikoli, suspended national director of public prosecutions, had been sacked for allegedly not paying enough attention to public security, though he claimed that his dismissal was related to his having charged Selebi with corruption. In August 2009, however, the North Gauteng High Court ruled that his dismissal was invalid. In November he was paid 7.5 million rand (about \$1 million) by the government to withdraw his court challenge contesting his dismissal.

Politician Helen Suzman (*see* OBITUARIES), the only Progressive Party MP from 1961 to 1974 and a veteran anti-apartheid campaigner, died on New Year's Day. Schabir Shaik, sentenced to 15 years in jail in 2005 after his conviction for fraud and corruption and accused by the judge of having a "generally corrupt" relationship with Zuma, was released from jail early in the year on the grounds that he was terminally ill, though the severity of his illness was widely doubted.

From midyear there were many strikes. These included a protracted strike by doctors over wages and conditions in hospitals, a weeklong strike over wages and benefits by construction workers involved in, among other things, building stadiums for the association football (soccer) World Cup games in 2010, and a weeklong strike by municipal workers over wages.

Economy. The economy was severely affected by the world recession. Having grown 0.2% in the third quarter of 2008, it shrank by 1.8% in the fourth quarter, 7.4% in the first quarter of 2009, and 2.8% in the second quarter,

recovering to 0.9% growth in the third quarter. Growth was 3.1% for 2008 as a whole. During 2009 nearly one million jobs were lost, and from July 2008 to July 2009, manufacturing production slumped by 13.7%.

Inflation, which had peaked at 13.6% in August 2008, fell during 2009 to 6.4% in August and was expected to average 5.9% through the year, inside the official target range. This permitted the Reserve Bank to make cuts of 5% in interest rates between December 2008 and August 2009. In 2008 the deficit on the current account of the balance of payments was 7.4% of GDP, a 36-year peak, but it eased during 2009.

Owing to the need for continued state spending in conditions of recession and lessened revenue, the 2009–10 budget deficit was projected in February to increase to 3.9% from an estimated 1% in 2008–09. By September the National Treasury was estimating a higher budget deficit due to a decline in revenue. The budget granted 13.6 billion rand (\$1.8 billion) in personal tax relief, and 12 billion rand (\$1.6 billion) was added over three years to social grants, expected to benefit some two million more people. Some 4 billion rand (\$535 million) was allocated to the expanded public works program, with a promise of more if necessary from a contingency fund. Total spending for 2009–10 was budgeted at 841 billion rand (\$109 billion).

Foreign Policy. Speaking to the UN General Assembly on September 23, President Zuma outlined a foreign policy in continuity with the Mbeki presidency and emphasized the importance of dealing with climate change. The South African government continued to monitor precarious situations in nearby countries, notably Zimbabwe. (*See Zimbabwe, below.*) (MARTIN LEGASSICK)

SPAIN



Area: 505,991 sq km (195,364 sq mi)

Population (2009 est.): 46,059,000

Capital: Madrid

Chief of state: King Juan Carlos I

Head of government: Prime Minister José Luis Rodríguez Zapatero

After officially entering into recession in the final quarter of 2008, the Spanish economy nose-dived in 2009. The year ended with GDP down by close to 4%, unemployment at nearly 18% (and at more than 27% among the country's immigrant population), and a budget deficit of almost 10% (compared with 3.8% in 2008). Spain not only was one of the worst-hit EU economies but also was expected to be one of the last to recover from the downturn; the Organisation for Economic Co-operation and Development predicted that the country would experience another year of negative growth and that unemployment would top 20% in 2010.

The ever-worsening economic reality shook the Spanish Socialist Workers' Party (PSOE) government out of its initial complacency. Prime Minister José Luis Rodríguez Zapatero opted for classic demand-side policies despite the skepticism of employers, the opposition Popular Party (PP), and some within

his own party (including respected Economy Minister Pedro Solbes, who was replaced in a major cabinet reshuffle in April). These policies included spending the equivalent of 2.3% of GDP in measures to stimulate the economy and create jobs, introducing subsidies for new car purchases, and extending welfare provision for the unemployed who had exhausted their entitlement to benefits. All this forced the PSOE into making a major U-turn on taxation; the 2010 budget approved in the fall included higher capital gains taxes, a 2% hike in the general value-added tax (VAT), and the elimination of a nearly \$600 across-the-board annual income-tax rebate that had been promised before the 2008 elections. In November the government unveiled a wide-ranging package of measures intended to transform the Spanish economy into one based on research and development, gender equality, and environmentally friendly and financially stable economic growth and competitiveness.

Given the perilous state of the economy, it was hardly surprising that the PSOE fared badly at the ballot box. The PP won an absolute majority in regional elections in Galicia in March and a convincing countrywide victory in the European Parliament elections in June, in which it took 42.2% of the vote as opposed to the Socialists' 38.5%.

These results provided a much-needed boost to the PP, which was reeling from the impact of the Gürtel case, a corruption scandal involving a network of companies that had obtained contracts amounting to more than \$25 million from PP-controlled administrations and the party itself since the late 1990s. Things only got worse for the party; by the end of the year, more than 60 PP members—including the party's former national treasurer (who had been forced to resign in July) and elected officials in four regions—were under investigation for offenses that included money laundering, bribery, and tax fraud. PP leader Mariano Rajoy's indecisive response to the scandal and inability to stamp his authority on regional party leaders undermined his

influence and electoral credibility. Another major corruption scandal was uncovered in Catalonia in October. This one involved both the PSOE and conservative nationalists, however, and showed that graft was by no means restricted to the PP. Opinion polls conducted that month showed that for the first time, corruption had overtaken terrorism in the ranking of citizens' concerns.

This result also reflected positive developments in the Basque Country and in the struggle against the armed separatists of Euskadi Ta Askatasuna (ETA). ETA remained active, causing small explosions in and beyond the Basque Country, injuring 65 people in a bomb attack on a Civil Guard barracks in July and killing three police officers in two separate incidents in the summer. The French and the Spanish continued to arrest dozens of suspected activists, including in April the suspected leader of the organization, the fourth person in that position to be captured in 11 months. Meanwhile, elections held on March 1 led to a historic change of government in the region. Although the ruling Basque Nationalist Party (PNV) received the most votes, it failed to win enough seats to reestablish its coalition government with other nationalist parties (not least because the radical nationalists linked to ETA were banned from standing for election, and their supporters cast almost 100,000 null votes). With the support of the other nonnationalist parties—above all the PP—the Basque Socialist Party was able to oust the PNV from power for the first time since Spain's return to democracy 30 years earlier. Many viewed this as a healthy sign of political normalcy in the divided region.

The year saw a marked improvement in Spanish-U.S. relations, which had been strained since Zapatero's unilateral decision to withdraw Spanish troops from Iraq in 2004. This new spirit of cooperation was reflected in Spain's positive and symbolically important response to U.S. requests for help in Afghanistan and in its bid to close the Guantánamo prison in Cuba. In October, in his first state visit to the United States since 2004, Zapatero informed U.S. Pres. Barack Obama that Spain would accept two prisoners from Guantánamo. Just a few days before, the Spanish parliament had approved the government's request to send a further 220 military personnel to join the 800 Spanish troops already serving in Afghanistan, and in December the

Pro-life demonstrators participate in a march held in Madrid on October 17 to protest proposed new legislation that would liberalize abortion laws in Spain.



Pedro Armestre—AFP/Getty Images

government again reacted positively to U.S. requests for further reinforcements from its NATO allies, despite polls showing that most Spaniards opposed increased military engagement in that country. (JUSTIN BYRNE)

SRI LANKA



Area: 65,610 sq km (25,332 sq mi)

Population (2009 est.): 20,238,000

Capitals: Colombo (executive and judicial); Sri Jayawardenepura Kotte (legislative)

Head of state and government: President Mahinda Rajapakse, assisted by Prime Minister Ratnasiri Wickremarajane

The year 2009 marked the end of Sri Lanka's civil war, which began in 1983 and caused up to 80,000 deaths and extensive suffering and displacement among the civil population. In May the Sri Lankan armed forces succeeded in capturing the final enclave of the rebel Liberation Tigers of Tamil Eelam (LTTE) in the north of the island. The LTTE's leader, Velupillai Prabhakaran, and other prominent figures died in the fighting, and surviving LTTE fighters were rounded up.

The armed victory and prospect of restored security throughout the country brought the United People's Freedom Alliance government of Pres. Mahinda Rajapakse tremendous popularity among the Sinhalese majority. This was reflected in subsequent victories in several provincial and local elections. Late in the year, however, President Rajapakse was challenged by Gen. Sarath Fonseka, former commander of the Sri Lankan military, in an election scheduled for Jan. 26, 2010. The war's conclusion left on the table the issues of whether and how to accommodate demands from the Tamil minority—major future challenges for the Sri Lankan government. There was, however, a clear commitment to promote economic development in the north and east in the hope of lessening resentment within the Tamil community.

Masses of civilians fled the final stages of fighting, and 280,000 were interned in government-run camps. Their treatment in the camps invoked criticism from international groups active in relief and resettlement as well as from governments and the press in the United States and Europe. While this criticism may have impinged on aid from the U.S. and the EU and affected trade preferences from the latter, ties with China and India continued to strengthen.

Ironically, economic growth, which had held up remarkably well during the long civil war, slumped in 2009 as the

global recession had a serious impact on the island. After growing at 6% in 2008, GDP was expected to rise by only 3% in 2009, although faster growth was expected in 2010. While the end of fighting engendered a national spirit of optimism and halted an outflow of private capital, Sri Lanka's garment and other industrial exports suffered badly as purchasing power in its principal markets dropped. The important tourist industry began to revive, however, as soon as the fighting ended. The government continued to run a large fiscal deficit, and foreign exchange reserves dropped to dangerously low levels. A \$2.6 billion loan from the International Monetary Fund that was agreed to in July helped to stabilize the country's economic position. (DONALD SNODGRASS)

SUDAN, THE



Area: 2,505,810 sq km (967,499 sq mi)

Population (2009 est.): 42,272,000, including about 250,000 refugees in Chad

Capital: Khartoum

Head of state and government: President and Prime Minister Lieut. Gen. Omar Hassan Ahmad al-Bashir

Government troops maneuver inside the war zone near the Sri Lankan town of Mullaittivu during a final offensive against the Tamil Tiger rebels in May.



Sri Lankan Government—Reuters/Landov

On March 4, 2009, the International Criminal Court (ICC) issued an arrest warrant for Sudanese Pres. Omar al-Bashir on seven counts of war crimes and crimes against humanity in Darfur—the first time that the tribunal had acted against a sitting head of state. Condemning the edict, Bashir expelled 13 international philanthropic organizations active in Darfur and throughout The Sudan, including Oxfam, Save the Children, and Doctors Without Borders. Later he announced the Sudanization of humanitarian work, which caught the government's own Humanitarian Aid Commission ill-prepared to take on relief responsibilities for Darfur and the transitional areas between north and south. In June, partly owing to U.S. Sen. John Kerry's intervention, the Sudanese government reversed its decision and allowed the return of philanthropic organizations on condition that they change their names and logos. Some analysts cynically observed that this tactic allowed the government to use international aid organizations to

limit Darfur fatalities while simultaneously curtailing further their already limited freedom of speech and action.

The African Union and the Arab League supported Bashir, arguing that the ICC's decision impeded peaceful settlement to the Sudanese crisis. Both organizations requested that the UN Security Council suspend the warrant, but to no avail. Meanwhile, Bashir continued to defy the ICC by frequent travels to friendly African and Arab countries, including Egypt, Eritrea, Ethiopia, Libya, Qatar, Saudi Arabia, and Zimbabwe.

Conflict, displacement, and insecurity persisted throughout the country. In Darfur hostilities continued between armed opposition factions, government armed forces, militias, and ethnic groups. The UN estimated that another 250,000 southern Sudanese had been displaced by interethnic fighting, bringing the total of internally displaced persons across the country to 4.9 million.

UN and local officials expressed apprehension that ongoing conflict could impede preparations for national elections, originally scheduled for July 2009 but postponed until April 2010. The elections were a crucial part of the 2005 Comprehensive Peace Agreement that ended more than two decades of civil war between the north and the south, but several hurdles would need to be overcome before polling day, the most important being the controversial results of the 2008 census. According to the director general of the Central Bureau of Statistics, the 10 states of southern Sudan now had only about 21% of The Sudan's total population. Thus, the allocation of assembly seats for southern Sudan dropped from 34% (based on the 1986 census) to 22%. These figures were rejected by leading Darfur movements and a number of political parties.

Although The Sudan's ruling party, the National Congress Party, and the southern Sudan People's Liberation Movement accepted the elections timetable, distrust permeated the political scene. With a record 68 political parties vying for positions, political dissension would surely escalate. Some southern officials claimed that their northern political rivals deliberately incited interethnic violence to obstruct national elections and represent the southern government as ineffectual. In November calls for the southern states to secede from The Sudan intensified as national First Vice Pres. Salva Kiir, the leader of southern Sudan, urged the south to split from the government.

Two significant deaths occurred. In February, The Sudan's most acclaimed author, Tayeb Salih, died in London. In May former president Gaafar el-Nimeiri (*see* OBITUARIES) died. He was head of state during 1969–85, a period book-ended by coups. (LARAY DENZER)

SURINAME



Area: 163,820 sq km (63,251 sq mi)

Population (2009 est.): 520,000

Capital: Paramaribo

Head of state and government: President Ronald Venetiaan, assisted by Prime Minister Ram Sardjoe

Suriname's president, Ronald Venetiaan, successfully held his fractious New Front Plus coalition together and provided overall stable governance in 2009. It was a trying year; buffeted by the global economic meltdown, the country's economic growth was expected to slow to 1.5%. The bauxite industry, a pillar of the economy and a major source of tax revenue, was especially hard-hit. Bauxite multinational corporation BHP Billiton's announcement in 2008 that it was proposing to pull out of Suriname further added to the gloom. The recession, the refusal of President Venetiaan, who was nearing the end of his third term, to contest another election, and the nonappearance of an appealing successor depressed the government's support.

At the close of 2009, some observers saw the political horizon darkening. The opposition Mega Combination, headed by the National Democratic Party (NDP), overtook the government coalition in the polls, and the NDP's leader, former dictator Dési Bouterse, announced his candidacy for president. Bouterse's prospects were complicated by a long-pending indictment for the murder of 15 political opponents in the 1980s. The same observers grumbled that if Bouterse's candidacy were to be blocked, the probable alternative, former president Jules Wijdenbosch (1996–2000), was almost as unattractive because of his past destabilizing management of the country.

Suriname continued to suffer the corrosive impact of organized crime and revenue losses resulting from illegal

gold mining. The year ended, however, with near-zero inflation.

(JOHN W. GRAHAM)

SWAZILAND



Area: 17,364 sq km (6,704 sq mi)

Population (2009 est.): 1,337,000

Capitals: Mbabane (administrative and judicial); Lobamba (legislative)

Chief of state: King Mswati III, assisted by Prime Minister Barnabas Sibusiso Dlamini

The beginning of 2009 was marked by economic uncertainty in Swaziland, which was experiencing the effects of the global recession. The recent shrinking of Southern African Customs Union benefits for the country had worsened the situation. Two major constitutional provisions were realized; a program of free primary education, which was to be introduced gradually beginning in 2010, was effected, and the Commission on Human Rights and Public Administration was appointed in September. The commission's fundamental role was to protect human rights and freedoms. It also constituted the Integrity Commission, to which politicians and top civil servants were required to declare their assets upon assumption of public office.

In October Jan Sithole, who had led the Swaziland Federation of Trade Unions since the mid-1980s, stepped down, and Mduduzi Gina was elected to succeed him as secretary-general. Mario Masuku, president of the banned People's United Democratic Movement (PUDEMO), who had been arrested under the Suppression of Terrorism Act soon after its promulgation in November 2008, was released from prison on September 22 on grounds of paucity of evidence. As chairman of the Southern African Development Community's politics, defense, and security committee, King Mswati played a prominent role in the attempt to facilitate dialogue between Madagascar's ousted president, Marc Ravalomanana, and his successor, Andry Rajoelina.

Official estimates put GDP growth at 1.9%. New antigraft legislation was being prepared because corruption continued to be a problem in both government and the private sector.

(NHLANHLA DLAMINI)

SWEDEN



Area: 450,295 sq km (173,860 sq mi)
Population (2009 est.): 9,290,000
Capital: Stockholm
Chief of state: King Carl XVI Gustaf
Head of government: Prime Minister Fredrik Reinfeldt

As a small, open, and export-oriented economy, Sweden suffered greatly from the global economic downturn in 2009. In fact, it was the most difficult year for the Swedish economy since World War II. The Finance Ministry estimated that GDP contracted by 5.2%, after having been at a virtual standstill the year before. The production of key Swedish exports, such as cars, trucks, specialty steel, household appliances, and forest products, diminished rapidly. Many companies, such as truck-making giant Scania, reduced both work hours and salaries to offset the sharply falling demand from abroad. The employees and unions reluctantly accepted these cuts to avoid job losses.

In spite of such measures, however, the most alarming feature of the Swedish economic crisis was rising unemployment. In a country where full employment had been the proud goal of all governments for decades, it was a significant defeat that the unemployment rate rose from 5.8% in July 2008 to more than 8% in the autumn of 2009. In its budget for 2010, the government projected that unemployment would reach more than 11% that year.

The government responded to the economic downturn by providing a massive fiscal stimulus package. The budget bill for 2010, moreover, included tax cuts on ordinary incomes as well as subsidies for municipalities and for the education and training of the unemployed. The Swedish central bank, the Riksbank, followed a highly expansionary monetary policy, reducing its benchmark interest rate, which had been more than 4% in the autumn of 2008, to a historically low 0.25%. The central bank also supported Swedish banks with generous lending facilities, although by autumn none of the banks had needed any formal state aid. Instead, the shareholders in three of the largest banks, Nordea, SEB, and Swedbank, approved capital increases.

Late in the year some indicators suggested that the worst of the Swedish economic crises was over and that the government might even have been overly pessimistic in its assumptions. Shares on the Stockholm stock exchange rose by almost 40% from January to October. The financial markets started to anticipate rising sales and profits in 2010 and beyond, after the "lost year" of 2009. Many economists believed that Sweden would be in a favourable position to resume growth once the international economy started to pick up. The European Commission recognized Sweden as one of the EU countries with the best public finances, with a deficit below the EU average, and the IMF predicted that it would be one of the few European economies to return to a growth of more than 1% in 2010.

Nevertheless, Prime Minister Fredrik Reinfeldt, leader of the Moderate Party, had won the 2006 election by promising to create more jobs, and he faced a clear risk of losing in the general elections of September 2010 if he did not deliver fully on his promises. His ruling four-party centre-right coalition was expected to face a united red-green opposition with Social Democratic leader Mona Sahlin as the candidate for prime minister. In autumn opinion polls, Sahlin and her coalition of the Social Democrats, the Greens, and the Left had a small but definite lead, receiving about 5% more supporters than the government alliance. Sweden's presidency of the EU in the second half of the year did not affect the government's position in the polls, although Sweden put a lot of effort into finishing the long-drawn-out process for concluding the EU's Lisbon Treaty, which was finally accepted by all EU member nations in the autumn.

In the winter it was announced that Sweden would celebrate a royal wedding in June 2010. The engagement of Crown Princess Victoria to her long-time boyfriend, Daniel Westling, was a major news item both nationally and internationally. Victoria was first in line to succeed her father, King Carl XVI Gustaf, to the throne.

A major disappointment for most Swedes in 2009 was the failure of the Swedish association football (soccer) team to qualify for the 2010 World Cup in South Africa. After this debacle the Swedish team received a new coach, Erik Hamrén, and concentrated on qualifying for the 2012 European championships to be held in Poland and Ukraine.

(MARTIN HAAG)

SWITZERLAND



Area: 41,285 sq km (15,940 sq mi)
Population (2009 est.): 7,739,000
Capital: Bern
Head of state and government: President Hans-Rudolf Merz

In 2009 Switzerland was forced to relax its banking secrecy for foreigners—though not for Swiss residents—under pressure from its European neighbours and the United States to clamp down on tax evaders. The small Alpine country was shocked to find itself on a "gray list" of uncooperative tax havens published in April by the Organisation for Economic Co-operation and Development (OECD) and protested that it had not been given prior warning and that the complaints were unjustified. Switzerland scrambled to have its name be removed from the list by signing double-taxation agreements in less than six months with the OECD's stipulated minimum of 12 countries, offering to share previously confidential bank documents.

The treaty with the United States stated that any request for administrative assistance had to clearly identify the person concerned, ruling out so-called fishing expeditions to net a wider range of potential tax fugitives. The signing of the treaty followed an agreement in August for Switzerland's biggest bank, UBS AG, to turn over information on 4,450 accounts of Americans suspected of holding undeclared assets. In return, U.S. tax authorities dropped demands for UBS to reveal the details of all 52,000 of its American clients and said that it would not enforce the "John Doe Summons" authorized by a U.S. court, which sought information on American customers of UBS. "This solution frees UBS and indirectly also our national economy from a sword of Damocles. At the same time, it respects our legal order and our sovereignty," Swiss Pres. Hans-Rudolf Merz told bankers.

Die-hard defenders of Swiss independence accused the government of buckling under U.S. pressure. Criticism intensified after Swiss authorities arrested filmmaker Roman Polanski on a 31-year-old U.S. arrest warrant stemming from his conviction for having had sexual intercourse with a 13-year-



A controversial campaign poster featuring minarets that resemble missiles standing on top of a Swiss flag flanked by a woman in a burka is displayed in Corseaux, Switz., in November; the poster was part of an effort by the right-wing Swiss People's Party to generate support for a referendum to ban the construction of minarets in Switzerland.

Fabrice Coffrini—AFP/Getty Images

old girl. Polanski was in Zürich to accept an award for his life's work when he was detained; his arrest prompted fury in France, where he resided.

Merz came under pressure to resign over his handling of a diplomatic spat with Libya. Relations between the two countries had soured in July 2008 when Geneva police arrested Hannibal al-Qaddafi, son of the Libyan leader, on allegations that he and his wife had beaten two servants. He was released several days later, but Libya cut economic and diplomatic ties to Switzerland and detained two Swiss businessmen, allegedly for immigration violations. The Swiss long resisted Libyan demands for an apology, but Merz ultimately traveled to Tripoli in August and apologized to Muammar al-Qaddafi, apparently without having consulted his cabinet colleagues. He returned without the Swiss businessmen, who were subsequently sentenced to 16 months' imprisonment.

Switzerland faced international condemnation after a November 29 referendum unexpectedly backed proposals by the right-wing Swiss People's Party to ban the construction of minarets. The 57% majority in favour of the ban was seen as an embarrassment for a country that hosts the European headquarters of the United Nations and where about 4% of the population was Muslim. On December 2 the Swiss parliament elected Economics Minister Doris Leuthard as president for 2010. She would be the third woman to serve as Switzerland's head of state.

Switzerland reluctantly ended the freezing of \$7 million in assets linked to Mobutu Sese Seko, the late president of Zaire (now the Democratic Republic

of the Congo), when a Swiss court ruled that the money had to be returned to his family. Switzerland stated that this was due to the inaction of Congolese authorities to recover the funds through the courts and the refusal of Mobutu's family to relinquish their claim to the assets, which allegedly had been pilfered from the mineral-rich African country. The Swiss government said that the ruling proved the need for changes in the law, scheduled for 2010, to allow the outright confiscation of illicitly gained assets held by "politically exposed people."

Switzerland was less affected by the economic recession than some other industrialized countries. A government expert group said that it expected GDP to shrink by 1.7% in 2009 and to recover slightly to 0.4% in 2010. It predicted that unemployment, hovering just under 4%, would rise.

(CLARE KAPP)

SYRIA



Area: 185,180 sq km (71,498 sq mi)

Population (2009 est.): 21,763,000 (including 1,200,000 Iraqi refugees)

Capital: Damascus

Head of state and government: President Bashar al-Assad, assisted by Prime Minister Muhammad Naji al-Otari

Global financial difficulties led to a sharp downturn in industrial activity in

Syria in early 2009. State officials responded by raising duties on cloth and thread imports and setting up a commission to encourage exports. In March a local stock market, the Damascus Securities Exchange, opened its doors. Six companies—four banks, a publishing and marketing group, and a transportation firm—were listed on the exchange, and four brokerage houses were authorized to trade shares. Prime Minister Muhammad Naji al-Otari announced at the end of March that no state employees or public-sector workers would be laid off as a result of the economic slump and that steps to expand agriculture along the Euphrates River were being planned. Nevertheless, growing unemployment sparked a jump in armed robberies and other violent crimes around Aleppo.

In April the Muslim Brotherhood pulled out of the opposition National Salvation Front (NSF), headed by former vice president 'Abd al-Halim Khaddam. The Muslim Brotherhood's London-based general supervisor, 'Ali Sadr al-Din al-Bayanuni, attributed the withdrawal to persistent criticism of the organization by liberals inside the NSF, as well as to disagreements over the best way to respond to Israel's 2008 invasion of the Gaza Strip. Sheikh Mahmud Kafaru, an influential religious figure with close ties to the regime, was arrested in early May on charges of having held unauthorized talks with Western diplomats. A month later the Islamic television station Mihrab al-Sham was ordered to cease broadcasting, despite its links to influential state-affiliated religious scholars. Controversy erupted in June over a proposed personal status law that would have mandated greater uniformity across religious communities on matters of marriage, inheritance, and child custody. Prime Minister Naji al-Otari quickly withdrew the draft law, calling it a "working paper." Pres. Bashar al-Assad in October issued a decree that prohibited smoking in restaurants, movie houses, schools, health centres, and other public places.

Relations with Saudi Arabia turned from icy to lukewarm as the year passed. President Assad met with the head of the Saudi intelligence service in February and then dispatched Foreign Minister Walid al-Mu'allim to Riyadh. Saudi Foreign Minister Sa'ud al-Faisal returned the visit in early March. President Assad traveled to Jiddah in September to attend the opening of the King 'Abdullah University of Science and Technology. King 'Abdullah then

capped the rapprochement by flying to Damascus in early October. During the visit Syria's minister of finance told reporters that taxes on Saudi imports would be eliminated as a way to stimulate bilateral trade.

Improvements in relations with Turkey were more pronounced. New economic protocols were signed throughout the year. In April unprecedented joint military exercises took place, and an agreement was signed to augment cooperation between the Syrian and Turkish defense industries.

Meanwhile, Syria's relations with Iraq took a nosedive. Iraqi Prime Minister Nuri al-Maliki discussed collaborative measures to improve border security with President Assad during a trip to Damascus in August, and the two leaders set up a council to oversee combined economic, cultural, and security projects. In early September, however, a cluster of bombings in Baghdad prompted Iraqi officials to accuse Syria of having provided safe haven for the Ba'thist militants responsible for the attacks. Iraqi Foreign Minister Hoshiyar Zebari infuriated Damascus by demanding that the United Nations look into the incident by forming a commission similar to the one that was investigating the assassination of former Lebanese prime minister Rafiq al-Hariri. (FRED H. LAWSON)

TAIWAN (REPUBLIC OF CHINA)



Area: 36,190 sq km (13,973 sq mi)

Population (2009 est.): 23,069,000

Capital: Taipei

Chief of state: President Ma Ying-jeou

Head of government: Presidents of the Executive Yuan (Premiers) Liu Chao-shiuan and, from September 10, Wu Den-yih

In 2009 Taiwan (Republic of China) continued its economic and political opening to China. After breakthroughs in 2008 that involved increasing Chinese tourism in Taiwan and expanding direct flights and trade between the two countries, the administration of Pres. Ma Ying-jeou announced in March that it intended to negotiate and sign the Economic Cooperation Framework Agreement (ECFA). This agreement, which would lower tariffs between Taiwan and China, was bitterly opposed

by the opposition Democratic Progressive Party (DPP) on grounds that it would harm Taiwan's economy and dilute its sovereignty. The DPP insisted that the ECFA be ratified only by a national referendum, while the Ma administration promised to consult with Taiwan's legislature.

While signing of the ECFA appeared to be delayed until 2010, Taiwan opened 192 sectors of its economy to direct Chinese investment in late June. Chinese investors were also permitted to purchase real estate in Taiwan, and institutional investors (known as Chinese qualified domestic institutional investors) were allowed to invest in Taiwan's stock market. Rounding out this series of economic breakthroughs, Taiwan and China's financial regulators in November signed a memorandum of understanding on financial services that would eventually allow Taiwanese securities firms, banks, and insurance companies to set up operations in China, and vice versa.

Domestically, the ruling Kuomintang (KMT) suffered political attrition as three of its lawmakers were forced from office. Longtime legislator Diane Lee resigned in early 2009 after it became clear that she had never renounced her U.S. citizenship. Two other KMT legislators stepped down after they were convicted of electoral fraud. While the KMT won the by-election to replace Lee in one of its Taipei strongholds, it did so by an unexpectedly low margin. Further signs of electoral weakness came when the KMT lost a by-election held in rural Yunlin county, where a DPP political newcomer achieved a landslide victory over a local factional candidate.

Meanwhile, Premier Liu Chao-shiuan was forced to resign in early September to take responsibility for the administration's much-criticized response to a devastating typhoon in August. Typhoon Morakot—the worst natural disaster to hit Taiwan since the massive earthquake of 1999—claimed the lives of more than 600 people, including nearly 500 plains aborigines in the village of Hsiao-lin. Liu was replaced as premier by Wu Den-yih, a former mayor of Kaohsiung and a Nantou county legislator.

In the aftermath of Typhoon Morakot, the Dalai Lama was allowed to make a rare religious and humanitarian visit to Taiwan despite objections from China. Although Uighur human rights activist Rebiya Kadeer (*see* BIOGRAPHIES) was not granted a visa to visit Taiwan, a doc-

umentary about her life, entitled *The Ten Conditions of Love*, was shown across Taiwan on October 1, China's National Day. To show their displeasure, Chinese tourists boycotted Kaohsiung because its mayor, Chen Chu, had invited the Dalai Lama to visit the city and had screened the Kadeer documentary at a city-sponsored film festival.

The corruption trial of former president Chen Shui-bian, which began in March, was the subject of much international and domestic criticism. Chen had been detained without bail since November 2008. Observers expressed concerns over the fairness of the trial, particularly after news emerged that prosecutors had performed a skit satirizing Chen at a Lunar New Year's party; many also raised objections over Chen's being held in solitary confinement throughout the trial. Chen labeled himself a victim of political persecution and, even before the court proceedings got under way, stated that the verdict and sentence had been "already determined." He was convicted and sentenced to life in prison in September. Chen's wife, Wu Shu-chen, was also found guilty of corruption and given a life sentence. Both Chen and Wu were appealing their convictions.

The Ma administration claimed a diplomatic victory in May when Taiwan, after reaching an agreement with China, was able to send observers to the World Health Assembly, the general policy-making body of the World Health Organization; the observers attended the assembly under the name "Chinese Taipei." The significance of this was that for the first time in decades, Taiwan was able to participate in the deliberations of a UN body, albeit not as a formal member.

In keeping with its new low-key diplomatic approach, Taiwan also abandoned its annual attempt to rejoin the UN. Relations with the U.S. improved in November as Taipei agreed to permit expanded imports of U.S. beef, despite widespread fears in Taiwan that such beef was unsafe.

Taiwan's export-oriented economy, which was severely affected by the ongoing global economic downturn, contracted 4.9% in 2009. Despite increased export orders in the second half of the year, the unemployment rate hovered above 6%. Consumers received some relief as the consumer price index declined by 1.84% and the Ma administration issued consumer vouchers amounting to more than \$2 billion. (MICHAEL R. FAHEY)

TAJIKISTAN



Area: 143,100 sq km (55,300 sq mi)

Population (2009 est.): 6,952,000

Capital: Dushanbe

Chief of state: President Imomali Rakhmon

Head of government: Prime Minister Akil Akilov

Though Tajikistan's financial structure was largely protected from the direct effects of the global economic crisis because of its weak integration into the international financial system, in 2009 the country experienced very severe secondary effects. Tajikistan's national economy was heavily dependent on remittances from labour migrants working abroad, and these sharply declined as migrants lost their jobs owing to the spread of the economic downturn in Russia and Kazakhstan. By the end of March, remittances were down an estimated 30%, with a 40% reduction expected by year's end.

The Tajik government drafted a package of anticrisis measures, but most of them, while highly beneficial if implemented, were designed for future needs. Among the long-term proposals was a revival of the vocational-technical education system, which could provide young people with much-needed technical skills. For immediate relief, Tajikistan turned for help to the international community, using the country's position on the front line with Afghanistan and the danger posed if the Afghan insurgency spread across the border. A number of major international financial institutions, including the International Monetary Fund, the World Bank, the Asian Development Bank, and the European Bank for Reconstruction and Development, provided additional assistance, including budget support. Tajik Pres. Imomali Rakhmon told the UN General Assembly in September that the wealthy and developed countries that had caused the financial crisis should help less-developed countries overcome its effects. Specifically, he asked that debts be partially written off that were accumulated as a result of the crisis. An IMF official visiting Tajikistan at the time retorted that it was the responsibility of the government of every country to manage its own economy.

Effects of the crisis became increasingly apparent as the crime rate rose. According to official law-enforcement sources, the crime rate increased 11.6% from January to August. September saw a wave of attacks on currency exchanges, some resulting in the killing of employees. In July a shoot-out between security officers and what was officially described only as an "armed band" took place near Tavildara in north-central Tajikistan, but the importance of this region to the Islamist opposition during the 1992–97 civil war led to speculation that the disturbance might have been connected to the possible return to the area of Mullo Abdullo, a prominent Islamist field commander. Members of the militant extremist Islamic Movement of Uzbekistan were believed to be crossing the border from Afghanistan into Tajikistan, raising fears that the influence of extremists in a society shaken by the effects of the economic downturn might grow. (BESS BROWN)

TANZANIA



Area: 945,090 sq km (364,901 sq mi)

Population (2009 est.): 41,049,000

De facto capital: Dar es Salaam; only the legislature meets in Dodoma, the longtime planned capital

Chief of state and head of government:

President Jakaya Kikwete, assisted by Prime Minister Mizengo Pinda

In 2009 Tanzania played an important role in regional diplomacy. In November the country hosted the 10th anniversary celebrations of the East African Community (EAC), which culminated in the signing of the Common Market Protocol and the laying of the foundation stone for the new EAC headquarters in Arusha.

In the October 25 elections for village leaders and local representatives, the ruling Revolutionary Party of Tanzania (CCM) won a landslide victory, gaining a colossal 93.7% of the vote. President Kikwete dismissed suggestions from the opposition that the elections were flawed.

Like other East African states suffering from the effects of the global economic downturn, Tanzania experienced weakened demand for exports of goods (cash

crops) and services (tourism) and a contraction of foreign investment. GDP growth dropped from 7.1% in 2008 to 4–5% in 2009. The country still ranked in the lowest 10% of the world's economies in terms of annual per capita income. According to Omar Yusuf Mzee, deputy minister for finance and economic affairs, at least 16.5% of the population lived in abject poverty, while a slightly better-off 35.7% lived in "average poverty." The government's poverty-reduction strategy prioritized the agricultural sector, which accounted for more than 40% of GDP, 85% of exports, and 80% of the workforce. In the industrial sector, gold mining was increasingly important; Tanzania became Africa's third largest gold producer. In June the World Bank approved a \$50 million loan for a mineral-resources project to improve the socioeconomic impact of mining and to enhance local and foreign investment.

While the government paid lip service to its war on corruption, leading officials examined the difficulties in curbing financial malfeasance. Prime Minister Mizengo Pinda conceded that corruption was a difficult problem to overcome. One analyst argued that the low incomes of many Tanzanians made it necessary for them to steal from the workplace to meet their basic survival needs. In his view the most effective remedy would be to provide better economic incentives. President Kikwete blamed foreign countries for the persistence of corruption in Tanzania and singled out the United Kingdom for failing to respond to his government's request for assistance in corruption cases involving U.K.-based companies. Nevertheless, the government registered some success in pursuing graft cases; two former ministers, Basil Mramba (finance) and Daniel Yona (energy and minerals), were tried on charges of abuse of office.

Throughout the year the government sought to mitigate the harm done to the country's image by the spate of murders of albinos, whose body parts were used in traditional medicine to make good-luck charms and potions. In January the government banned traditional healers, but this overlooked the fact that healers purportedly treated 30% of Tanzania's population. More than 90 people, including four police officers, were charged with killing albinos or trading in their body parts. Meanwhile, to fight prejudice against albinos, in 2008 Prime Minister Pinda had appointed an albino woman, Al-Shymaa J. Kwegyir, as an MP. (LARAY DENZER)

THAILAND



Area: 513,120 sq km (198,117 sq mi)
Population (2009 est.): 65,998,000
Capital: Bangkok
Chief of state: King Bhumibol Adulyadej
Head of government: Prime Minister Abhisit Vejjajiva

In Thailand the year 2009 began amid great political uncertainty following the December 2008 ruling by the Constitutional Court that dissolved the People's Power Party (PPP)—a reincarnation of former prime minister Thaksin Shinawatra's Thai Rak Thai Party (TRT)—on account of electoral fraud. The ruling forced PPP leader Somchai Wongsawat to resign as prime minister, and the parliament subsequently chose Abhisit Vejjajiva of the anti-Thaksin Democrat Party to succeed him. Abhisit, however, was unable to restore much-needed political stability to the country; in fact, his assumption of power as a nonelected prime minister made Thailand all the more polarized between the so-called yellow shirts—anti-Thaksin royalists who were mostly urban-based—and the pro-Thaksin, largely rural-based red shirts. The latter group

disputed the political independence of the Constitutional Court, which had dissolved the TRT in a 2007 ruling, and contested Abhisit's choice of Kasit Piromya, a strong supporter of the yellow shirts, as foreign minister.

The rising tensions erupted in March when the red shirts, who formed a populist movement called the United Front for Democracy Against Dictatorship (UDD), staged a massive protest in Bangkok. In April the protesters moved to Pattaya, south of Bangkok, where they forced the cancellation of a summit meeting of the Association of Southeast Asian Nations. Deeply embarrassed, Abhisit declared a state of emergency and used military force to quell the demonstrations; at least two people were killed during the crackdown. An assassination attempt on yellow-shirt leader Sondhi Limthongkul exacerbated the crisis. On September 19, which marked the third-year anniversary of the military coup that drove Thaksin from power, the UDD staged another large-scale demonstration in Bangkok and called on Abhisit to resign; troops were again deployed, but the protest ended peacefully.

In parliamentary by-elections held in April and June, the Phuea Thai Party—the main pro-Thaksin opposition party—gained two seats, and in October former prime minister and army chief Chavalit Yongchaiyudh, who was regarded by some as a proxy for Thaksin, joined the Phuea Thai. The yellow shirts, for their part, founded the New Politics Party and elected Sondhi its leader.

In September Thailand's 81-year-old King Bhumibol was hospitalized, reportedly with pneumonia. He was released the following month and declared to be in "satisfactory" health.

On the foreign relations front, Thailand faced international criticism in January following reports that its military had mistreated Muslim refugees from Myanmar (Burma) and Bangladesh. In April, Thai and Cambodian troops clashed near the Temple of Prear Vihear—a source of long-standing land disputes between the two countries; the skirmish left two Thai soldiers

dead. In November Thaksin was made an economic adviser to Cambodian Prime Minister Hun Sen. Thailand responded by recalling its ambassador. At the end of the year, Thailand again raised international ire when it forcibly repatriated 4,000 Hmong refugees to Laos.

The economy remained sluggish. The tourist industry, a major source of income for Thailand, was negatively affected by the persistent political unrest and by the rapid spread of the H1N1 flu, which by October had claimed more than 184 lives.

(YOSHINORI NISHIZAKI)

TOGO



Area: 56,785 sq km (21,925 sq mi)
Population (2009 est.): 6,032,000
Capital: Lomé

Chief of state: President Faure Gnassingbé, assisted by Prime Minister Gilbert Houngbo

Positioning for Togo's 2010 presidential election began in early 2009 when on January 29 the two main opposition parties, Gilchrist Olympio's Union of Forces for Change (UFC) and Yawovi Agboyibo's Action Committee for Renewal (CAR), announced that they would unite behind one candidate. They also agreed to boycott voting on changes to the electoral code. The bill was, however, passed by the National Assembly and signed into law by the president on June 30. On August 21 deputies from all parties unanimously approved a bill defining eligibility requirements for the election, stipulating that all presidential candidates were to be in good standing with tax authorities and were to have renounced any nationality other than Togolese.

Former defense minister Kpatcha Gnassingbé, brother of Pres. Faure Gnassingbé, was arrested on April 15 while he was attempting to seek refuge at the U.S. embassy. He was accused of having plotted a coup with several senior military officers. On April 17 police invited the public to see weapons allegedly found at Kpatcha's house. Police announced on May 1 that they had detained 10 civilians, as well as another Gnassingbé brother, Essolizam, for complicity in the alleged plot. On May

Demonstrators demand the resignation of Thai Prime Minister Abhisit Vejjajiva as they stage a protest outside the venue for the ASEAN summit held in Pattaya in April.



David Longstreath/AP

Xinhua/Landov



Police in Lomé, Togo, display weapons on April 17 that allegedly were found at the house of Kpatcha Gnassingbé, who was arrested for having plotted a coup against his brother, Pres. Faure Gnassingbé.

28 the president announced that a truth, justice, and reconciliation commission would be created to investigate the violence that gripped the country following the death of Pres. Gnassingbé Eyadéma in 2005.

On June 23 the National Assembly abolished the death penalty. Togo was the 15th state of the African Union to do so. (NANCY ELLEN LAWLER)

TONGA



Area: 748 sq km (289 sq mi)
Population (2009 est.): 103,000
Capital: Nuku'alofa
Chief of state: King Siaosi (George) Tupou V
Head of government: Prime Minister of Privy Council Feleti Sevele

The rebuilding of Tonga's capital, Nuku'alofa, which was destroyed during riots in 2006, continued in 2009 with funding from China, Australia, and New Zealand and additional civil and infrastructural work provided by the Asian Development Bank. Aid funding was offset by falls in revenue from overseas remittances, the amount of which typically totaled \$96 million an-

nually but had dropped by 10% owing to the global recession. In addition, government tax revenues were expected to plummet by 8% as a result of lower levels of spending and a decline in imports. Overall GDP growth was likely to fall to 0.5% for fiscal year 2008–09. Hopes were dashed when Nautilus Minerals experienced difficulty raising funds for the seabed mining of 10 massive sulfides systems.

To the delight of pro-democratic forces, the Commission on Constitutional and Electoral Reform produced its comprehensive and radical constitutional reform recommendations in mid-November. Under the proposals, Tonga would remain a constitutional monarchy; however, the king and Privy Council would no longer be part of the executive, the king would no longer independently appoint the prime minister or cabinet ministers, and elections would occur under a new single transferable voting system.

Tonga went into mourning on August 6 after an interisland ferry, *Princess Ashika*, carrying 127 people, sank; 74 passengers lost their lives. A Royal Commission appointed to consider the ferry's loss revealed that the ferry was not designed to operate in open seas, had not been inspected by qualified marine engineers, and was known to be in very poor structural condition when it was sent on its interisland journey.

(CLUNY MACPHERSON)

TRINIDAD AND TOBAGO



Area: 5,155 sq km (1,990 sq mi)
Population (2009 est.): 1,302,000
Capital: Port of Spain
Chief of state: President George Maxwell Richards
Head of government: Prime Minister Patrick Manning

In January 2009 Moody's Investors Service declared that Trinidad and Tobago's financial outlook was stable and that the country was well prepared to weather the global economic slowdown. The international credit-rating agency cited as strengths the country's net creditor position, diversified energy sector, prudent fiscal policies, and good debt ratios.

One victim of the economic slump was CL Financial Group, the largest conglomerate in Trinidad and Tobago; the government was forced to extend a bailout package to the group in January after the conglomerate fell into financial distress. CL Financial was involved in insurance, banking, real estate, and other businesses throughout the Caribbean and elsewhere. The group's main problem concerned its insurance subsidiary, the Colonial Life Insurance Co. (CLICO), which was said to be billions of dollars in arrears on its statutory fund to protect policyholders. In exchange for providing funds to CL Financial, the government took an equity interest in CLICO.

Trinidad and Tobago was in the international spotlight in April when it hosted U.S. Pres. Barack Obama and other heads of government at the Fifth Summit of the Americas, held in Port of Spain; the visit by Obama marked his first trip to the Caribbean as the U.S. head of state. In November, Trinidad and Tobago again hosted a gathering of world leaders when it presided over the biennial Commonwealth Heads of Government Conference. (DAVID RENWICK)

TUNISIA



Area: 163,610 sq km (63,170 sq mi)
Population (2009 est.): 10,272,000
Capital: Tunis
Chief of state: President Gen. Zine al-Abidine Ben Ali
Head of government: Prime Minister Mohamed Ghannouchi

In the Tunisian presidential and parliamentary elections held on Oct. 25, 2009, incumbent Pres. Zine al-Abidine Ben Ali was elected to a fifth term, as expected, and his party, the Democratic Constitutional Assembly (RCD), confirmed its hold over the Chamber of Deputies, the lower house of parliament. There was speculation that the 73-year-old president's fifth term might be his last, given the constitution's upper limit of 75 years of age for prospective candidates. Although there were three other candidates, the two who might have threatened Ben Ali's hegemony, Nejib Chebbi and Mustapha Ben Jaafar, had been ex-

Fethi Belaid—AFP/Getty Images



Supporters of Tunisian Pres. Zine al-Abidine Ben Ali hold placards as he arrives in the port city of Rades to give a speech at the beginning of his reelection campaign in October.

cluded by amendments to the constitution passed in 2008, changes that had ostensibly been made to ease the candidate registration requirement.

Although the political scene remained unmarred by violence during the year, there were reminders of what could happen: in early 2009 three men—a Tunisian, a German, and, in absentia, Kuwait-born Pakistani Khalid Sheikh Mohammed—were tried in Paris for the 2002 synagogue bombing in Jerba (Djerba). U.S. Gen. David Petraeus, head of the U.S. military's Central Command, told a U.S. congressional committee in April that four of the recent suicide bombers in Iraq had been Tunisian and that a network had been reactivated in Tunisia six months earlier to recruit militants for attacks in Iraq and Afghanistan. Tunisia also sought the repatriation of two Tunisian prisoners held in U.S. military facilities, one at Bagram, Afg., and the other at Guantánamo Bay, Cuba, who had been charged in absentia for terrorism offenses.

Despite objections from the European Court of Human Rights, European states persisted in returning illegal migrants to Tunisia. Italy sent back five migrants during the year, and all of them were subsequently sentenced to prison. Despite minor amendments, Tunisia's 2003 antiterrorism law continued to be used to imprison the regime's opponents, especially those who sympathized with Salafi jihadism. By 2009 as many as 1,200 persons had been sent to prison under the law. Sadok Chourou, the former leader of the banned Islamist political party Al-Nahdah, was sentenced to an addi-

tional year in prison for a new offense one month after his release in January from an 18-year sentence.

Outspoken Muslim cleric Sheikh Yusuf al-Qaradawi visited Kairouan in May, despite his past criticisms of the Tunisian government. In June the Tunisian journalists' union submitted to the government a memorandum complaining of official harassment. In Middle Eastern relations, Tunisia remained a member of the moderate Arab camp, standing with Saudi Arabia, Jordan, and Egypt in their confrontations with Iran. Tunisia also retained good relations with France, obtain-

ing support for a nuclear power station, to be completed by 2020.

(GEORGE JOFFÉ)

TURKEY



Area: 785,347 sq km (303,224 sq mi)

Population (2009 est.): 71,983,000

Capital: Ankara

Chief of state: President Abdullah Gul

Head of government: Prime Minister Recep Tayyip Erdogan

Turkey's international standing was enhanced when the country took its seat as a nonpermanent member of the UN Security Council on Jan. 1, 2009. Turkey was also a member state of the Group of 20 (G-20) and sent representatives to the G-20 summit meetings held in London and in Pittsburgh during the year. In spite of these successes, the ruling conservative Justice and Development Party (AKP) lost ground in the local government elections held on March 29. The AKP won 39% of the votes—down from its 42% total in the 2004 local elections and the 47% it won in the 2007 general elections—while the two parties of the Turkish nationalist opposition, the Republican People's Party and the Nationalist Action Party, each improved on its past performances. The Kurdish nationalist Democratic Society Party consolidated its

dominant position in the southeastern provinces. The local government elections were followed by a government reshuffle on May 1. Prime Minister Recep Tayyip Erdogan's foreign policy adviser, Ahmet Davutoglu, became foreign minister, replacing Ali Babacan, who was appointed deputy prime minister in charge of the economy.

Relations between the government and the military were strained by an expanding investigation into an alleged military plot to overthrow the government. In October 2008, charges had been brought against 86 defendants, including a number of high-ranking officers. While most of the officers arrested were subsequently released, 56 of the 86 defendants accused of having instigated the so-called Ergenekon plot remained in prison as new charges were added to the original indictment.

The National Security Council recommended in August that the government continue to implement its policy of strengthening the unity of the nation—i.e., of fulfilling at least some Kurdish aspirations. In a message released to the press in August, however, Gen. Ilker Basbug, the Turkish armed forces chief, declared that the military

Carrying a banner depicting the image of the founder of the Republic of Turkey, Kemal Atatürk, protesters march in Ankara on April 18, following new arrests in an alleged plot to overthrow the government; among the protesters were many university students and teachers, who were alarmed that a number of leading academics had been charged with involvement in the plot.



Adem Altan—AFP/Getty Images

remained opposed to any change in the constitution that would specify Kurdish rights and to a general amnesty for members of the militant Kurdistan Workers' Party (PKK). Although Erdogan announced in November a plan to allow the use of the Kurdish language in broadcast media, at the end of the year the Constitutional Court disbanded the Democratic Society Party, citing ties with the PKK.

On October 10, Turkish Foreign Minister Ahmet Davutoglu joined his Armenian counterpart, Edward Nalbandian, in signing two protocols that called for the establishment of full diplomatic relations and the opening of the frontier between the two countries. Achieving those goals remained problematic, however, even if the protocols were ratified by both countries' parliaments, as opposition to the protocols emerged on numerous fronts. Turkey's relations with Syria and Iraq were upgraded to "strategic partnerships," and visa-free travel between Turkey and Syria came into force in September. Relations with Israel deteriorated. On January 29, Erdogan quit a panel at the World Economic Forum in Davos, Switz., complaining that he had not been allowed to respond to a speech by Israeli Pres. Shimon Peres rejecting Turkish criticism of the Israeli operation in Gaza. In October, Turkey withdrew at the last moment an invitation to the Israeli air force to take part in joint maneuvers in central Turkey.

U.S. Pres. Barack Obama visited Turkey on April 6–7 and expressed support for Turkey's aspirations to join the EU. The EU annual report on Turkey's progress praised the government's Kurdish and Armenian initiatives while drawing attention to shortcomings in human rights. In response to the report, Egemen Bagis, Turkey's minister for EU affairs, outlined a program of legislation aimed at meeting some of the EU's demands.

The effects of the global recession were felt in Turkey throughout 2009. GDP contracted by 7% year-on-year in the second quarter; the volume of foreign trade fell by 36% in the first nine months; and the unemployment rate increased from 10% to 13% by the end of July. However, the index of the Istanbul Stock Exchange more than doubled from a low of 26,864 at the beginning of the year to 59,093 by November 5, which suggested that in Turkey the worst of the economic crisis was over. (ANDREW MANGO)

TURKMENISTAN



Area: 488,100 sq km (188,500 sq mi)

Population (2009 est.): 4,885,000

Capital: Ashgabat

Head of state and government: President Gurbanguly Berdymukhammedov

In March 2009, Pres. Gurbanguly Berdymukhammedov announced that the global financial crisis was affecting Turkmenistan (despite the country's lack of integration into the world financial system) because the volume of exports had been reduced. The steps the government had already taken to mitigate the effects of the crisis included issuing redenominated banknotes, creating a stabilization fund, and seeking to make the Turkmen economy even less dependent on the outside world. This last endeavour was being made easier, Berdymukhammedov noted, because Turkmenistan had no foreign debts. In June, however, the country received a \$3 billion loan from China to develop the South Yolotan natural gas deposit, from which gas would be exported to China through a new pipeline that opened in December.

Turkmenistan also expressed interest during the year in participating in the Nabucco pipeline project, an international scheme to export gas to Europe via Iran, bypassing Russia. Foreign observers suggested that Turkmen interest was at least partly intended to irritate the Russian state-owned energy giant Gazprom. In the first half of 2009, there were several disagreements between the two countries over gas deliveries from Turkmenistan to Russia, but by October the disputes had been resolved, and at the end of the year, deliveries were set to begin in January 2010.

In April Berdymukhammedov sought to defuse the dispute between Central Asian states over water use by offering gas and electricity to Turkmenistan's neighbours at a meeting of the International Fund to Save the Aral Sea. (See Map on page 237.) He angered Tajikistan, however, by supporting Uzbekistan in insisting that construction of any large hydropower projects in upstream states be subject to regional consent and approved by independent international experts. On April 13 Berdymukhammedov signed a decree

setting up an interdepartmental working group on energy diplomacy consisting of heads of the state agencies dealing with energy affairs, the Ministry of Foreign Affairs, and special scientific-research institutes to analyze the situation in the international energy sphere, including energy security issues, and promote Turkmenistan's cooperation with the international energy market.

The gradual dismantling of the legacy of Berdymukhammedov's predecessor Saparmurat Niyazov—the self-styled Turkmenbashi the Great—continued in 2009 with the gradual disappearance of more visible trappings of Niyazov's period in office. This included the pervasive influence of Niyazov's book *Ruhnama*, which had been given the status of holy writ and had caused incalculable damage to the education process. The Turkmen opposition in exile argued, however, that little had actually improved since Niyazov's death because the influence of the security services was still all-pervasive. (BESS BROWN)

TUVALU



Area: 25.6 sq km (9.9 sq mi)

Population (2009 est.): 11,100

Capital: Government offices in Vaiaku, Fongafale islet, of Funafuti Atoll

Chief of state: Queen Elizabeth II, represented by Governor-General Filoimea Telito

Head of government: Prime Minister Apisai Ielemeia

In 2009 Tuvalu, which was struggling to meet its Millennium Development Goals by 2015, received assistance from the United Nations Development Programme and the Australian Agency for International Development, which agreed to jointly fund an aid program that would help Tuvalu meet its goals efficiently. Investment returns from the Tuvalu Trust Fund shrank, and the fund lost an estimated 12.5% of its value as global financial markets contracted.

Following successful experiments with solar and wind energy, Tuvalu's minister for public utilities and industries announced the creation of a \$20 million plan to generate all of Tuvalu's energy from renewable sources by 2020. At the Copenhagen Climate Summit held in December, Tuvalu put

political pressure on those larger countries whose emissions were producing sea level rises that were starting to salinate hard-won cropping soil and king tides that continued to degrade coasts on Tuvalu's atolls, which were only 4.3 m (about 14 ft) above sea level at the highest point.

On April 4 the risks for the many Tuvaluans who serve as crew on merchant ships were highlighted when 12 Tuvaluans on the German-registered ship *Hansa Stavanger* were among 24 taken hostage by Somali pirates. In August all were freed after the ship's owner paid a \$2.75 million ransom.

(CLUNY MACPHERSON)

UGANDA



Area: 241,551 sq km (93,263 sq mi)

Population (2009 est.): 32,710,000

Capital: Kampala

Head of state and government: President Yoweri Museveni, assisted by Prime Minister Apolo Nsibambi

The Ugandan economy withstood the world financial crisis in 2009 better than expected. Growth declined slightly from 7.1% to 6.3%. The regional drought that devastated large areas in neighbouring countries initially led to

increased Ugandan exports of food, which offset diminished external demand for established exports such as coffee. The drought also hit Uganda hard, however, and after food shortages became severe in parts of the country, the government temporarily halted the export of key food commodities to regional markets. Although the government consolidated and expanded the gains of poverty-reduction efforts of recent years, the per capita GDP (\$440) still ranked among the lowest in Africa.

At the beginning of the year, two British oil companies announced "world-class" discoveries in the Lake Albert region. The finds were later estimated to hold 800 million to 2 billion bbl of oil, which was roughly comparable to the reserves of Chad or Equatorial Guinea. Oil production was expected to start in 2010. Tullow Oil signed nondisclosure production and revenue-sharing agreements that were rumoured to give 8 of every 10 bbl found to the Ugandan government. Mindful of endemic political instability in the oil-bearing area, the government was eager to avoid the mistakes of other African oil-producing countries in unplanned development and lack of transparency. Early discussions for future planning concerned the construction of a refinery and a pipeline to the coast to end the country's dependence on Kenya.

Throughout the first quarter of 2009, Uganda participated with the Democratic Republic of the Congo (DRC) and southern Sudan in a joint military operation, supported by U.S. advisers, in

the DRC against the Lord's Resistance Army (LRA), a Ugandan rebel group. The operation's objectives were to capture or kill LRA leader Joseph Kony and to destroy the organization's command structure. Poorly executed, the campaign failed. Kony escaped and was rumoured to be at large in the Darfur region of The Sudan under the protection of the Khartoum government, while the LRA scattered throughout the northeastern DRC and into The Sudan and the Central African Republic. Wherever the rebels went, they continued their reign of terror, raping and killing civilians and forcibly recruiting child soldiers. (See Special Report on page 180.) The Ugandan army pulled back from the DRC in March.

In a February cabinet reshuffle, Pres. Yoweri Museveni made two surprising new appointments: first lady Janet Museveni was named state minister for the district of Karamoja, and Syda Bbumba, who had served as gender minister, became Uganda's first woman finance minister. Challenged about his wife's appointment, Museveni replied that originally he had yielded to pressure from the elders in her constituency to allow her to enter politics and that then her parliamentary performance had been impressive. Besides, he said, "elite ministers did not want to work in Karamoja."

In September ongoing tension between the government and the traditional Buganda monarchy, in south-central Uganda, erupted in violence when the police prevented the Bugandan *kabaka* (ruler) from attending a function in a town near Kampala that the government claimed had seceded from his kingdom. The police used tear gas and live ammunition to quash the ensuing riots, in which some 20 people died and 50 were wounded. At the end of the month, inconclusive talks took place between the *kabaka* and President Museveni. (LARRY DENZER)

Rioters flee after setting ablaze a police post in Uganda's capital city, Kampala, on September 10.



AP

UKRAINE



Area: 603,628 sq km (233,062 sq mi)

Population (2009 est.): 46,029,000

Capital: Kiev (Kyiv)

Chief of state: President Viktor Yushchenko

Head of government: Prime Minister Yuliya Tymoshenko

Sergei Chuzavkov/AP



Amid an ongoing gas dispute between Russia and Ukraine, demonstrators gather in front of the Russian embassy in Kiev in January, with one bearing a poster of Russian Prime Minister Vladimir Putin and a caption that reads, "Liars have always had their tongues cut out."

The year 2009 proved a difficult one for Ukraine as a result of a sharp economic downturn and an ongoing political crisis. The year began with a gas dispute with Russia after the breakdown of talks on Dec. 31, 2008, between Russia's Gazprom (the gas supplier) and Ukraine's national oil and gas company, Naftohaz Ukrainy. By January 7, Russia had halted all gas transit through Ukraine on the main pipeline to Europe. Slovakia, Bulgaria, and Moldova were especially affected. The dispute, over prices and back payments, ended after Prime Minister Yuliya Tymoshenko met with her Russian counterpart, Vladimir Putin, on January 18; gas transit through Ukraine resumed shortly thereafter.

The economic crisis in Ukraine, sparked by the worldwide financial crisis that began in 2008, deepened in 2009. Although the contraction of the economy had slowed by November, GDP still fell 15.9% in the third quarter of the year, compared with the same period in 2008. In the first nine months of the year the Ukrainian currency, the *hryvnya*, fell from 5 to 8 against the U.S. dollar. During that same period, output of crude steel declined by 31%, and pig iron production fell by 29%.

counter to Ukraine's agreement with the IMF, the president signed it into law. The IMF subsequently suspended further disbursement of the country's loan.

Tymoshenko's fiscal proposals in response to the economic crisis led to fractures within the government and ultimately resulted in the dismissal of several ministers: Minister of Finance Viktor Pynzenyk (February 12), Minister of Foreign Affairs Volodymyr Ohryzko (March 3), Minister of Defense Yuri Yekhanurov (June 5), and Minister of Transport Yosyp Vynskyi (June 23). The only permanent replacement was a close ally of President Yushchenko, Petro Poroshenko, who was appointed foreign minister on October 9.

The prime minister suffered a political setback in March when, in a regional council election in Ternopil, the Tymoshenko Bloc placed fourth, behind both the United Centre Party, led by Viktor Baloha (head of the presidential secretariat until his resignation in May), and Yanukovych's Regions Party. The right-wing Svoboda Party, led by Oleh Tyahnybok, was the unexpected victor, winning 50 seats in the 120-seat assembly. The Tymoshenko Bloc responded to Svoboda's victory by declaring the election results invalid.

The International Monetary Fund (IMF) released \$10.6 billion of its \$16.4 billion loan to Ukraine after Tymoshenko agreed to keep the country's budget deficit at less than 6% in 2009 and less than 4% in 2010. On March 18, as a cost-saving measure, she ordered a 50% cut in salary for all cabinet ministers, effective from April 1 until Jan. 1, 2010. Her budget nonetheless was criticized sharply by Pres. Viktor Yushchenko as being insufficiently austere. Conversely, in the Verkhovna Rada (parliament), the opposition Regions Party under Viktor Yanukovych responded to the economic crisis with a bill that proposed a substantial increase in both the minimum wage and pensions. The Rada passed the bill in October, and, despite warnings by the prime minister and her allies in the Tymoshenko Bloc that the bill ran

The Rada initially set the next presidential election for October 25, but after the Constitutional Court overturned that decision on May 17, the election was scheduled for Jan. 17, 2010. According to a poll taken in July by the Razumkov Centre, a Kiev think tank, the leading candidates at that time were Yanukovych (26.8%), Tymoshenko (16.3%), and Arsenii Yatsenyuk (13.4%). Trailing at 5.1%, Yushchenko was not expected to make an impact.

Just as Yushchenko's popularity among Ukrainians had plummeted, relations between the Ukrainian president and his Russian counterpart, Dmitry Medvedev, also deteriorated sharply. On August 11, Medvedev wrote an open letter to Yushchenko, denouncing him as "anti-Russian" and claiming that he had deliberately disrupted the supply of Russian gas to Europe. Yushchenko further angered the Russians by his continued efforts to have Ukraine's Great Famine of 1932–33 recognized as genocide engineered from Moscow, as well as by his recognition of Ukrainian nationalist insurgents who fought against the Soviets during World War II.

On July 21–22, U.S. Vice Pres. Joe Biden visited Ukraine, offering assurances that his country still supported Ukraine's NATO membership bid, despite delays in the admission process. Another visitor, from July 27 to August 10, was the new Russian Orthodox patriarch of Moscow and all Russia, Kirill I (see BIOGRAPHIES), in what was perceived to be a political mission.

(DAVID R. MARPLES)

UNITED ARAB EMIRATES



Area: 83,600 sq km (32,280 sq mi)

Population (2009 est.): 4,765,000, of whom about 900,000 are citizens

Capital: Abu Dhabi

Chief of state: President Sheikh Khalifah ibn Zayid Al Nahyan

Head of government: Prime Minister Sheikh Muhammad ibn Rashid al-Maktum

The global economic downturn of 2009 affected all the emirates composing the United Arab Emirates (U.A.E.). The formerly booming emirate of Dubai, however, suffered the most and had to be

Kamran Jebreili/AP



A Metro Dubai train passes through the formerly booming emirate of Dubai in October; the ultramodern rapid-transit line—the first of its kind in any Arab Gulf country—opened on schedule on September 10, though it was still incomplete and reportedly 80% over budget.

helped by the oil-rich Abu Dhabi. Dubai's stock exchange, real-estate values, and construction industry declined markedly, and thousands of residents and workers left the emirate. In November world markets were shaken when Dubai asked to delay interest payments for six months, and Abu Dhabi was forced to extend bailout funds. Nonetheless, in September Dubai inaugurated an ultramodern subway line.

Tensions between the U.A.E. and Saudi Arabia rose over border issues and the selection of Riyadh by members of the Gulf Cooperation Council (GCC) as the headquarters of its proposed central bank. The U.A.E. considered the decision to be both politically motivated and dismissive of the competitive advantages of locating the bank in the emirates. Subsequently, in May the U.A.E. decided to join Oman in withdrawing from the planned GCC monetary union.

The U.A.E. continued its efforts to build nuclear energy plants for peaceful purposes, to generate electricity. It entered into agreements with the United States and France to help develop its nuclear program and announced that it expected to have its first nuclear power plant operating in 2015. The U.A.E. also continued working to ensure its defense. In May France established a permanent military base in Abu Dhabi, a move that Iran strongly criticized as being directed against it. The U.A.E. and Iran continued their ongoing dispute over the ownership of three strategic islands located in the Persian Gulf (Abu Musa

and Greater and Lesser Tunb) that were under Iranian sovereignty.

(LOUAY BAHRY)

UNITED KINGDOM



Area: 243,073 sq km (93,851 sq mi)

Population (2009 est.): 61,855,000

Capital: London

Chief of state: Queen Elizabeth II

Head of government: Prime Minister Gordon Brown

Domestic Affairs. In the United Kingdom, the government—and politicians in general—had a difficult year in 2009, partly, but not only, because of the impact on the U.K. of the global recession. The governing Labour Party suffered its worst national election result on June 4, when it secured only 16% of the vote across the British mainland in elections to the European Parliament. The party's poor showing resulted in part from the proportional voting system used to elect members of the European Parliament. According to opinion polls, the Conservatives (with 28%) and Liberal Democrats (14%) also secured less support than they would have had in elections to the British Parliament, while smaller parties did well, with the ultranationalist, anti-immigration British National Party winning two European Parliament seats for the first time.

Labour's poor showing also reflected the unpopularity of Prime Minister Gordon Brown and his government ministers. Criticism of his leadership came to a head on the evening of June 4, immediately after the end of voting, when James Purnell, the secretary of state for work and pensions, resigned from Brown's cabinet. In his resignation letter, Purnell wrote: "I now believe your continued leadership makes a Conservative victory more, not less likely. . . . I am therefore calling on you to stand aside to give our party a fighting chance of winning." In the hours that followed, Brown's allies sought to ensure that no other ministers followed Purnell's example. None did, though Brown paid a price for securing the loyalty of two senior ministers. He had wished to switch Chancellor of the Exchequer Alistair Darling and Foreign Secretary David Miliband to new ministerial posts, but they refused to move. As Brown felt that he could not dismiss them, he left them where they were, and his authority was visibly weakened.

With a general election to be held no later than June 2010, one telling sign of the tide flowing away from Labour came with the decision of *The Sun*, the U.K.'s biggest-selling daily newspaper, to switch from Labour, which it had supported in the three previous general elections, to the Conservatives. *The Sun* announced its decision on September 29, just hours after Brown delivered his main speech to Labour's annual party conference. Media coverage of *The Sun*'s decision overshadowed that of Brown's speech, to the consternation of government ministers.

The opposition Conservative Party consolidated its lead over Labour and came to be seen by many as a government-in-waiting. At the annual conference in October, Conservative members sought to represent a moderate and responsible party that would neither return to the free-market ideology of the 1980s nor take risks with public finances. George Osborne (*see* BIOGRAPHIES), the party's shadow chancellor (finance spokesman), made it clear in a speech on October 6 that tough decisions would have to be made on both taxes and public spending. With growing public acceptance of the need for such measures, the Conservative strategy proved more popular than it might have been in a more clement economic climate.

British politicians as a whole suffered a sharp decline in public esteem during 2009 as allegations were made that

many members of both the House of Commons and the Lords had claimed expenses to which they were not entitled. Starting on May 8, after the *Daily Telegraph* newspaper had bought a pirated copy of a computer disk containing previously secret information, the paper devoted much of its news coverage for some weeks to disclosing the details of MPs' expense claims. This showed how many MPs had exploited the expenses system to use public money to make tax-free profits on property dealings and to fund spending that had nothing to do with their parliamentary duties. Examples included being reimbursed for building a duck house, maintaining a tennis court, and cleaning out a moat.

The disclosures led to resignations both of government ministers and of Conservative "shadow" ministers. A number of MPs announced that they would stand down at the next general election rather than risk the wrath of their local voters. The biggest casualty of the scandal was the speaker (or chairman) of the Commons, Michael Martin. He was criticized by some for not fighting what appeared to be an entrenched cavalier attitude toward expenses and by others for not defending MPs vigorously enough. On May 19 he became the first speaker in three centuries to be forced to resign his post; he was succeeded on June 22 by Conservative MP John Bercow.

Prime Minister Brown asked Sir Thomas Legg, a retired civil servant, to conduct an independent audit of all expense claims since 2004. In mid-October Legg wrote to each MP with his findings. It was reported that up to 500 out of a total of 646 MPs were asked to pay back some of their expenses, including Brown and Conservative Party leader David Cameron. Most MPs agreed to abide by Legg's request, though some challenged his findings, arguing that he was effectively changing the rules retrospectively and was challenging expense claims that were within the accepted rules at the time that they were made. Public opinion polls, however, showed that most voters thought most MPs were dishonestly claiming money to which they were not entitled. New rules were agreed on that both restricted what MPs could claim and required that all expense claims be published online, but these reforms did little to quell public suspicion.

Brown was also forced onto the defense by demands that Nepalese Gurkha soldiers who had fought for the

British army be allowed to retire in Britain. Government proposals to offer very limited immigration rights were rejected by the Commons on April 29. Three weeks later, following an effective campaign by actress Joanna Lumley (see BIOGRAPHIES), the government announced that it would, after all, allow retired Gurkha soldiers to retire in the U.K.

In Scotland the minority Scottish National Party government ran into trouble on January 28 when the Scottish Parliament rejected its budget. Scotland's first minister, Alex Salmond, had to make concessions to other parties to secure the passage of the budget on February 4. In Wales, Rhodri Morgan announced on October 1, two days after his 70th birthday, that he would step down after almost 10 years as the Welsh first minister. The Welsh Labour Party elected Carwyn Jones as his successor. He took over as first minister on December 10.

On October 1 the U.K.'s Supreme Court came into being. Previously the highest court in the land had been the Appellate Committee of the House of Lords, where panels of Law Lords would meet to decide cases referred by the Court of Appeal. Following growing calls to keep the legislative and judicial institutions completely separate, the Supreme Court was formally established.

British actress and social activist Joanna Lumley awaits the government's decision on whether all Gurkha soldiers who fought for the British army will be granted the right to settle in the U.K. The final ruling, in favour of the Gurkhas, came in May.



Lewis Whyld—PA Wire/AP

Economic Affairs. Amid the global recession, the U.K.'s GDP fell by 2.5% in the first quarter of 2009. The declines were gentler after that, although the announcement of a third-quarter slide of 0.2%, the sixth quarterly decline in GDP in succession, meant that the recession was the longest since quarterly GDP data were first collected in 1955. By the final months of the year, there were signs that the trough of the recession had been reached, with output 6% below its early-2008 peak, and a tentative recovery had begun. Despite signs of economic recovery, however—including a steady rise in property values from the spring—unemployment continued to rise, reaching 2.5 million, or 8% of the labour force, by the end of the year, compared with 1.9 million at the end of 2008.

The Bank of England (BOE), under the guidance of its governor, Mervyn King (see BIOGRAPHIES), acted aggressively in the early months of the year to revive demand. Its benchmark interest rate started the year at 2%; by March it had fallen to just 0.5%, the lowest in the BOE's 300-year history. In addition, the BOE embarked on a program of "quantitative easing," to inject more money into the economy by buying bonds from companies and banks. By the end of the year, the BOE had injected £200 billion (about \$320 billion) into the money supply.

One reason why monetary policy was loosened so dramatically was that there was little room for further fiscal expansion. Government measures that had been announced in 2008 to support the economy, combined with rapidly falling tax revenues, led the chancellor of the Exchequer to forecast in his budget speech on April 22 that government borrowing in fiscal 2009–10 was likely to reach £175 billion (about \$260 billion), or 12.4% of GDP, the highest peacetime figure for the U.K. in recent decades. This meant that Darling could not stimulate the economy further through tax cuts or higher spending. Indeed, he gave advance warning of future tax increases, intended to take effect as the economy recovered. He announced that the top rate of income tax would rise in 2010 to 50% for those earning more than £150,000 (about \$220,000) a year and that personal tax allowances for those earning more than £100,000 a year (about \$150,000) would be withdrawn.

On April 2 Brown hosted a summit of the Group of 20 (G-20) major advanced and emerging countries in London to

Matt Dunham/AP



Protesters take part in an antiwar demonstration in London on October 24.

discuss the global recession. He was publicly praised by U.S. Pres. Barack Obama for his role since September 2008 in leading the international response to the financial crisis. At the summit the G-20 members agreed to inject \$1.1 trillion into the global economy, including an additional \$500 billion for less-developed countries.

On January 19 Lloyds TSB completed its acquisition of the Halifax Bank of Scotland Group, to form the Lloyds Banking Group (LBG). The new bank remained vulnerable, however, like other major U.K. banks, which continued to require government support in the form of equity stakes and the insurance of "toxic" loans. The banks' plight was underlined by the Royal Bank of Scotland's (RBS's) announcement on February 26 of an annual loss of £24.1 billion (about \$35 billion), the biggest loss in U.K. company history. Toward the end of the year, the government owned 70% of RBS and 43.5% of LBG. In response to a European Commission ruling on the conditions under which state aid was permitted, the government announced on November 3 that both RBS and LBG would be required to sell off some of their mortgage, insurance, and retail banking subsidiaries to smaller banks or to companies new to banking.

Foreign Affairs. The U.K.'s military involvement in Iraq ended in 2009. On April 30 the U.K. base in Basra province was formally handed over to U.S. forces; the final British troops left Iraq at the end of July. U.K. forces—which at their peak in 2003 numbered 46,000—suffered 179 fatalities during the six years in which they served in Iraq. Brown on June 15 announced that a full, inde-

pendent inquiry would be held into Britain's involvement in Iraq to find out what lessons could be learned. Brown said that the inquiry, to be chaired by Sir John Chilcot, a retired civil servant, would be conducted in private, but the prime minister subsequently yielded to pressure, not least from Chilcot, to allow that, where possible, hearings could be conducted in public.

As U.K. forces were leaving Iraq, they were arriving in Afghanistan, and by October they numbered 9,500 there, mainly in Helmand province. Amid accusations that British troops lacked some of the equipment that they needed to operate effectively, U.K. casualties increased sharply during the year. In 2009 U.K. forces suffered 108 fatalities, up sharply from 51 in 2008 and 42 in 2007, to bring the total since 2001 to 245. On October 14 Brown said that British troops needed to stay in Afghanistan "to protect British streets" from al-Qaeda. Public support for the war fell as the death toll among U.K. troops increased, and a survey in November by market-research company YouGov found that more than 70% of the British public wanted the troops brought home within 12 months.

On August 20 Kenny MacAskill, Scotland's justice minister, ordered the release of 'Abd al-Basit al-Megrahi from jail on compassionate grounds. Megrahi, a Libyan, was serving a life sentence for helping to plant a bomb on Pan Am Flight 103, which in 1988 crashed into the town of Lockerbie, Scot., killing 270 people, including 179 Americans. At the time of his release, Megrahi, who had been diagnosed with terminal cancer, was appealing his conviction. Megrahi returned to a hero's welcome

in Libya, which had reportedly negotiated his release with the Scottish authorities. The event led to some friction between the U.K. and the U.S., which publicly condemned Megrahi's release.

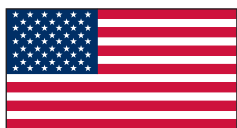
In October, Brown and Foreign Secretary Miliband proposed that former prime minister Tony Blair be selected as the president of the European Council, a new post established by the Lisbon Treaty, which came into effect on December 1. The post eventually went to Belgian Prime Minister Herman Van Rompuy, while the U.K.'s Baroness Ashton was named high representative for foreign affairs and security policy. (See BIOGRAPHIES.)

Northern Ireland. The 11-year-old Good Friday Agreement remained in force in Northern Ireland, despite occasional armed attacks by fringe military groups. On March 7 two British troops were shot dead by members of the Real Irish Republican Army outside a British army base in the province. One of the hard-line republican groups, the Irish National Liberation Army (INLA), announced on October 11 that it regarded the war as over and would henceforth use only peaceful means to pursue its goals. The INLA had declared a ceasefire in 1998 but was subsequently accused of having involvement in a number of serious crimes.

Meanwhile, First Minister Peter Robinson, of the Democratic Unionist Party, and Martin McGuinness, his Sinn Féin deputy first minister and erstwhile bitter enemy, continued to provide the province with political leadership, jointly lobbying the European Union and the U.S. (where they met President Obama in March) for extra financial help and investment. The main source of tension between the two men in 2009 concerned policing. Under the Good Friday Agreement, ultimate control over policing in the province would be handed over to the Northern Ireland Executive. Throughout 2009 McGuinness urged that the transfer take place as swiftly as possible. Robinson was more cautious, ostensibly because he feared that the U.K. would not provide enough funding for the police service but also because he feared that his party would lose ground to rival Protestant parties if Sinn Féin was seen to have too much influence over the new police service. On October 21 Brown announced additional funding. Full agreement on a transfer of powers, however, had not been achieved by the end of 2009.

(PETER KELLNER)

UNITED STATES



Area: 9,522,055 sq km (3,676,486 sq mi), including 204,083 sq km of inland water and 156,049 sq km of the Great Lakes that lie within U.S. boundaries but excluding 109,362 sq km of coastal water

Population (2009 est.): 307,226,000

Capital: Washington, D.C.

Head of state and government: Presidents George W. Bush and, from January 20, Barack Obama

In 2009, after decades of international economic, military, and political leadership, the United States faced serious limits on its ability to control world affairs. Years of fiscal excess exacerbated the effects of a severe global recession, reducing U.S. influence abroad and allowing less-developed countries, including China, to assume—at least temporarily—the U.S.'s historical role as the world's engine of economic growth. A new president, Barack Obama, started the year with high expectations and ended it with what appeared to be a significant legislative victory, but he also learned the limits of power in a politically divided country.

The Economy. The U.S. struggled through the year under the burden of its most severe economic downturn since the Great Depression. Joined by other major governments, the U.S. adopted unprecedented stimulus measures aimed at saving jobs and restoring growth, fully utilizing the borrowing and spending powers of the U.S. Department of the Treasury and the monetary and credit-creation devices of the central banking system. By year's end the intervention appeared to have stopped the economic decline, but economists worried that recovery would be slow by historical standards and hindered by excessive government intervention and borrowing.

The U.S. recession officially started in December 2007, but the slump accelerated as businesses reacted to major financial market turmoil the following year and a resulting reduction in credit. GDP contracted 6.3% in late 2008 and 5.7% in early 2009—the most dismal two quarters for the U.S. economy in more than 60 years. In mid-February, Obama signed a \$787 billion stimulus spending measure. Initially, financial

markets reacted negatively, with stock prices sinking to 1997 levels by early March.

As more cracks in the economy appeared, the federal government responded with increasing activism. The Treasury Department was forced to extend a total of \$80 billion to two ailing automobile manufacturers, taking 8% ownership of Chrysler and a 61% stake in General Motors and forcing both companies into temporary bankruptcy. Insurance giant AIG, which reinsured numerous mortgage securities that went sour, needed even more help, taking \$170 billion in government funds to remain solvent after staggering losses. By late spring, aided by loans authorized under the 2008 Troubled Assets Relief Program (TARP) emergency legislation, financial institutions had begun to stabilize. Treasury Secretary Timothy Geithner (*see* BIOGRAPHIES) established “stress tests” to make certain remaining banks were adequately capitalized and accurately projecting their losses. Even so, 140 banks failed during 2009.

The U.S. central bank kept interest rates at historic lows to encourage borrowing and economic activity. The target rate for federal funds was pegged at zero to 0.25% for the entire year, which helped to keep rates for business loans and mortgages down. The Federal Reserve pumped well over \$1 trillion into the economy by purchasing Treasury bonds and mortgage instruments, effectively printing new money to keep interest rates at minimal levels.

As 2009 began, unemployment stood at 7.2% and was climbing. Obama administration officials warned that unless the stimulus bill was approved, unemployment might climb as high as 9%. Even with massive federal intervention, however, job losses continued, with unemployment hitting 10.2% in October—the highest jobless rate in more than a quarter of a century—before easing slightly to 10% in December.

After the stock market's March lows, the Standard & Poor's index of 500 large-company stocks (S&P 500) began a solid upward drive that lasted through the remainder of 2009, creating gains of almost 25% for the year. The upswing erased most of the stock market losses of 2008, which averaged some 40%, but also produced major inequities. By year's end, the seven largest banks that had received TARP funding had repaid the government with dividends and interest, in part to escape government supervision, including caps on executive pay. This meant that some financial industry executives were receiving outsized bonuses even as jobs continued to disappear across the country.

GDP finally turned positive in the third quarter, gaining 2.2% and raising hopes that the country was emerging from recession. Some economists, however, noted that the economic growth was made possible only by temporary federal stimulus programs, including an \$8,000 tax credit for first-time home buyers and a \$3 billion “cash for clunkers” program designed to remove gas-

Barack Obama—with his wife, Michelle, watching—is sworn in as the 44th president of the United States on January 20.



MSgt Cecilio Ricardo, U.S. Air Force/U.S. Department of Defense

Mark Lennihan/AP

guzzling autos from the road and replace them with new, more fuel-efficient ones.

Inflation virtually disappeared during the recession. For the first time in 35 years, Social Security and other pensioners received no inflation adjustment because the consumer price index for the fiscal year ended September 30 actually dropped. Even so, energy and food prices began climbing again late in the year, signaling an imminent return to the modest inflation of recent years.

The recession erased most remaining traces of fiscal responsibility in Washington. Stimulative policies helped balloon the U.S. federal deficit to \$1.42 trillion for the fiscal year, three times the previous record set a year earlier. A similar deficit was forecast for fiscal year 2010, part of a deficit projection of \$9 trillion for the next decade. Fiscal imbalance, in addition to low interest rates, helped depress the value of the U.S. dollar against foreign currencies for much of the year and prompted frequent grumbling from countries that held U.S. Treasury debt.

Domestic Policy. Like his predecessor, Obama entered office vowing to reduce partisanship in Washington, but he made little progress in his first year. With Democrats holding substantial majorities in both houses of Congress, Obama allowed congressional leaders to shape important legislation. Republicans, largely excluded from substantive negotiations on key bills, were able to slow progress on several of Obama's legislative priorities.

In the president's first month in office, Democrats pushed three major bills through Congress with minimal or no Republican support. The first, the Lilly Ledbetter Fair Pay Act, overturned a 2007 U.S. Supreme Court decision and extended the time frame in which pay discrimination plaintiffs are able to file a complaint. The second bill was a reauthorization and expansion of the State Children's Health Insurance Program, a measure that had been vetoed twice by former president George W. Bush as fiscally irresponsible. The House of Representatives passed a third bill—the \$787 billion stimulus spending measure—without any Republican votes. The bill was strongly tilted toward projects supported by Democratic Party constituencies, including renewable energy incentives



Amid the most severe economic downturn in the U.S. since the Great Depression, protesters gather outside the Bank of America Tower in New York City in April.

and union construction jobs. The partisan actions helped solidify the Republican caucus, particularly in the Senate, where 60 votes were effectively required for most legislative action.

The president was able to accomplish numerous changes through executive order in early 2009. In January Obama rescinded the "Mexico City policy"—which had been reinstated by Bush in 2001—to allow the resumption of U.S. foreign aid funding for international family planning groups that facilitated abortion services or abortion counseling. In March he removed restrictions on federal funding for stem cell research that had been established by the Bush administration eight years earlier.

Obama's overall job-approval rating, as measured by public opinion polls, topped 65% in early 2009 but dropped steadily to around 50% in late December. His rating was weighed down by rising unemployment, perceived federal overreaching, and hard decisions that he had to make on his legislative and policy agendas. Obama was able to secure an uneventful Senate confirmation of his first Supreme Court nominee, Sonia Sotomayor (see BIOGRAPHIES), by a vote of 68–31 in August. Later that month, however, when Obama renominated Ben Bernanke for a second term as chairman of the Federal Reserve Board (Fed), the nomination was quickly bogged down amid congressional de-

mands for more transparency and added control over the Fed. Bernanke had not been confirmed by year's end.

In June, declaring that the subprime mortgage crisis had been caused by "insufficient regulation," Obama proposed a sweeping increase in federal authority over the country's financial institutions. By December the House had approved—again without any Republican votes—legislation that cracked down on hedge funds and credit-rating agencies, established a new financial consumer watchdog agency, and increased congressional scrutiny of Fed monetary policy. The Senate was set to take up the legislation in 2010.

Later in June the House approved a controversial Obama administration energy and environmental protection bill on a largely party-line vote. The "cap-and-trade" legislation, which would establish a system of buying and selling pollution permits

to meet emissions limits, aimed to slash greenhouse-gas emissions to 17% below 2005 levels by 2020. Opponents complained that the legislation would hamstring American industry and cause major increases in taxes and the cost of American goods. The Senate failed to take up the legislation during 2009 as opposition mounted, and several analysts declared the cap-and-trade concept dead.

At year's end Obama obtained a major victory on his top domestic policy priority when both chambers of Congress approved national health care reform bills after contentious legislative bargaining. The two versions were to be reconciled in early 2010. Both bills would extend access to health insurance to an additional 30 million Americans, prohibit denial of coverage by insurers, and require most Americans to obtain insurance or face financial penalties. The bills would pay for expanded care in part through tax increases on higher-income earners and reductions in payments to providers of Medicare and Medicaid services.

Although Democrats were optimistic that Obama would eventually get a final bill to sign, serious problems remained. Critics complained that the legislation would raise revenues quickly but delay benefits and called into question its estimated \$900 billion price tag over 10 years. Republicans labeled the measure

Roger L. Wollenberg—UPI/Landov



Opponents of proposed health care reform legislation rally on Capitol Hill in Washington, D.C., on November 5.

a government takeover of health care, and no GOP member voted for either bill. The Senate dropped a provision setting up a government-run insurance option to compete with private firms, angering liberal Democrats, and also watered down a strict House measure prohibiting public funds from being spent on abortion services. At year's end, support for the legislation dropped markedly amid allegations that some Senate votes had been effectively bought via special-interest provisions. Even so, the apparent breakthrough on health care provided an upbeat ending to a difficult first year for the new administration.

War and National Security. President Obama moved quickly in departing from Bush administration efforts to combat Islamist terrorism and extremism. Part of the effort was semantic; the new administration stopped using terminology such as "war on terrorism" while narrowing the focus to combating al-Qaeda and its allies. Only days after his inauguration, Obama signed executive orders that banned the use of harsh interrogation techniques on captured terrorist suspects, abolished secret CIA overseas prisons, and called for closing the U.S. military detention facility at Guantánamo Bay, Cuba, within a year.

The Guantánamo deadline was especially controversial and proved overly ambitious. It implied rejection of Bush-backed military tribunals conducted outside U.S. soil, suggesting instead that the 242 remaining detainees held

at Guantánamo as "enemy combatants" would be either released, transferred to other countries, or tried in U.S. civilian courts. Few countries were interested in taking high-risk prisoners, however; in addition, federal trials of detainees posed some enormous procedural and security problems, and terrorism recidivism was high among released prisoners. In May the administration altered its course and announced that it would retain the use of military tribunals, albeit with new procedures that would provide additional defendant rights.

Attorney General Eric Holder declared in November that Khalid Sheikh Mohammed and four

other Guantánamo detainees would stand trial in federal court in New York City on charges stemming from the Sept. 11, 2001, attacks. This decision meant that the defendants, all of whom had been captured abroad, would receive most of the constitutional protections and process rights afforded U.S. citizens. Holder defended the venue as appropriate because most September 11 victims were civilians and the attacks occurred on U.S. soil. The one-year deadline for closing the Guantánamo facility was abandoned. Administration officials explored the possibility of confining most of the inmates at an unused state prison in rural northwestern Illinois, and federal acquisition of the prison was under way at year's end. Another idea—transferring numerous prisoners to Yemen—was widely discredited after concerns were raised over al-Qaeda activity in that country. Yemeni extremists were linked to the perpetrator of an attempted bombing of an airliner bound for Detroit on Christmas Day. The suspect in a mass shooting at the U.S. Army base in Ft. Hood, Texas, in November was also linked to a radical Islamist cleric in Yemen.

The military focus shifted from Iraq to Afghanistan during the year. In his presidential campaign, Obama had criticized U.S. involvement in Iraq and suggested that Afghanistan pacification efforts were wrongly shortchanged as a result. As security conditions in Iraq continued to improve, the new administration began slowly removing U.S.

military personnel, with an announced goal of ending U.S. combat operations by mid-2010 and exiting the country entirely by late 2011. The military outlook in Afghanistan deteriorated rapidly, however, as Taliban insurgents regrouped and stepped up attacks on U.S. and NATO forces.

In February Obama announced plans to send 17,000 additional U.S. troops to Afghanistan, bringing the total troop commitment to 68,000. He also ordered a comprehensive review of the U.S. mission in Afghanistan. His military appointees concluded their review in August and asked for the deployment of up to 40,000 more troops. The request came as evidence of fraud nearly overturned the Afghan national election. At the same time, U.S. troop fatalities in the country were mounting (they doubled in 2009 compared with the previous year), and antiwar activists were raising the spectre of another Vietnam-like disaster for the U.S. military. Following three months of internal deliberations, in what was likely the most important decision of his first year in office, Obama announced that he would send 30,000 fresh U.S. troops to Afghanistan in an attempt to blunt the insurgency and that he would use his best efforts to recruit another 10,000 troops from reluctant NATO allies.

With the decision to send more troops, however, Obama also called for a drawdown of combat forces to begin after 18 months, leading many conservatives to fault the commitment as unserious. Left-wing critics complained that despite superficial changes, Obama had adopted and even escalated most war and national security policies of his predecessor. Obama defended his path as he accepted the Nobel Peace Prize in Oslo in December. "Evil does exist in the world," he said. "There will be times when nations—acting individually or in concert—will find the use of force not only necessary but morally justified." (See NOBEL PRIZES.)

Foreign Policy. The new administration worked to project a more cooperative and tolerant image of the U.S. abroad during 2009, acknowledging past errors and seeking to repair strained U.S. diplomatic relationships in many parts of the world. In April Obama sought a "fresh start" with Russia, telling Russian Pres. Dmitry Medvedev that "the relationship between our two countries has been allowed to drift." In June Obama delivered a long-promised address in Cairo in which he pledged "a new beginning between the United States and

Muslims.” He told an audience of Latin American leaders in Trinidad and Tobago that if “we occasionally confess to having strayed from our values and our ideals, that strengthens our hand,” and in a speech in Strasbourg, France, he acknowledged that “there have been times when America has shown arrogance and been dismissive, even derisive.”

This diplomatic outreach was well received internationally, but tangible results on specific major international controversies were almost nonexistent during the year. Some world leaders applauded the approach as helpful toward restoring the vitality of U.S. diplomacy, while critics suggested that the U.S. was instead pandering, projecting weakness, and abandoning a leadership role that had provided stability in an uncertain world.

Progress in the U.S.’s relationship with Russia was modest. Even after U.S. Vice Pres. Joe Biden declared that Russia was a nation in decline, Russia allowed the U.S. to use its airspace to resupply allied military forces in Afghanistan and promised a new nuclear arms reduction agreement by year’s end. In September, in a major concession, the U.S. dramatically abandoned elements of its long-standing European missile shield project—including planned missile interceptors in Poland and a radar site in the Czech Republic. The Strategic Arms Reduction Talks I (START I) treaty was allowed to expire in December without a replacement, and Russia pressed for additional concessions by threatening to restart development of new offensive weaponry.

Efforts to thwart the nuclear ambitions of North Korea and Iran again went nowhere in 2009. The U.S. offered several initiatives to entice North Korea into abandoning its nuclear weapons research, including bilateral negotiations, but the North Korean regime continued to test missiles and nuclear weapons and staved off ongoing international pressure to shutter its nuclear facilities.

Despite active U.S. diplomacy, both public and private, Iran also evaded proposals to reign in its nuclear development. Obama drew widespread criticism from opponents who thought he issued only a mild condemnation of an Iranian government crackdown on pro-democracy dissidents following a disputed election in June. Obama also downplayed the belated discovery of a new Iranian fuel-reprocessing facility in Qom. In October Iranian negotiators in Geneva appeared to agree to a U.S.-backed proposal to send most of Iran’s

stockpile of low-enriched uranium to Russia for reprocessing—a plan that would have delayed any Iranian nuclear weapon by at least a year. Iran’s government later reneged on the proposal.

Obama’s open hand to Latin America did not immediately produce results. At the meeting in Trinidad and Tobago, Obama was photographed warmly greeting Venezuelan Pres. Hugo Chávez, but the effort stilled Chávez’s anti-American rhetoric only briefly. Venezuela later announced that it was cooperating on nuclear development with Iran. The U.S. State Department sided with a Chávez ally, Honduran Pres. Manuel Zelaya, after he was overthrown in June and deported to Costa Rica. The U.S. pressured Honduras to restore Zelaya to power, suspending military and development aid to the country and canceling U.S. visas for Honduran officials. The interim Honduran government refused to accede, however, and instead proceeded to new elections in November. Although the U.S. ultimately urged recognition of the balloting results, which removed Zelaya’s party from control, the development was widely viewed as a sign of declining U.S. influence in Latin America.

As the Chinese economy grew rapidly out of its 2008 downturn and the U.S. economy struggled, U.S.-China relations sustained awkward moments. China was a significant holder of U.S. Treasury bonds, and Beijing officials repeatedly warned against excessive U.S. borrowing. An influential Chinese central banker published a paper in March that predicted that the U.S. dollar would eventually be replaced as the world’s reserve currency. Obama visited China in November and was given a decidedly mixed reception, which included a joint “press conference” (at which no questions were allowed) and a meeting with Chinese students that authorities prevented from being televised.

In December China and the U.S.—the world’s largest emitters of carbon dioxide—were central players at the UN Climate Change Conference in Copenhagen. Both countries made demands of each other while declining to make serious concessions. As a result, aspirational goals but no enforceable actions defined the outcome. Throughout the event, Chinese officials appeared to avoid serious negotiations with their U.S. counterparts, and Obama expressed chagrin when he appeared at a Chinese meeting with Indian, Brazilian, and South African officials to which he had not been invited. (DAVID C. BECKWITH)

DEVELOPMENTS IN THE STATES 2009

Fiscal troubles created by a long-running national economic recession dominated the priorities of U.S. state governments in 2009. Almost all states were constitutionally required to balance their budgets, and, facing major deficit projections, officials took drastic measures to reduce costs and increase revenue. The fiscal crisis, termed the most severe for states since the Great Depression, discouraged creation of new legislative programs, prompted major tax increases during economic hard times, and caused unusual tensions in the symbiotic relationship between states and the federal government.

Several lower-tax states with energy-based economies were able to weather the downturn relatively easily and used federal stimulus funds to avoid significant trims to state services. In states with more costly government services, however, such as California, New York, and Michigan, the federal aid failed to cover their budget gaps, which forced lawmakers to cut programs and increase taxes and fees. While the economy showed signs of recovery by midyear, state finances were slow to stabilize. In the face of declining tax revenues and rising expenses from unemployment, Medicaid, and other so-

A protester chants during a demonstration staged in July by health care workers and others outside the gated entrance to the private residential community in Los Angeles where California Gov. Arnold Schwarzenegger lives.



Reed Saxon/AP

cial payments, numerous states ended the year facing the possibility of additional severe budget deficits in 2010 without the help of further federal assistance. All 50 states held regular legislative sessions during the year; and 15 staged one or more special sessions, often to deal with budget matters.

Structures, Powers. Under fiscal pressure, some state governments reformed services and operations, often by consolidating functions, reducing hours, and increasing efficiency. Utah's 2008 enactment of a four-day workweek for some agencies was closely watched. Maine's governor issued a controversial economy measure to consolidate school districts, and the state's voters later refused to overturn it. California faced the country's most severe financial problems, and the state chief justice criticized the California initiative and referendum process as having produced haphazard and counterproductive policies over the years. Voters in Maine and Washington rejected "taxpayer bill of rights" measures designed to limit government growth.

In November, benefiting from deteriorating public confidence in government officials, Republicans made gains in limited state elections. In New Jersey and Virginia the GOP wrested away governorships previously held by Democrats; a Republican also took over as governor in Arizona after Pres. Barack Obama named Gov. Janet Napolitano to his cabinet. Republicans picked up seats in legislative elections in Virginia and New Jersey and in a handful of special elections in four other states. For 2010, 26 governorships would be held by Democrats and 24 by Republicans. Democrats owned a more comfortable advantage in state legislatures, enjoying two-house control of 27 states, while Republicans held a majority in both chambers of 14 states. In 8 states the legislatures were split or tied, and Nebraska had a non-partisan unicameral legislature.

Federalism. The year saw historic developments in state-federal relations. As state budgets deteriorated rapidly in the face of national economic conditions, the U.S. Congress rushed billions of dollars in aid to state treasuries to maintain services and control deficits. In many cases, however, this aid came with strings attached, imposing federal policies on unenthusiastic state governments and, in some instances, countering state efforts to reduce social services spending. For example, one federal stimulus program to assist state unemployment insurance efforts required

that part-time workers be covered; Republican governors in Texas, South Carolina, Alabama, Louisiana, Alaska, and Mississippi initially rejected those funds. Legislatures in South Carolina and Alaska overturned gubernatorial decisions and accepted almost all federal assistance offered.

Federal efforts to improve homeland security prompted another face-off over the 2005 Real ID Act, which required states to tighten standards on the issuance of state driver's licenses as well as identification cards. Washington warned that residents of states unable to comply by the December 31 deadline could not use existing licenses as identification to board airplanes or enter federal buildings. With only a small minority of states on track to meet the deadline, the government granted an extension until May 2011.

Finances. The fiscal crisis preoccupied state governments throughout the year and led to a second consecutive year of reduced general fund spending. Revenue from all major state tax sources diminished by more than 10% as the national economy languished, while required expenditures for unemployment, health care, and other programs rose dramatically. Stimulus funds were used to shore up state expenditures for social services, infrastructure programs, public schools, and general economic stabilization. The aid also allowed a few, mostly smaller, states to balance their budgets without dramatic legislative adjustments, although 13 states drained their rainy-day funds in order to resolve budget problems.

To reduce costs, 22 states laid off government workers and 23 made across-the-board reductions in agency budgets. In some cases interest groups were able to stop planned cuts via lawsuits. Colorado, Kansas, Michigan, North Carolina, and Washington were among states closing prisons. Arizona and California resorted to selling public buildings to raise funds and then leasing them back. Even though the federal stimulus program promised \$100 billion to shore up state education—usually among the last items cut in any downturn—Idaho, Kansas, Utah, Nevada, and Washington trimmed spending on public schools, and Florida, Kansas, and Washington reduced higher-education support.

The crisis overcame traditional legislative reluctance to raise taxes during economic downturns. In revenue actions 29 states raised taxes or fees to generate \$23.9 billion in new revenue,

the largest increase on record. Twelve states raised sales taxes, producing \$6.1 billion in additional net revenue. Twelve states also increased individual income taxes. Eight states increased the rate for their highest-income earners. California (\$4.3 billion) and New York (\$4.1 billion) accounted for the lion's share of \$10.7 billion in added net income taxes. Three states boosted motor-fuel levies, while 17 states increased taxes on tobacco and alcohol. Increased fees for licenses and services were enacted in 19 states, producing \$5.3 billion in additional revenue, including \$2 billion in New York alone.

At year's end the economic downturn showed signs of easing, but social service expenditures in most states continued to climb as state revenue lagged. Some state officials began lobbying Washington for another round of aid even while they prepared for a decline in overall state spending for an unprecedented third consecutive year.

Social Issues. Despite setbacks, legal recognition of same-sex marriage expanded significantly during the year. Vermont, New Hampshire, and the District of Columbia became the first jurisdictions to sanction gay marriage through legislative process. In November, Maine voters rescinded a gay-marriage law passed by the legislature earlier in the year. The Iowa Supreme Court declared that state's ban on same-sex marriages to be unconstitutional.

Nevada authorized domestic partnerships, and the state of Washington strengthened its domestic partnership laws. The California Supreme Court affirmed the validity of Proposition 8, a 2008 initiative that overturned the high court's extension of full same-sex marriage rights, but the ruling also validated 18,000 gay marriages performed before the vote was taken. By year's end 5 states and the District of Columbia fully sanctioned same-sex marriage, and 7 more provided for domestic partnerships or civil unions; 30 states, including California, had constitutional provisions banning same-sex marriage.

Arkansas became the 15th state to ban late-term "partial-birth" abortions. Kansas, Ohio, and North Dakota required medical clinics to post notices advising women that they could not be coerced into having an abortion. Georgia became the first state to provide for adoption of human embryos; critics said that the law was a back-door attempt to extend legal rights to embryos. Utah joined eight states with "fetal pain" legislation; the law required doc-

tors to offer anesthesia for a fetus before abortions performed 20 or more weeks after conception.

Under recession-induced pressure to raise additional revenue, states continued to expand legalized gaming. In November, Ohio voters approved casinos in four cities after having rejected four similar ballot proposals. Kansas became the first jurisdiction to provide for state-owned casinos, although actual gambling operations at its initial Dodge City site were to be run by a private firm under a lease arrangement.

Law, Ethics. Reversing a recent trend, the imposition of capital punishment ticked up during 2009. Eleven states executed a total of 52 men; 24 of those were in a single state, Texas. New Mexico became the second state in three years to repeal the death penalty, and Maryland narrowed the criteria for its imposition. The governor of Texas became embroiled in a controversy over whether he had allowed an innocent man to be executed for arson in 2004. Objections to the death penalty as cruel and unusual punishment continued. Nebraska became the last among 35 death-penalty states to authorize execution by lethal injection, and Ohio became the first to authorize a slow-acting single-dose intravenous anesthetic to replace the three-injection method used elsewhere across the country.

The year produced unprecedented ethics drama involving ranking state officials. Following his indictment on federal corruption charges, including an alleged attempt to sell Pres. Barack Obama's former Senate seat, Illinois Gov. Rod Blagojevich was impeached and removed from office by the Illinois legislature. He was only the eighth governor in U.S. history to have been ousted after impeachment.

Alaska Gov. Sarah Palin, the 2008 Republican vice presidential candidate, abruptly resigned her office at midyear, complaining of "frivolous" ethics investigations by the state legislature. At year's end South Carolina lawmakers voted not to impeach Gov. Mark Sanford, who had been under investigation after having confessed to using state funds to pursue an extramarital affair. New Mexico Gov. Bill Richardson withdrew as the Obama administration's candidate to head the U.S. Commerce Department owing to an ongoing investigation into New Mexico state contracting practices. Former New York Senate president Joseph L. Bruno was convicted on fraud and corruption charges involving the acceptance of

money from firms doing business with the state.

Three powerful speakers of state house chambers left office early under fire. In Florida, Ray Sansom quit after accusations that he had funneled funds to a college that later hired him; he was later indicted by a state grand jury. In Massachusetts, Salvatore DiMasi resigned amid allegations that he had helped solicit kickbacks from a state contractor. He was also later indicted on federal fraud and extortion charges. In Georgia, Glenn Richardson attempted suicide and later resigned amid rumours of his having had an extramarital affair with a lobbyist.

Health, Welfare. The U.S. Congress debated a sweeping reform of national health care in late 2009. Most congressional bills envisioned a major expansion of Medicaid, a health insurance program for low-income persons that is jointly funded by federal and state governments and run by states. State officials, however, feared they would be burdened with stepped-up obligations and no method of paying for them. Some Democratic proposals also included a "public option"—that is, a government health plan that would compete with private insurers. To meet objections that the provision of a public option would lead to government takeover of health care, bill writers explored turning over numerous details to individual states or allowing individual states to opt out. These controver-

sies helped slow consideration of health care reform. The House and the Senate passed their bills in early November and late December, respectively.

Medicaid expenditures soared; to help states defray added costs, the federal stimulus bill contained \$87 billion in funds for a two-year period ending in 2011. The transfers, however, came with stipulations that states had to retain the eligibility and application processes they had in place as of mid-2008. That meant that Arizona, California, Florida, Rhode Island, and South Carolina had to rescind stricter eligibility requirements they had enacted since mid-2008. In yet another federalism controversy, as H1N1 (swine) flu threatened the U.S., states were given responsibility for distributing flu vaccine even as health department employees were being furloughed during budget cutting. One result was an ominous shortfall in vaccine distribution, but the most severe predictions of a swine flu epidemic failed to materialize by year's end. (See also Special Report on page 194.)

Reversing a controversial policy of the George W. Bush administration, the Obama administration announced it would no longer pursue criminal cases against users of medical marijuana who followed state laws. Fourteen states allowed the use of marijuana prescribed by medical personnel. In November balloting, Maine voters approved an expansion of the state's medical marijuana program. (DAVID C. BECKWITH)

Madeline Martinez, executive director of the Oregon chapter of the National Organization for the Reform of Marijuana Laws (NORML), talks with a patron at the Cannabis Café in Portland; the café served those who held Oregon medical marijuana cards.



Rick Bowmer/AP

URUGUAY



Area: 177,879 sq km (68,679 sq mi)

Population (2009 est.): 3,361,000

Capital: Montevideo

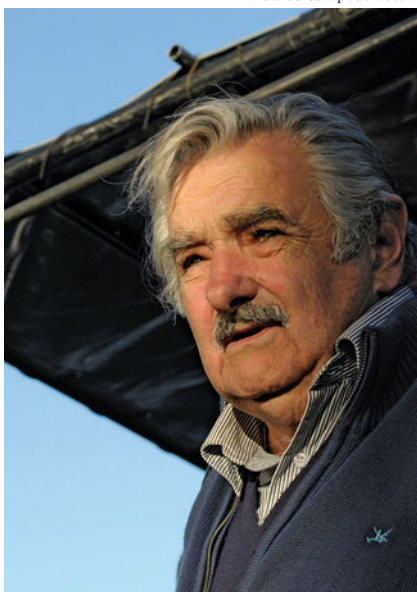
Head of state and government: President
Tabaré Ramón Vázquez Rosas

In 2009, for the fifth time since the restoration of democratic rule in 1985, Uruguayans went to the polls to elect a president and the entire parliament. The elections took place on October 25. The results gave the ruling Progressive Encounter–Broad Front (EP-FA) leftist coalition a majority in both houses of the parliament, but after narrowly failing to win 50% of the vote, the EP-FA's presidential candidate, José Mujica, was forced into a runoff election with the second-place finisher, former president Luis Lacalle of the Blanco Party. The runoff was held on November 29. As expected, Mujica won by a comfortable margin, earning 53% of the vote to 43% for Lacalle. Mujica was scheduled to take office on March 1, 2010.

Mujica promised to run an administration similar to that of Brazilian Pres. Luiz Inácio Lula da Silva—i.e., a leftist government that would respect the rules of international finance and investment while striving to improve the plight of the less fortunate. Former finance minister Danilo Astori, who was to serve as Mujica's vice president, was expected to have a large say in running the economy. Mujica's background as a former Tupamaro guerrilla leader and as the current leader of the Movement of Popular Participation—one of the more radical factions within the EP-FA—caused some to worry about the future direction of the government. Mujica's ruffled persona and shoot-from-the-hip speaking style perhaps contributed to this concern. Nevertheless, Uruguay's democracy was clearly successfully consolidated.

The five-year term of Pres. Tabaré Vázquez culminated with the successful implementation of a program to provide laptop computers to all primary schoolchildren in Uruguay. The ability of same-sex couples to adopt children was legalized during the year. Health care was made more fully accessible to the poor through a some-

Matilde Campodonico/AP



José Mujica campaigns for president of Uruguay in October. He won in a runoff election on November 29.

what controversial increase in the personal income tax.

Even with a slowdown in economic growth brought on by the worldwide financial crisis, Uruguay was expected to see a modest positive gain in GDP for the year. Unemployment remained historically low, and foreign investment was especially strong. A new container terminal at the port of Montevideo was opened late in the year.

(MARTIN WEINSTEIN)

UZBEKISTAN



Area: 447,400 sq km (172,700 sq mi)

Population (2009 est.): 27,606,000

Capital: Tashkent

Chief of state and head of government:

President Islam Karimov, assisted by Prime
Minister Shavkat Mirziyayev

Though Uzbekistan appeared to be one of the least affected by the global financial crisis of all the Central Asian states, in February 2009 Pres. Islam Karimov complained that the crisis was harming Uzbek exports; nevertheless, the country maintained a 8.2% growth rate, the highest in the Commonwealth of Independent States (CIS). In his in-

dependence day speech at the beginning of September, Karimov declared that the anticrisis measures adopted by the government had produced "convincing" results, and he attributed Uzbekistan's economic success to the country's having followed its own development path.

As part of the program designating 2009 as the Year of Development and Improvement of the Countryside, the little-developed Navoi region was declared a free economic zone; the Uzbek leadership aspired to attract investment amounting to \$900 million by year's end. A visit in May by South Korean Pres. Lee Myung-bak raised expectations for increased investment by Seoul in Uzbek industry.

Uzbekistan's relations with its neighbours Kyrgyzstan and Tajikistan worsened during the year. Uzbekistan remained adamant in its opposition to the construction of large-scale hydroelectric projects in those two countries, and in February Karimov persuaded his Turkmen counterpart to join him in opposing construction of the two power dams, thereby infuriating the Tajiks, whose rhetoric toward Uzbekistan became sharper as the year progressed. Uzbek-Tajik relations began to deteriorate at the very beginning of the year when Uzbekistan stopped transmission of power purchased by Tajikistan from Turkmenistan. In September an Uzbek expert questioned the safety of the large power plants built in Tajikistan and Kyrgyzstan during the Soviet era; his concerns were raised later in the month by Uzbek Foreign Minister Vladimir Norov in the UN General Assembly. This event marked an escalation of the verbal feud between Uzbekistan and its upstream neighbours.

Relations between Uzbekistan and Kyrgyzstan were strained by the occasionally high-handed behaviour of Uzbek border guards and the Uzbek reinforcement of the common border after an armed attack in May on a police post in the town of Khonobod near the Kyrgyz frontier. The attack was initially attributed to the militant Islamic Movement of Uzbekistan; the Kyrgyz Border Service denied Uzbek assertions that the group had come from Kyrgyzstan.

Despite security concerns, in June Uzbekistan refused to join the Rapid Reaction Force of the Collective Security Treaty Organization because the latter's charter did not prohibit the use of force in conflicts within the CIS. In October, despite worries over human

rights abuses dating back to 2005, when Uzbek government troops fired on unarmed protesters, the EU lifted the last of several sanctions that had been imposed against it. (BESS BROWN)

VANUATU



Area: 12,190 sq km (4,707 sq mi)

Population (2009 est.): 240,000

Capital: Port Vila

Chief of state: Presidents Kalkot Mataskelekele, Maxime Carlot Korman (acting) from August 16, and, from September 2, Iolu Abil

Head of government: Prime Minister Edward Natapei

Vanuatu's economy slowed during 2009. Pressure by the Group of 20 and the U.S. on Vanuatu to end its tax havens led to declines in activity in Vanuatuan offshore financial centres. From December 2006 to June 2008, external assets fell from \$292 million to \$116 million. Though regional source economies contracted, tourism grew significantly, and the numbers of visiting cruise ships increased. In July, France financed the construction of a new airport on Pentecost, which would exploit the island's tourist potential and reduce its isolation. Increases in quotas for Vanuatuan horticultural workers in New Zealand and Australia were also producing useful revenues.

On the external political front, Vanuatu established diplomatic relations with the United Arab Emirates and renewed a dispute with France over the ownership of two uninhabited islands that France maintained were part of its overseas territory of New Caledonia. New Caledonian leader Victor Tutugoro, however, had signed a document declaring that Matthew and Hunter islands belonged to Vanuatu.

In September, after two earlier tries by Vanuatu's electoral college to elect a new chief of state, Iolu Abil was installed as the country's new president. Pres. Kalkot Mataskelekele's term in office had ended in August, and his bid for reelection was unsuccessful. The government faced criticism and political challenges for the mishandling of funds by the Commodities Marketing Board and Air Vanuatu. (CLUNY MACPHERSON)

VATICAN CITY STATE



Area: 44 ha (109 ac)

Population (2009 est.): about 800

Chief of state: (sovereign pontiff) Pope Benedict XVI

Head of administration: Secretary of State Tarcisio Cardinal Bertone

The year 2009 marked the 80th anniversary of the founding of the Vatican City State, which was established as an independent and sovereign state through a bilateral agreement reached with Italy on Feb. 11, 1929. The Vatican sponsored a number of anniversary celebrations, and a commemorative exposition was held for the public between February and May.

Dramatic tensions between the Vatican and the Italian government emerged during the year after the Roman Catholic newspaper *Avvenire* published articles highly critical of Italian Prime Minister Silvio Berlusconi. The articles concerned not only the Italian government's draconian response to illegal immigration but also what was claimed to be scandalous conduct by the prime minister in his private life. Following a series of journalistic exchanges that included an attack on *Avvenire's* top editor by *Il Giornale*, a Berlusconi family newspaper, Vatican Secretary of State Tarcisio Cardinal Bertone canceled a planned dinner with Berlusconi and took a public stance in favour of *Avvenire* and its editor. The prime minister subsequently dissociated himself from *Il Giornale's* attack. In an effort to reestablish a collaborative relationship with the Italian government, Pope Benedict XVI met with Berlusconi's chief adviser in early September.

Another controversy erupted over Pope Benedict's public claim—made during his official visit to Africa in March—that the distribution of condoms could not arrest the spread of AIDS; he instead advocated sexual abstinence and marital fidelity. The intransigence of his position on family planning and abortion was well known and allegedly led to the Vatican's rejection of several nominees to the post of U.S. ambassador to the Holy See; among those rejected was Caroline Kennedy, the daughter of former U.S. president John F. Kennedy. Theologian

Miguel H. Díaz was eventually confirmed as ambassador in August.

In May the pope toured the Holy Land, where he met with representatives of the major faiths. On this and other occasions, he called for a strengthening of the role of the UN in promoting world peace.

During Russian Pres. Dmitry Medvedev's visit to Italy in early December, he also met with the pope and with Bertone. On December 3 Medvedev and the pope announced an agreement to upgrade the level of representation between Russia and the Vatican to full diplomatic relations.

(GREGORY O. SMITH)

VENEZUELA



Area: 916,445 sq km (353,841 sq mi)

Population (2009 est.): 28,583,000

Capital: Caracas

Head of state and government: President Hugo Chávez Frías

Venezuelan Pres. Hugo Chávez scored a decisive victory on Feb. 15, 2009, when voters approved a referendum to remove term limits for all elected officials, which thus enabled Chávez to run for reelection in 2012. This measure won the support of 54.4% of the voters and restored to Chávez the political momentum that he had lost after voters defeated his first attempt to scrap term limits in December 2007. Emboldened, Chávez maneuvered to create the hybrid military-socialist regime that he touted as "twenty-first century socialism." On July 25 he opined that he would not object to being given powers to eliminate all "counterrevolutionary" laws by the end of the year. More than 80% of the deputies in the National Assembly were loyal to Chávez, but they declined to give him those powers. Still, the deputies passed important legislation that moved Venezuela closer to the Cuban model. Noteworthy in this regard were laws that increased government control over police forces, education, and the expropriation of land. In addition, community councils received new powers to determine the manner in which expropriated property could be used. Finally, the government introduced a bill in the National Assembly that criminalized the

provision of false information that harmed the state; conviction for this offense could bring a prison sentence of up to four years.

The official government political party, the United Socialist Party of Venezuela (PSUV), became more institutionalized and the opposition fragmented during the year. The National Electoral Council (CNE) oversaw the PSUV's internal elections for delegates to the First Extraordinary Congress, which took place over three weeks beginning on November 21. Party members elected 772 delegates to attend the conclave, at which the PSUV's institutional structure was organized, party leaders were chosen, and procedures were established for selecting candidates to run in the National Assembly elections scheduled for Sept. 26, 2010. There was concern in the PSUV that the opposition could win the one-third of National Assembly seats necessary to block fundamental changes to the state's administrative structure. Thus, the government introduced legislation that downsized the representation of party coalitions and gave the Chávez-controlled CNE the power to arbitrarily redraw electoral districts until just prior to the 2010 elections.

Venezuela's economy remained dependent on revenue from petroleum sales. In November the Ministry of Finance projected that oil revenues for 2009 would amount to \$18.33 billion. Non-oil revenues were expected to total \$39.07 billion, and debt was likely to reach \$16.42 billion. Inflation approached 30%, real wages fell, and distribution programs sustained large cuts in their budgets. One study found that food consumption among poorer Venezuelans was declining despite discounts of up to 40% at Mercal, the state-owned grocery chain. Mercal's sales fell by more than 11% in the first half of the year. Many units of the government's primary-care health network, Barrio Adentro, closed despite being staffed by thousands of Cuban doctors. The Foreign Exchange Administration Commission reported that the government authorized \$29.9 billion for imports through September—a 47% decrease compared with 2008.

In the international arena, Chávez sought to strengthen the Bolivarian Alternative for the Americas—which he described as an “anti-imperialist military alliance”—and to develop the Union of South American Nations into an institution capable of managing political and military tensions. The Brazilian Senate voted in October to support

Venezuela's bid to join the Common Market of the South (Mercosur). Venezuela's admission was cast into doubt on November 8 when Chávez told his people to “prepare for war” with Colombia, one of Mercosur's five associate members. Chávez was angered by Colombian Pres. Álvaro Uribe's decision to allow the U.S. to use military installations in Colombia as bases from which to hunt down drug traffickers. Relations between Venezuela and the U.S. remained frosty. (DAVID J. MYERS)

VIETNAM



Area: 331,212 sq km (127,882 sq mi)

Population (2009 est.): 88,577,000

Capital: Hanoi

Chief of state: President Nguyen Minh Triet

Head of government: Prime Minister Nguyen Tan Dung

Four major issues dominated Vietnam's domestic politics in 2009: the economy, bauxite mining, Roman Catholic land claims, and political dissent. In January the Central Committee of the Vietnam Communist Party (VCP) conducted a review of party policies at its ninth plenum. The meeting focused on corruption and personnel policy. It adopted a resolution calling for measures to prevent recession, reduce inflation, and stabilize the macroeconomy.

Long-simmering discontent over the government's decision to approve bauxite mining in the Central Highlands and to award the construction contract to a Chinese company erupted in public. A loose coalition of environmental scientists, academics, and retired officials opposed the government. General Vo Nguyen Giap, a national military hero, wrote three letters to party and state leaders urging reconsideration on environmental and national security grounds. These concerns were echoed at a government seminar in April to review bauxite mining and were raised on the floor of the National Assembly in May. Catholic priests and dissident Buddhists also weighed in. The government was eventually forced to revise its plans and address the impact on the environment and ethnic minority community.

At midyear the Central Committee held its 10th plenum, which initiated

preparations for the 11th national congress, scheduled for January 2011. The meeting reviewed draft socioeconomic plans for 2011–20, proposed alterations to the party's 1991 platform, and appointed three subcommittees to deal with administrative matters, leadership selection, and amendments to the party statutes.

Relations with China became a domestic issue when Beijing unilaterally declared a moratorium on fishing in the South China Sea from May 16 to August 1, the height of Vietnam's fishing season. Chinese fishery vessels aggressively chased Vietnamese fishermen out of the area by seizing catches and detaining and fining boat crews.

In July the Roman Catholic Church became involved in a major dispute over ownership of land that once belonged to the Tam Toa church in the Vinh diocese in the city of Dong Hoi. During July and August tens of thousands of parishioners held public prayer vigils and mass rallies to protest police brutality, demand the release of those arrested, and call for land confiscated by the state to be returned to the church. Riot police and bulldozers leveled the site in August, and in November authorities returned to remove a statue of the Virgin Mary from the Catholic cemetery there.

Security authorities continued to arrest and detain prominent pro-democracy activists. In October, Vietnam tried and convicted six persons for their role in 2008 in hanging banners in Haiphong calling for political freedom. Three other dissidents received separate trials in Hanoi. In December former army officer Tran Anh Kim, one of five dissidents arrested in June, was convicted and sentenced to more than five years in prison for subversion. The other four, notably U.S.-educated human rights lawyer Le Cong Dinh, were expected to be tried in 2010.

In October the Central Committee held its 11th plenum to discuss future economic plans and the draft political report to be presented to the 11th congress. The plenum concluded that Vietnam had begun its recovery from the global financial crisis with a GDP growth rate projected at 5.2% for the year. Later the government announced that it would extend until March 2010 portions of the economic stimulus package that it had enacted.

Vietnamese leaders crisscrossed the globe in 2009 to promote Vietnam's interests. Party Secretary-General Nong Duc Manh visited Japan in April and Australia and New Zealand in Septem-

ber. President Nguyen Minh Triet addressed the UN General Assembly and Security Council Summit on Nuclear Nonproliferation and Nuclear Disarmament in September before flying to Cuba. In November he visited Venezuela and Singapore, and in December he journeyed to Italy, the Vatican, Spain, and Slovakia. Deputy Prime Minister and Minister of Foreign Affairs Pham Gia Khiem, who accompanied the president, made a separate trip to Washington to promote trade and educational cooperation.

Prime Minister Nguyen Tan Dung visited numerous countries around the globe, including China twice, first in April to participate in the Boao Forum for Asia (a symposium on Asia's economic future) and then in October to attend a trade and investment conference in Chengdu. He also attended the 15th Association of Southeast Asian Nations summit in Thailand in October. During 2009 Vietnam hosted visits by the presidents of Laos, South Korea, and Sri Lanka; the prime ministers of Thailand, France, and Finland; and the foreign minister of Cuba.

(CARLYLE A. THAYER)

YEMEN



Area: 528,076 sq km (203,891 sq mi)

Population (2009 est.): 22,858,000

Capital: Sanaa

Chief of state: President Maj. Gen. 'Ali 'Abdallah Salih

Head of government: Prime Minister Ali Muhammad Mujawar

Ruling a poor country with limited resources, the Yemeni government faced two important challenges in 2009. The first was a series of strikes and demonstrations by secessionists in the south, aimed at reviving the old republic of South Yemen (1967–90). The second was an armed uprising of the al-Houthis along the mountainous northern border with Saudi Arabia. The al-Houthis were tribal clans who belonged to the Zaydi branch of Shi'ite Islam (whereas nearly two-thirds of Yemenis were Sunnis). The al-Houthis, who were revolting for the sixth time since 2004, claimed that they were politically marginalized; the government con-



Antigovernment demonstrators attend a rally in the southern Yemeni city of Habbaleen on October 14.

Reuters/Landov

tended that they were seeking to revive the old Zaydi monarchy that had been toppled by a coup d'état in 1962.

In early November al-Houthi elements made an incursion into Saudi Arabia. The Saudis counterattacked with land and air strikes. Both Yemen and the Saudis accused Iran of supporting the Shi'ite al-Houthis, thereby feeding Shi'ite-Sunni tensions in the region. By December armed conflicts with the al-Houthis had left thousands dead or wounded, and some 150,000 civilians had fled the area. Both the U.S. and Saudi Arabia feared that al-Qaeda, which had a presence in Yemen, would take advantage of the weak government and instability to expand its influence in Yemen and Saudi Arabia. At year's end there were indications that the al-Houthis were willing to pursue peace talks with Saudi Arabia.

Yemen remained a country with high unemployment (20%) and shortages of water, electricity, and municipal services. The Yemeni government was trying to attract foreign investment to stimulate the economy. It also continued seeking entrance into a partnership with the Gulf Cooperation Council to help its economy and provide employment for its workers. (LOUAY BAHRY)

ZAMBIA



Area: 752,612 sq km (290,585 sq mi)

Population (2009 est.): 12,935,000

Capital: Lusaka

Head of state and government: President Rupiah Banda

Reflecting on his first year in office as president of Zambia, Rupiah Banda in 2009 frankly described his experience as "tough." He complained about uncooperative members within his own ruling Movement for Multiparty Democracy (MMD) and malicious media attacks. He castigated opposition politician Michael Sata, leader of the Patriotic Front (PF), as "evil" and the "son of Satan." In August Banda withstood an impeachment attempt led by PF and United Party for National Development (UPND) parliamentarians. Shortly afterward, a dispute arose within the MMD leadership about the timing of a national convention to elect party officers. President Banda and his supporters contained the dissent by dissolving the provincial branch executive that had been opposing them, but this action only buttressed allegations of autocratic behaviour and lack of transparency.

In August former president Frederick Chiluba (1991–2002) was acquitted of corruption charges after a long trial; this was the first time that an African former head of state had undergone a credible trial in his own country. Earlier in the year his wife, Regina, had been imprisoned for having received stolen funds during his term of office, and in 2007 the U.K.'s High Court had determined that the former president had bilked the Zambian government of some \$46 million. In the trial that ended in 2009, he was accused of having embezzled half a million dollars during his 10-year presidency, but the judge ruled that the prosecution had not established that the funds in question could be traced to government money. A local officer of Transparency International observed that the case demonstrated the inherent complica-

tions involved in fighting corruption in Africa.

The effects of the global recession on Zambia's economy were mitigated by high copper prices, which were driven by strong demand from China, the world's largest consumer. Global electronics manufacturers also sustained demand and investment in mining. By the end of the year, copper prices had more than doubled. To reduce overdependence on the mining sector, which supplied most of the country's foreign earnings, the World Bank and other international agencies urged Zambia to develop alternative sources of revenue, including tourism and agriculture. Although poverty continued to be a serious problem, the economy had strengthened, characterized by a stable currency and increasing trade. Although inflation topped 12%, growth was anticipated to exceed 5% in 2009–10.

Zambia had become a model country in malaria-reduction policy; a 2008 survey showed that the prevalence of the malaria parasite in children under age five had decreased by more than 50% since 2006. Mortality rates in this age group had also been reduced by 29% from 2002 to 2007, which health professionals largely attributed to the success of the country's new malaria policy. (LARAY DENZER)

ZIMBABWE



Area: 390,757 sq km (150,872 sq mi)

Population (2009 est.): 12,523,000, of which about 3,000,000 people might be living outside the country

Capital: Harare

Chief of state: President Robert Mugabe

Head of government: Prime Minister Morgan Tsvangirai

On Feb. 11, 2009, Morgan Tsvangirai, leader of the Movement for Democratic Change (MDC-T), was sworn in as prime minister of Zimbabwe's new unity government, a coalition of the MDC-T, the Zimbabwe African National Union–Patriotic Front (ZANU-PF), and



On March 11, hundreds of mourners in Buhera, Zimb., attend the burial of Susan Tsvangirai, wife of Zimbabwean Prime Minister Morgan Tsvangirai; her death in a head-on automobile collision in which her husband was also injured prompted speculation of an assassination attempt.

the small MDC splinter group led by Arthur Mutambara (MDC-M). This was the result of protracted negotiations brokered by the Southern African Development Community (SADC). From the beginning, political analysts expected that the new government was a fragile, uneasy power-sharing arrangement, which the SADC had strong-armed the parties into accepting. Essentially, Tsvangirai was cast as the junior partner to his archrival, Pres. Robert Mugabe. On March 6 suspicion about ZANU-PF objectives deepened when the prime minister was injured in a head-on automobile collision in which his wife, Susan, was killed. Many MDC-T officials and supporters believed that this accident was an assassination attempt, for Tsvangirai had survived a previous attempt on his life and several brutal beatings at the hands of his political opponents.

In his inaugural speech Tsvangirai advocated a policy for democratic reconstruction; however, Pres. Mugabe's intransigence and unyielding control over home affairs, the military, and the security forces blocked any reform. Throughout the year Tsvangirai complained about continued harassment and manhandling of MDC-T members, including legislators and ministers, some of whom faced criminal charges. Of these, the most conspicuous case

was that of Roy Bennett, whose nomination as deputy minister of agriculture Mugabe refused to accept. Two days after the unity government came into effect, Bennett, a white farmer and the MDC-T treasurer, was detained on charges of alleged antigovernment activities. He was released on bail in March but was rearrested in October. Bennett's case highlighted the issue of Mugabe's blocking the appointment of top government officials, which in mid-October culminated in the MDC-T's boycott of cabinet meetings with the president. After intervention by SADC leaders, Tsvangirai agreed to lift the three-week boycott on the understanding that the power-sharing agreement would be implemented fully within 30 days.

Despite the tense political scene, the new government managed to turn around the economy. At the end of 2008, Zimbabwe had set an unenviable record as the second most-

extreme example of hyperinflation in world history (after Hungary in 1946). On February 2, the government devalued the Zimbabwe dollar—as it had six months earlier—dropping 12 zeros to make Z\$1 trillion of the old currency redenominated to Z\$1.00. Then in April the new unity government suspended the Zimbabwean dollar for at least a year, opting to allow the use of selected foreign currencies, notably the South African rand and the U.S. dollar, in financial transactions. This gambit proved to be effective, as subsequent events showed. In March retail prices fell significantly. By August the month-on-month inflation rate had fallen to 0.4%, and by year's end GDP was projected to grow by about 6–7% in 2010. The agricultural and mining sectors began to improve as restructuring programs were established and investment began to return. The major problem that remained was Zimbabwe's \$1.4 billion debt to the IMF, the World Bank, and the African Development Bank, which the government was unable to repay; however, the policies of the new prime minister and his financial officials won a considerable amount of international support, which resulted in rescheduled loan repayments and offers of development assistance by foreign donors.

(LARAY DENZER)

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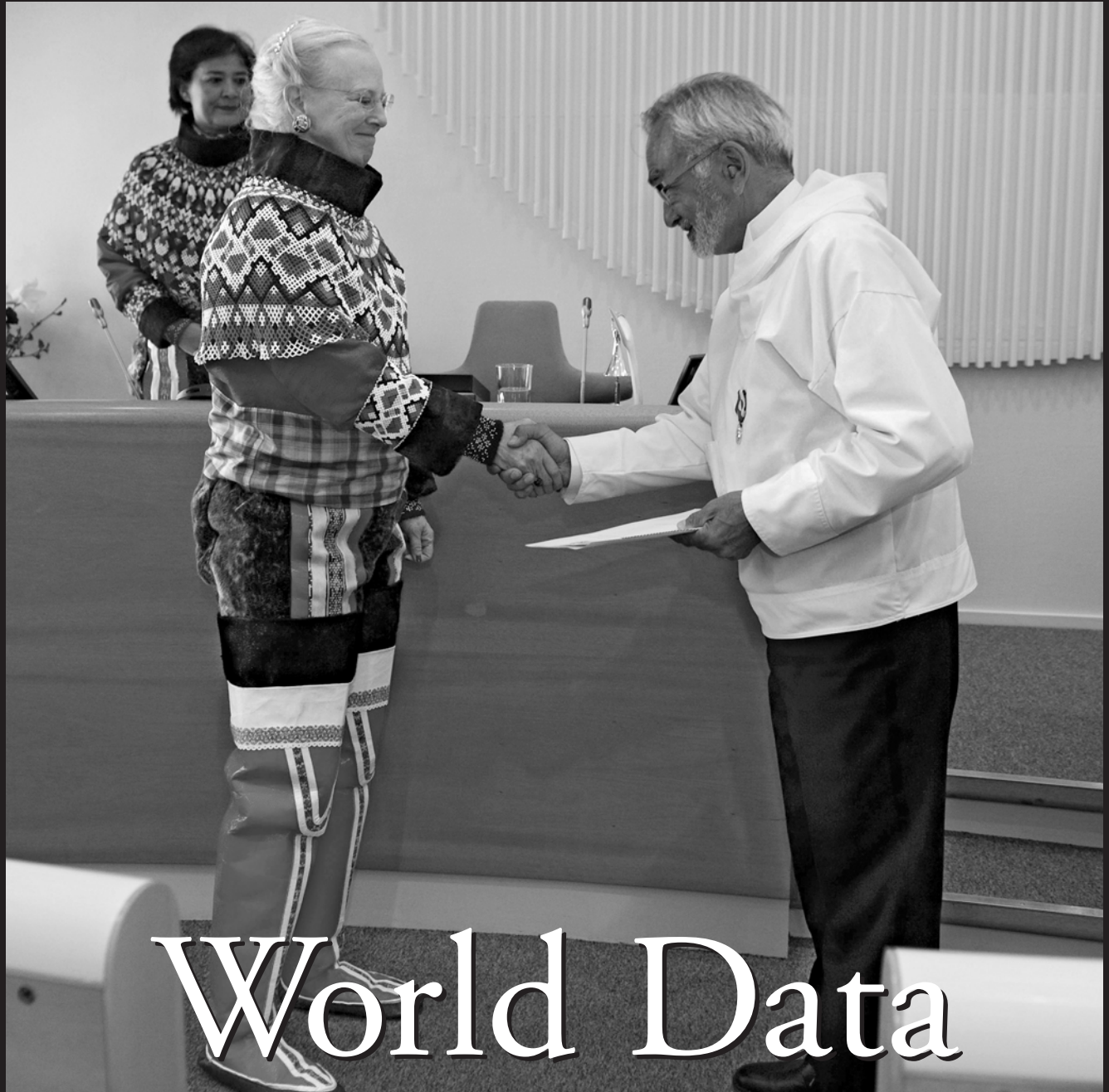
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World Data

Greenland attained greater autonomy from Denmark with a formal transfer of powers on June 21, 2009, in Nuuk, Greenland's capital. In this photo Denmark's Queen Margrethe II presents the official law of self-governance to Josef Motzfeldt, the chairman of the Greenland Parliament.

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INTRODUCTION

Britannica World Data provides a statistical portrait of some 220 countries and dependencies of the world, at a level appropriate to the significance of each. It contains 217 country statements (the "Nations of the World" section), ranging in length from one to seven pages, and permits, in the 15 major thematic tables (the "Comparative National Statistics" [CNS] section), comparisons among these larger countries and 3 other states.

Updated annually, *Britannica World Data* is particularly intended as direct, structured support for many of *Britannica's* other reference works—encyclopaedias, yearbooks, atlases—at a level of detail that their editorial style or design do not permit.

Like the textual, graphic, or cartographic modes of expression of these other products, statistics possess their own inherent editorial virtues and weaknesses. Two principal goals in the creation of *Britannica World Data* were up-to-dateness and comparability, each possible to maximize separately, but not always possible to combine. If, for example, research on some subject is completed during a particular year (x), figures may be available for 100 countries for the preceding year ($x - 1$), for 140 countries for the year before that ($x - 2$), and for 180 countries for the year before that ($x - 3$).

Which year should be the basis of a thematic compilation for 218 countries so as to give the best combination of up-to-dateness and comparability? And, should $x - 1$ be adopted for the thematic table, ought up-to-dateness in the country table (for which year x is already available) be sacrificed for agreement with the thematic table? In general, the editors have opted for maximum up-to-dateness in the country statistical boxes and maximum comparability in the thematic tables.

Comparability, however, also resides in the meaning of the numbers compiled, which may differ greatly from country to country. The headnotes to the thematic tables explain many of these methodological problems; the Glossary serves the same purpose for the country statistical pages. Published data do not always provide the researcher or editor with a neat, unambiguous choice between a datum compiled on two different bases (say, railroad track length, or route length), one of which is wanted and the other not. More often a choice must be made among a variety of official, private, and external intergovernmental (UN, FAO, IMF) sources, each reporting its best data but each representing a set of problems: (1) of methodological variance from (or among) international conventions; (2) of analytical completeness (data for a single year may, successively, be projected [based on 10 months' data], preliminary [for 12 months], final, revised or adjusted, etc.); (3) of time frame, or accounting interval (data may represent a full Gregorian calendar year [preferred], a fiscal year, an Islamic or other national or religious year, a multiyear period or average [when a one-year statement would contain unrepresentative results]); (4) of continuity with previous data; and the like. Finally, published data on a

particular subject may be complete and final but impossible to summarize in a simple manner. The education system of a single country may include, for example, public and private sectors; local, state, or national systems; varying grades, tracks, or forms within a single system; or opportunities for double-counting or fractional counting of a student, teacher, or institution. When no recent official data exist, or they exist, but may be suspect, the tables may show unofficial estimates, a range (of published opinion), analogous data, or no data at all.

The published basis of the information compiled is the statistical collections of *Encyclopædia Britannica, Inc.*, some of the principal elements of which are enumerated in the Bibliography. Holdings for a given country may include any of the following: the national statistical abstract; the constitution; the most recent censuses of population; periodic or occasional reports on vital statistics, social indicators, agriculture, mining, labour, manufacturing, domestic and foreign trade, finance and banking, transportation, and communications. Further information is received in a variety of formats—telephone, letter, fax, microfilm and microfiche, and most recently, in electronic formats such as computer disks, CD-ROMs, and the Internet. So substantial has the resources of the Internet become that it was decided to add uniform resource locators (URLs) to the great majority of country pages and a number of the CNS tables (summary world sites with data on all countries still being somewhat of a rarity) so as to apprise the reader of the possibility and means to access current information on these subjects year-round.

The recommendations offered are usually to official sites (national statistical offices, general national governments, central banks, embassies, intergovernmental organizations [especially the UN Development Programme], and the like). Though often dissimilar in content, they will usually be updated year-round, expanded as opportunity permits, and lead on to related sites, such as parliamentary offices, information offices, diplomatic and consular sites, news agencies and newspapers, and, beyond, to the myriad academic, commercial, and private sites now accessible from the personal computer. While these URLs were correct and current at the time of writing, they may be subject to change.

The great majority of the social, economic, and financial data contained in this work should not be interpreted in isolation. Interpretive text of long perspective, such as that of the *Encyclopædia Britannica* itself; political, geographic, and topical maps, such as those in the *Britannica Atlas*; and recent analysis of political events and economic trends, such as that contained in the articles of the *Book of the Year*, will all help to supply analytic focus that numbers alone cannot. By the same token, study of those sources will be made more concrete by use of *Britannica World Data* to supply up-to-date geographic, demographic, and economic detail.

GLOSSARY

A number of terms that are used to classify and report data in the "Nations of the World" section require some explanation.

Those italicized terms that are used regularly in the country compilations to introduce specific categories of information (*e.g.*, *birth rate*, *budget*) appear in this glossary in italic boldface type, followed by a description of the precise kind of information being offered and how it has been edited and presented.

All other terms are printed here in roman boldface type. Many terms have quite specific meanings in statistical reporting, and they are so defined here. Other terms have less specific application as they are used by different countries or organizations. Data in the country compilations based on definitions markedly different from those below will usually be footnoted.

Terms that appear in small capitals in certain definitions are themselves defined at their respective alphabetical locations.

Terms whose definitions are marked by an asterisk (*) refer to data supplied only in the larger two- to four-page country compilations.

activity rate, *see* participation/activity rates.

age breakdown, the distribution of a given population by age, usually reported here as percentages of total population in 15-year age brackets except for, when available, the 75–84 group. When substantial numbers of persons do not know, or state, their exact age, distributions may not total 100.0%.

aquatic plants production, the weight of aquatic plants (primarily seaweeds) harvested in freshwater or marine areas; the share harvested by farming is *aquaculture* production.

area, the total surface area of a country or its administrative subdivisions, including both land and inland (nontidal) water area. Land area is usually calculated from "mean low water" on a "plane table," or flat, basis.

area and population, a tabulation usually including the first-order administrative subdivisions of the country (such as the states of the United States), with capital (headquarters, or administrative seat), area, and population. When these subdivisions are especially numerous or, occasionally, nonexistent, a planning, electoral, census, or other nonadministrative scheme of regional subdivisions has been substituted.

associated state, *see* state.

atheist, in statements of religious affiliation, one who professes active opposition to religion; "nonreligious" refers to those professing only no religion, nonbelief, or doubt.

balance of payments, a financial statement for a country for a given period showing the balance among: (1) transactions in goods, services, and income between that country and the rest of the world, (2) changes in ownership or valuation of that country's monetary gold, SPECIAL DRAWING RIGHTS, and claims on and liabilities to the rest of the world, and (3) unrequited transfers and counterpart entries needed (in an accounting sense) to balance transactions and changes among any of the foregoing types of exchange that are not mutually offsetting. Detail of national law as to what constitutes a transaction, the basis of its valuation, and the

size of a transaction visible to fiscal authorities all result in differences in the meaning of a particular national statement.*

balance of trade, the net value of all international goods trade of a country, usually excluding reexports (goods received only for transshipment), and the percentage that this net represents of total trade.

Balance of trade refers only to the "visible" international trade of goods as recorded by customs authorities and is thus a segment of a country's BALANCE OF PAYMENTS, which takes all visible and invisible trade with other countries into account. (Invisible trade refers to imports and exports of money, financial instruments, and services such as transport, tourism, and insurance.) A country has a favourable, or positive (+), balance of trade when the value

of exports exceeds that of imports and negative (–) when imports exceed exports.

barrel (bbl), a unit of liquid measure. The barrel conventionally used for reporting crude petroleum and petroleum products is equal to 42 U.S. gallons, or 159 litres. The number of barrels of crude petroleum per metric ton, ranging typically from 6.20 to 8.13, depends upon the specific gravity of the petroleum. The world average is roughly 7.33 barrels per ton.

birth rate, the number of live births annually per 1,000 of midyear population. Birth rates for individual countries may be compared with the estimated world annual average of 20.3 births per 1,000 population in 2005.

budget, the annual receipts and expenditures—of a central government for its activities only; does not include state, provincial, or local

Abbreviations

Measurements

cu m	cubic metre(s)
kg	kilograms(s)
km	kilometre(s)
kW	kilowatt(s)
kW-hr	kilowatt-hour(s)
metric ton-km	metric ton-kilometre(s)
mi	mile(s)
passenger-km	passenger-kilometre(s)
passenger-mi	passenger-mile(s)
short ton-mi	short ton-mile(s)
sq km	square kilometre(s)
sq m	square metre(s)
sq mi	square mile(s)
troy oz	troy ounce(s)
yr	year(s)

Political Units and International Organizations

ASEAN	Association of Southeast Asian Nations
CACM	Central American Common Market
Caricom	Caribbean Community and Common Market
CFA	Communauté Financière Africaine
CFP	Change franc Pacifique
CIS	Commonwealth of Independent States
CUSA	Customs Union of Southern Africa
EC	European Communities
ESCWA	Economic and Social Commission for Western Asia
EU	European Union
FAO	United Nations Food and Agriculture Organization
ILO	International Labour Organisation
IMF	International Monetary Fund
Neth.	Netherlands
OECD	Organization for Economic Cooperation and Development

OECS

Serb.–Mont.	Serbia and Montenegro
Trin./Tab.	Trinidad and Tobago
U.A.E.	United Arab Emirates
UNDP	United Nations Development Programme

Months

Jan.	January	Oct.	October
Feb.	February	Nov.	November
Aug.	August	Dec.	December
Sept.	September		

Miscellaneous

AIDS	Acquired Immune Deficiency Syndrome
avg.	average
c.i.f.	cost, insurance, and freight
commun.	communications
CPI	consumer price index
est.	estimate(d)
excl.	excluding
f.o.b.	free on board
GDP	gross domestic product
GNP	gross national product
govt.	government
incl.	including
LNG	liquefied natural gas
n.a.	not available (in text)
n.e.s.	not elsewhere specified
no.	number
pl.	plural
pub. admin.	public administration
SDR	Special Drawing Right
SITC	Standard International Trade Classification
svcs.	services
teacher tr.	teacher training
transp.	transportation
VAT	value-added taxes
Voc.	Vocational
\$	dollar (of any currency area)
£	pound (of any currency area)
...	not available (in tables)
—	none, less than half the smallest unit shown, or not applicable (in tables)

governments or semipublic (parastatal, quasi-nongovernmental) corporations unless otherwise specified. Figures for budgets are limited to ordinary (recurrent) receipts and expenditures, wherever possible, and exclude capital expenditures—*i.e.*, funds for development and other special projects originating as foreign-aid grants or loans.

When both a recurrent and a capital budget exist for a single country, the former is the budget funded entirely from national resources (taxes, duties, excises, etc.) that would recur (be generated by economic activity) every year. It funds the most basic governmental services, those least able to suffer interruption. The capital budget is usually funded by external aid and may change its size considerably from year to year.

capital, usually, the actual seat of government and administration of a state. When more than one capital exists, each is identified by kind; when interim arrangements exist during the creation or movement of a national capital, the *de facto* situation is described.

Anomalous cases are annotated, such as those in which (1) the *de jure* designation under the country's laws differs from actual local practice (*e.g.*, Benin's designation of one capital in constitutional law, but another in actual practice), (2) international recognition does not validate a country's claim (as with the proclamation by Israel of a capital on territory not internationally recognized as part of Israel), or (3) both a state and a capital have been proclaimed on territory recognized as part of another state (as with the Turkish Republic of Northern Cyprus).

capital budget, *see* budget.

causes of death, as defined by the World Health Organization (WHO), "the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of accident or violence which produced the fatal injury." This principle, the "underlying cause of death," is the basis of the medical judgment as to cause; the statistical classification system according to which these causes are grouped and named is the *International List of Causes of Death*, the latest revision of which is the Tenth. Reporting is usually in terms of events per 100,000 population. When data on actual causes of death are unavailable, information on morbidity, or illness rate, usually given as reported cases per 100,000 of infectious diseases (notifiable to WHO as a matter of international agreement), may be substituted.

chief of state/head of government, paramount national governmental officer(s) exercising the highest executive and/or ceremonial roles of a country's government. In general usage, the chief of state is the formal head of a national state. The primary responsibilities of the chief of state may range from the purely ceremonial—convening legislatures and greeting foreign officials—to the exercise of complete national executive authority. The head of government, when this function exists separately, is the officer nominally charged (by the constitution) with the majority of actual executive powers, though they may not in practice be exercised, especially in military or single-party regimes in which effective power may reside entirely outside the executive governmental machinery provided by the constitution. A prime minister, for example, usually the actual head of government, may in practice exercise only Cabinet-level authority.

In communist countries an official identified as the chief of state may be the chairman of the policy-making organ, and the official given as the head of government the chairman of the nominal administrative/executive organ.

c.i.f. (trade valuation): *see* imports.

commonwealth (U.K. and U.S.), a self-governing political entity that has regard to the common weal, or good; usually associated with the United Kingdom or United States. Examples include the Commonwealth (com-

posed of independent states [from 1931 onward]), Puerto Rico since 1952, and the Northern Marianas since 1979.

communications, collectively, the means available for the public transmission of information within a country. Data are tabulated for: daily newspapers and their total circulation; television as total numbers of receivers; telephone data as landlines, or the number of subscriber lines (not receivers) having access to the public switched network; cellular telephones and Internet broadband users as number of subscribers; and personal computers and Internet users as number of units. For each, a rate per 1,000 persons is given.

constant prices, an adjustment to the members of a financial time series to eliminate the effect of inflation year by year. It consists of referring all data in the series to a single year so that "real" change may be seen.

constitutional monarchy, *see* monarchy.

consumer price index (CPI), also known as the retail price index, or the cost-of-living index, a series of index numbers assigned to the price of a selected "basket," or assortment, of basic consumer goods and services in a country, region, city, or type of household in order to measure changes over time in prices paid by a typical household for those goods and services. Items included in the CPI are ordinarily determined by governmental surveys of typical household expenditures and are assigned weights relative to their proportion of those expenditures. Index values are period averages unless otherwise noted.

coprincipality, *see* monarchy.

current prices, the valuation of a financial aggregate as of the year reported.

de facto population, for a given area, the population composed of those actually present at a particular time, including temporary residents and visitors (such as immigrants not yet granted permanent status, "guest" or expatriate workers, refugees, or tourists), but excluding legal residents temporarily absent.

de jure population, for a given area, the population composed only of those legally resident at a particular time, excluding temporary residents and visitors (such as "guest" or expatriate workers, refugees, or tourists), but including legal residents temporarily absent.

death rate, the number of deaths annually per 1,000 of midyear population. Death rates for

individual countries may be compared with the estimated world annual average of 8.6 deaths per 1,000 population in 2005.

density (of population), usually, the *DE FACTO* POPULATION of a country divided by its total area. Special adjustment is made for large areas of inland water, desert, or other uninhabitable areas—*e.g.*, excluding the ice cap of Greenland.

dependency, an area annexed to, or controlled by, an independent state but not an integral part of it; a non-self-governing territory. A dependency has a charter and may have a degree of self-government. A crown dependency is a dependency originally chartered by the British government (*see* Table).

direct taxes, taxes levied directly on firms and individuals, such as taxes on income, profits, and capital gains. The *immediate* incidence, or burden, of direct taxes is on the firms and individuals thus taxed; direct taxes on firms may, however, be passed on to consumers and other economic units in the form of higher prices for goods and services, blurring the distinction between direct and indirect taxation.

divorce rate, the number of legal, civilly recognized divorces annually per 1,000 population.

doubling time, the number of complete years required for a country to double its population at its current rate of natural increase.

earnings index, a series of index numbers comparing average wages in a collective industrial sample for a country or region with the same industries at a previous period to measure changes over time in those wages. It is most commonly reported for wages paid on a daily, weekly, or monthly basis; annual figures may represent total income or averages of these shorter periods. The scope of the earnings index varies from country to country. The index is often limited to earnings in manufacturing industries. The index for each country applies to all wage earners in a designated group and ordinarily takes into account basic wages (overtime is normally distinguished), bonuses, cost-of-living allowances, and contributions toward social security. Some countries include payments in kind. Contributions toward social security by employers are usually excluded, as are social security benefits received by wage earners.

economically active population, *see* population economically active.

Dependencies¹

Australia

Christmas Island
Cocos (Keeling) Islands
Norfolk Island

Denmark

Faroe Islands
Greenland

France

French Guiana
French Polynesia
Guadeloupe
Martinique
Mayotte
New Caledonia
Réunion
Saint-Barthélemy
Saint-Martin
Saint Pierre and Miquelon
Wallis and Futuna

Netherlands

Aruba
Netherlands Antilles

New Zealand

Cook Islands
Niue
Tokelau

United Kingdom

Anguilla
Bermuda
British Virgin Islands
Cayman Islands
Falkland Islands
Gibraltar
Guernsey
Isle of Man
Jersey
Montserrat
Pitcairn Island
Saint Helena and Dependencies
Turks and Caicos Islands

United States

American Samoa
Guam
Northern Mariana Islands
Puerto Rico
Virgin Islands (of the U.S.)

¹Excludes territories (1) to which Antarctic Treaty is applicable in whole or in part, (2) without permanent civilian population, (3) without internationally recognized civilian government (Western Sahara, Gaza Strip), or (4) representing unadjudicated unilateral or multilateral territorial claims.

education, tabulation of the principal elements of a country's educational establishment, classified as far as possible according to the country's own system of primary, secondary, and tertiary levels (the usual age limits for these levels being identified in parentheses), with total number of teachers and students (whether full- or part-time). The student-teacher ratio and enrollment rates are calculated whenever available data permit.

educational attainment, the distribution of the population age 25 and over with completed educations by the highest level of formal education attained or completed; it must sometimes be reported, however, for age groups still in school or for the economically active only.

emirate, *see* monarchy.

enrollment rates, if net (for primary and secondary levels of education): number of students in a theoretical age group for a given level of education expressed as a percentage of the total population of that age group; if gross: number of (domestically enrolled) students, regardless of age, expressed as a percentage of a theoretical age group (for the tertiary level of education UNESCO Institute for Statistics defines the theoretical age group as being the 5-year age group following the secondary school-leave).

enterprise, a legal entity formed to conduct a business, which it may do from more than one establishment.

ethnic/linguistic composition, ethnic, racial, or linguistic composition of a national population, reported here according to the most reliable breakdown available, whether published in official sources (such as a census) or in external analysis (when the subject is not addressed in national sources).

exchange rate, the value of one currency compared with another, or with a standardized unit of account such as the SPECIAL DRAWING RIGHT, or as mandated by local statute when one currency is "tied" by a par value to another. Rates given usually refer to free market values when the currency has no, or very limited, restrictions on its convertibility into other currencies.

exports, material goods legally leaving a country (or customs area) and subject to customs regulations. The total value and distribution by percentage of the major items (in preference to groups of goods) exported are given, together with the distribution of trade among major trading partners (usually single countries or trading blocs). Valuation of goods exported is free on board (f.o.b.) unless otherwise specified. The value of goods exported and imported f.o.b. is calculated from the cost of production and excludes the cost of transport.

external debt, public and publicly guaranteed debt with a maturity of more than one year owed to nonnationals of a country and repayable in foreign currency, goods, or services. The debt may be an obligation of a national or subnational governmental body (or an agency of either), of an autonomous public body, or of a private debtor that is guaranteed by a public entity. The debt is usually either outstanding (contracted) or disbursed (drawn).

external territory (Australia), *see* territory.

federal, consisting of first-order political subdivisions that are prior to and independent of the central government in certain functions.

federal constitutional monarchy, *see* monarchy.

federal republic, *see* republic.

federation, union of coequal, preexisting political entities that retain some degree of autonomy and (usually) right of secession within the union.

fertility rate, *see* total fertility rate.

financial aggregates, tabulation of seven-year time series, providing principal measures of the financial condition of a country, including: (1) the exchange rate of the national currency against the U.S. dollar, the pound sterling, and the International Monetary Fund's SPECIAL

DRAWING RIGHT (SDR), (2) the amount and kind of international reserves (holdings of SDRs, gold, and foreign currencies) and reserve position of the country in the IMF, and (3) principal economic rates and prices (central bank discount rate, government bond yields, and industrial stock [share] prices). For BALANCE OF PAYMENTS, the origin in terms of component balance of trade items and balance of invisibles (net) is given.*

fisheries production, the live-weight equivalent of the aquatic animals (including fish, crustaceans, mollusks, and other aquatic mammals) caught in freshwater or marine areas by national fleets and landed in domestic or foreign harbours for commercial, industrial, or subsistence purposes. The share of fisheries production that is harvested by farming is *aquaculture* production.

f.o.b. (trade valuation), *see* exports.

food, *see* daily per capita caloric intake.

foreign direct investment (FDI), a long-term investment with a significant degree of control by a business entity or individual of one country into another country's economy. FDI comprises three components—equity capital, reinvested earnings, and intra-company loans. The net balance of the three FDI components is often volatile from one year to the next. If negative for a particular time period, the balance of the three components is called a reverse investment, or disinvestment.

form of government/political status, the type of administration provided for by a country's constitution—whether or not suspended by extralegal military or civil action, although such de facto administrations are identified—together with the number of members (elected, ap-pointed, and ex officio) for each legislative house, named according to its English rendering. Dependent states (*see* Table) are classified according to the status of their political association with the administering country.

gross domestic product (GDP), the total value of the final goods and services produced by residents and nonresidents within a given country during a given accounting period, usually a year. Unless otherwise noted, the value is given in current prices of the year indicated. The *System of National Accounts* (SNA, published under the joint auspices of the UN, IMF, OECD, EC, and World Bank) provides a framework for international comparability in classifying domestic accounting aggregates and international transactions comprising "net factor income from abroad," the measure that distinguishes GDP and GNP.

gross national income (GNI), also called gross national product (GNP), the total value of final goods and services produced both from within a given country and from external (foreign) transactions in a given accounting period, usually a year. Unless otherwise noted, the value is given in current prices of the year indicated. GNI is equal to GROSS DOMESTIC PRODUCT adjusted by net factor income from abroad, which is the income residents receive from abroad for factor services (labour, investment, and interest) less similar payments made to nonresidents who contribute to the domestic economy.

head of government, *see* chief of state/head of government.

health, a group of measures including number of accredited physicians currently practicing or employed and their ratio to the total population; total hospital beds and their ratio; and INFANT MORTALITY RATE.

household, economically autonomous individual or group of individuals living in a single dwelling unit. A family household is one composed principally of individuals related by blood or marriage.

household income and expenditure, data for average size of a HOUSEHOLD (by number of individuals) and median household income. Sources

of income and expenditures for major items of consumption are given as percentages.

In general, household income is the amount of funds, usually measured in monetary units, received by the members (generally those 14 years old and over) of a household in a given time period. The income can be derived from (1) wages or salaries, (2) nonfarm or farm SELF-EMPLOYMENT, (3) transfer payments, such as pensions, public assistance, unemployment benefits, etc., and (4) other income, including interest and dividends, rent, royalties, etc. The income of a household is expressed as a gross amount before deductions for taxes. Data on expenditure refer to consumption of personal or household goods and services; they normally exclude savings, taxes, and insurance; practice with regard to inclusion of credit purchases differs markedly.

imports, material goods legally entering a country (or customs area) and subject to customs regulations; excludes financial movements. The total value and distribution by percentage of the major items (in preference to groups of goods) imported are given, together with the direction of trade among major trading partners (usually single countries), trading blocs (such as the European Union), or customs areas (such as Belgium-Luxembourg). The value of goods imported is given free on board (f.o.b.) unless otherwise specified; f.o.b. is defined above under EXPORTS.

The principal alternate basis for valuation of goods in international trade is that of cost, insurance, and freight (c.i.f.); its use is restricted to imports, as it comprises the principal charges needed to bring the goods to the customs house in the country of destination. Because it inflates the value of imports relative to exports, more countries have, latterly, been estimating imports on an f.o.b. basis as well.

incorporated territory (U.S.), *see* territory.

independent, of a state, autonomous and controlling both its internal and external affairs. Its date usually refers to the date from which the country was in effective control of these affairs within its present boundaries, rather than the date independence was proclaimed or the date recognized as a de jure act by the former administering power.

indirect taxes, taxes levied on sales or transfers of selected intermediate goods and services, including excises, value-added taxes, and tariffs, that are ordinarily passed on to the ultimate consumers of the goods and services. Figures given for individual countries are limited to indirect taxes levied by their respective central governments unless otherwise specified.

infant mortality rate, the number of children per 1,000 live births who die before their first birthday. Total infant mortality includes neonatal mortality, which is deaths of children within one month of birth.

invisibles (invisible trade), *see* balance of trade.

kingdom, *see* monarchy.

labour force, portion of the POPULATION ECONOMICALLY ACTIVE (PEA) comprising those most fully employed or attached to the labour market (the unemployed are considered to be "attached" in that they usually represent persons previously employed seeking to be reemployed), particularly as viewed from a short-term perspective. It normally includes those who are self-employed, employed by others (whether full-time, part-time, seasonally, or on some other less than full-time, basis), and, as noted above, the unemployed (both those previously employed and those seeking work for the first time). In the "gross domestic product and labour force" table, the majority of the labour data provided refer to population economically active, since PEA represents the longer-term view of working population and, thus, subsumes more of the marginal workers who are often missed by shorter-term surveys.

land use, distribution by classes of vegetational cover or economic use of the land area only (excluding inland water, built-up areas, and wasteland), reported as percentages. The principal categories utilized include: (1) arable land under temporary cultivation including land left fallow for less than five years, (2) land under permanent cultivation (significantly tree crops but also grapes, pineapples, and bananas), (3) pastures and rangeland, which includes land in temporary or permanent use whose principal purpose is the growing of animal fodder, and (4) forest areas, whose definition overlaps with other land use classes per the FAO *State of the World's Forests*; forest areas may include scrub forests, forest plantations, and recently afforested or reforested land.

life expectancy, the number of years a person born within a particular population group (age cohort) would be expected to live, based on actuarial calculations.

literacy, the ability to read and write a language with some degree of competence; the precise degree constituting the basis of a particular national statement is usually defined by the national census and is often tested by the census enumerator. Elsewhere, particularly where much adult literacy may be the result of literacy campaigns rather than passage through a formal educational system, definition and testing of literacy may be better standardized.

major cities, usually the five largest cities/towns proper (national capitals are almost always given, regardless of size); fewer cities/towns may be listed if there are fewer urban localities in the country. For multipage tables, 10 or more may be listed.* Populations for cities/towns will usually refer to the city/town proper—i.e., the legally bounded corporate entity, or the most compact, contiguous, demographically urban portion of the entity defined by the local authorities. Occasionally figures for METROPOLITAN AREAS, urban areas, or urban agglomerations are cited when the relevant civil entity at the core of a major agglomeration had an unrepresentatively small population.

manufacturing, mining, and construction enterprises/retail sales and service enterprises, a detailed tabulation of the principal industries in these sectors, showing for each industry the number of enterprises and employees, wages in that industry as a percentage of the general average wage, and the value of that industry's output in terms of value added or turnover.*

marriage rate, the number of legal, civilly recognized marriages annually per 1,000 population.

material well-being, a group of measures indicating the percentage of households or dwellings possessing certain goods or appliances, including automobiles, telephones, television receivers, refrigerators, air conditioners, and washing machines.*

metropolitan area, a city and the region of dense, predominantly urban, settlement around the city; the population of the whole usually has strong economic and cultural affinities with the central city.

military expenditure, the apparent value of all identifiable military expenditure by the central government on hardware, personnel, pensions, research and development, etc., reported here both as a percentage of the GNP, with a comparison to the world average, and as a per capita value in U.S. dollars.

military personnel, see total active duty personnel.

mobility, the rate at which individuals or households change dwellings, usually measured between censuses and including international as well as domestic migration.*

monarchy, a government in which the CHIEF OF STATE holds office, usually hereditarily and for life, but sometimes electively for a term. The

state may be a coprincipality, emirate, kingdom, principality, sheikhdom, or sultanate. The powers of the monarch may range from absolute (i.e., the monarch both reigns and rules) through various degrees of limitation of authority to nominal, as in a constitutional monarchy, in which the titular monarch reigns but others, as elected officials, effectively rule.

monetary unit, currency of issue, or that in official use in a given country; name and abbreviation or symbol according to local practice or name and 3-digit code according to the ISO (International Organization for Standardization); and valuation in U.S. dollars and U.K. pounds sterling, usually according to free-market rates.

See also exchange rate.

natural increase, also called natural growth, or the balance of births and deaths, the excess of births over deaths in a population; the rate of natural increase is the difference between the BIRTH RATE and the DEATH RATE of a given population. The estimated world average during 2005 was 11.7 per 1,000 population, or 1.35% annually. Natural increase is added to the balance of migration to calculate the total growth of that population.

nonreligious, see atheist.

official development assistance, officially administered grants and concessional loans that donors (usually developed countries) give to developing countries to promote economic development and welfare.

official language(s), that (or those) prescribed by the national constitution for day-to-day conduct and publication of a country's official business or, when no explicit constitutional provision exists, that of the constitution itself, the national gazette (record of legislative activity), or like official documents. Other languages may have local protection, may be permitted in parliamentary debate or legal action (such as a trial), or may be "national languages," for the protection of which special provisions have been made, but these are not deemed official. The United States, for example, does not yet formally identify English as "official," though it uses it for virtually all official purposes.

official name, the local official form(s), short or long, of a country's legal name(s) taken from the country's constitution or from other official documents. The English-language form is usually the protocol form in use by the country, the U.S. Department of State, and the United Nations.

official religion, generally, any religion prescribed or given special status or protection by the constitution or legal system of a country. Identification as such is not confined to constitutional documents utilizing the term explicitly.

organized territory (U.S.), see territory.

overseas department (France), see department.

overseas territory (France), see territory.

parliamentary state, see state.

part of a realm, a dependent Dutch political entity with some degree of self-government and having a special status above that of a colony (e.g., the prerogative of rejecting for local application any law enacted by The Netherlands).

participation/activity rates, measures defining differential rates of economic activity within a population. Participation rate refers to the percentage of those employed or economically active who possess a particular characteristic (sex, age, etc.); activity rate refers to the fraction of the total population who are economically active.

passenger-miles, or **passenger-kilometres**, aggregate measure of passenger carriage by a specified means of transportation, equal to the number of passengers carried multiplied by the number of miles (or kilometres) each passenger is transported. Figures given for countries are often calculated from ticket sales and ordi-

narily exclude passengers carried free of charge.

people's republic, see republic.

place of birth/national origin, if the former, numbers of native- and foreign-born population of a country by actual place of birth; if the latter, any of several classifications, including those based on origin of passport at original admission to country, on cultural heritage of family name, on self-designated (often multiple) origin of (some) ancestors, and on other systems for assigning national origin.*

political status, see form of government/political status.

population, the number of persons present within a country, city, or other civil entity at the date of a census of population, survey, cumulation of a civil register, or other enumeration. Unless otherwise specified, populations given are DE FACTO, referring to those actually present, rather than DE JURE, those legally resident but not necessarily present on the referent date. If a time series, noncensus year, or per capita ratio referring to a country's total population is cited, it will usually refer to midyear of the calendar year indicated.

population economically active, the total number of persons (above a set age for economic labour, usually 10–15 years) in all employment statuses—self-employed, wage- or salary-earning, part-time, seasonal, unemployed, etc. The International Labour Organisation defines the economically active as "all persons of either sex who furnish the supply of labour for the production of economic goods and services." National practices vary as regards the treatment of such groups as armed forces, inmates of institutions, persons seeking their first job, unpaid family workers, seasonal workers and persons engaged in part-time economic activities. In some countries, all or part of these groups may be included among the economically active, while in other countries the same groups may be treated as inactive. In general, however, the data on economically active population do not include students, persons occupied solely in family or household work, retired persons, persons living entirely on their own means, and persons wholly dependent upon others.

See also labour force.

population projection, the expected population in the years 2010 and 2020, embodying the country's own projections wherever possible. Estimates of the future size of a population are usually based on assumed levels of fertility, mortality, and migration. Projections in the tables, unless otherwise specified, are medium (i.e., most likely) variants, whether based on external estimates by the United Nations, World Bank, or U.S. Department of Commerce or on those of the country itself.

price and earnings indexes, tabulation comparing the change in the CONSUMER PRICE INDEX over a period of seven years with the change in the general labour force's EARNINGS INDEX for the same period.

principality, see monarchy.

production, the physical quantity or monetary value of the output of an industry, usually tabulated here as the most important items or groups of items (depending on the available detail) of primary (extractive) and secondary (manufactured) production, including construction. When a single consistent measure of value, such as VALUE ADDED, can be obtained, this is given, ranked by value; otherwise, and more usually, quantity of production is given.

public debt, the current outstanding debt of all periods of maturity for which the central government and its organs are obligated. Publicly guaranteed private debt is excluded. For countries that report debt under the World Bank Debtor Reporting System (DRS), figures for outstanding, long-term EXTERNAL DEBT are given.

purchasing power parity, an economic theory used to determine the number of units in a country's currency that are required to buy the same amount of goods and services in another country. As such it is often used to compare the standards of living between countries expressed in a common currency which is usually U.S.\$.. *Britannica World Data* publishes only purchasing power parity rates as calculated by the World Bank method.

quality of working life, a group of measures including weekly hours of work (including overtime); rates per 100,000 for job-connected injury, illness, and mortality; coverage of labour force by insurance for injury, permanent disability, and death; workdays lost to labour strikes and stoppages; and commuting patterns (length of journey to work in minutes and usual method of transportation).*

railroads, mode of transportation by self-driven or locomotive-drawn cars over fixed rails. Length-of-track figures include all mainline and spurline running track but exclude switching sidings and yard track. Route length, when given, does not compound multiple running tracks laid on the same trackbed.

recurrent budget, *see* budget.

religious affiliation, distribution of nominal religionists, whether practicing or not, as a percentage of total population. This usually assigns to children the religion of their parents.

remittances, amount of a migrant's earnings sent from the migration destination to the place of origin. Remittance data are compiled somewhat differently from one country source to another but usually include cash transfers of long-term legal migrants. Cash transfers of short-term ("for less than one year of residence") legal migrants or the cash transfers of illegal migrants and refugees are also often included with remittances. The standard (but not universal) sources used in BWD for national remittances are the latest editions of World Bank publications and UNCTAD *Handbook of Statistics*. These two sources may also (1) include net wages and salaries of all nonresident migrants and (2) approximate the value of migrants' transfers of household and personal effects to their place of origin as part of a broader remittances definition.

republic, a state with elected leaders and a centralized presidential form of government, local subdivisions being subordinate to the national government. A *federal republic* (as distinguished from a unitary republic) is a republic in which power is divided between the central government and the constituent subnational administrative divisions (e.g., states, provinces, or cantons) in whom the central government itself is held to originate, the division of power being defined in a written constitution and jurisdictional disputes usually being settled in a court; sovereignty usually rests with the authority that has the power to amend the constitution. A *unitary republic* (as distinguished from a federal republic) is a republic in which power originates in a central authority and is not derived from constituent subdivisions. A *people's republic*, in the dialectics of Communism, is the first stage of development toward a communist state, the second stage being a *socialist republic*. An *Islamic republic* is structured around social, ethical, legal, and religious precepts central to the Islamic faith.

retail price index, *see* consumer price index.

retail sales and service enterprises, *see* manufacturing, mining, and construction enterprises/retail sales and service enterprises.

roundwood, wood obtained from removals from forests, felled or harvested (with or without bark), in all forms. Roundwood used for fuel is fuelwood; other roundwood used in

construction, paper products, flooring, furniture manufacture, etc., is called industrial roundwood.

rural, *see* urban-rural.

self-employment, work in which income derives from direct employment in one's own business, trade, or profession, as opposed to work in which salary or wages are earned from an employer.

self-governing, of a state, in control of its internal affairs in degrees ranging from control of most internal affairs (though perhaps not of public order or of internal security) to complete control of all internal affairs (*i.e.*, the state is autonomous) but having no control of external affairs or defense. In this work the term self-governing refers to the final stage in the successive stages of increasing self-government that generally precede independence.

service/trade enterprises, *see* manufacturing, mining, and construction enterprises/retail sales and service enterprises.

sex distribution, ratios, calculated as percentages, of male and female population to total population.

sheikhdom, *see* monarchy.

social deviance, a group of measures, usually reported as rates per 100,000 for principal categories of socially deviant behaviour, including specified crimes, alcoholism, drug abuse, and suicide.*

social participation, a group of measures indicative of the degree of social engagement displayed by a particular population, including rates of participation in such activities as elections, voluntary work or memberships, trade unions, and religion.*

social security, public programs designed to protect individuals and families from loss of income owing to unemployment, old age, sickness or disability, or death and to provide other services such as medical care, health and welfare programs, or income maintenance.

socialist republic, *see* republic.

sources of income, *see* household income and expenditure.

Special Drawing Right (SDR), a unit of account utilized by the International Monetary Fund (IMF) to denominate monetary reserves available under a quota system to IMF members to maintain the value of their national currency unit in international transactions.*

state, in international law, a political entity possessing the attributes of: territory, permanent civilian population, government, and the capacity to conduct relations with other states. Though the term is sometimes limited in meaning to fully independent and internationally recognized states, the more general sense of an entity possessing a *preponderance* of these characteristics is intended here. It is, thus, also a first-order civil administrative subdivision, especially of a federated union. An associated state is an autonomous state in free association with another that conducts its external affairs and defense; the association may be terminated in full independence at the instance of the autonomous state in consultation with the administering power. A *parliamentary state* is an independent state of the Commonwealth that is governed by a parliament and that may recognize the British monarch as its titular head.

structure of gross domestic product and labour force, tabulation of the principal elements of the national economy, according to standard industrial categories, together with the corresponding distribution of the labour force (when possible POPULATION ECONOMICALLY ACTIVE) that generates the GROSS DOMESTIC PRODUCT.

sultanate, *see* monarchy.

territory, a noncategorized political dependency; a first-order administrative subdivision; a

dependent political entity with some degree of self-government, but with fewer rights and less autonomy than a colony because there is no charter. An *external territory* (Australia) is a territory situated outside the area of the country. An *organized territory* (U.S.) is a territory for which a system of laws and a settled government have been provided by an act of the United States Congress. An *overseas territory* (France) is an overseas subdivision of the French Republic with elected representation in the French Parliament, having individual statutes, laws, and internal organization adapted to local conditions.

ton-miles, or ton-kilometres, aggregate measure of freight hauled by a specified means of transportation, equal to tons of freight multiplied by the miles (or kilometres) each ton is transported. Figures are compiled from waybills (nationally) and ordinarily exclude mail, specie, passengers' baggage, the fuel and stores of the conveyance, and goods carried free.

total active duty personnel, full-time active duty military personnel (excluding militias and part-time, informal, or other paramilitary elements), with their distribution by percentages among the major services.

total fertility rate, the sum of the current age-specific birth rates for each of the child-bearing years (usually 15-49). It is the probable number of births, given present fertility data, that would occur during the lifetime of each woman should she live to the end of her child-bearing years.

tourism, service industry comprising activities connected with domestic and international travel for pleasure or recreation; confined here to international travel and reported as expenditures in U.S. dollars by tourists of all nationalities visiting a particular country and, conversely, the estimated expenditures of that country's nationals in all countries of destination.

transfer payments, *see* household income and expenditure.

transport, all mechanical methods of moving persons or goods. Data reported for national establishments include: for railroads, length of track and volume of traffic for passengers and cargo (but excluding mail, etc.); for roads, length of network and numbers of passenger cars and of commercial vehicles (*i.e.*, trucks and buses); and for air transport, traffic data for passengers and cargo.

undernourished population, the number of persons according to an FAO study whose daily caloric consumption (based on a weighted average of all age and sex groups) is below a minimum level needed for maintaining a healthy life and performing light physical activity.

unincorporated territory (U.S.), *see* territory.

unitary republic, *see* republic.

urban-rural, social characteristic of local or national populations, defined by predominant economic activities, "urban" referring to a group of largely nonagricultural pursuits, "rural" to agriculturally oriented employment patterns. The distinction is usually based on the country's own definition of urban, which may depend only upon the size (population) of a place or upon factors like employment, administrative status, density of housing, etc.

value added, also called value added by manufacture, the gross output value of a firm or industry minus the cost of inputs—raw materials, supplies, and payments to other firms—required to produce it. Value added is the portion of the sales value or gross output value that is actually created by the firm or industry. Value added generally includes labour costs, administrative costs, and operating profits.

The Nations of the World

Afghanistan

Official name: Islamic Republic of Afghanistan (Jomhūri-ye Eslāmī-ye Afghānestān [Dari]); Da Afghanistan Eslami Jamhuriyat (Pashto)¹.

Form of government: Islamic republic¹ with two legislative bodies (House of Elders [102]; House of the People [249]).

Head of state and government: President.

Capital: Kabul.

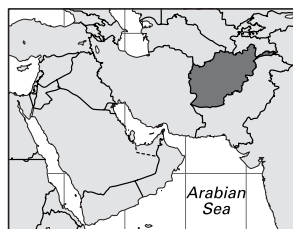
Official languages: Dari; Pashto².

Official religion: Islam.

Monetary unit: (new) afghani (Af);

valuation (Sept. 1, 2009)

1 U.S.\$ = Af 47.53; 1 £ = Af 77.12³.



(value added in Af '000,000; 2005–06): food 48,575; chemicals 1,206; cement, bricks, and ceramics 809; textiles, wearing apparel, and fur 569; base metals 139. Energy production (consumption): electricity (kW-hr; 2006–07) 916,900,000 (483,600,000); hard coal (metric tons; 2006) 33,000 (33,000); crude petroleum, n.a. (none); petroleum products (metric tons; 2006) none (186,000); natural gas (cu m; 2006) 20,000,000 (20,000,000).

Household income and expenditure (2003). Average household size 8.0; sources of income: wages and salaries 49%, self-employment 47%; expenditure (2004)¹²: food 60.6%, housing and energy 16.5%, clothing 9.1%.

Population economically active (2006): total 8,207,000¹³; activity rate of total population 31.5%¹³ (participation rates: ages 15–64, 60.3¹³; female 23.1¹³; unemployed [January 2009] c. 33%).

Price index (2005 = 100)

	2004	2005	2006	2007	2008
Consumer price index	89.2	100.0	103.5	121.0	148.5

Land use as % of total land area (2007): in temporary crops 5.4%, in permanent crops 0.2%, in pasture 46.0%, forest area 1.2%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (1998) 1.0; remittances, n.a.; foreign direct investment (2005–07 avg.) 268; official development assistance (2007) 3,951. Disbursements for (U.S.\$'000,000).

Foreign trade¹⁴

Balance of trade (current prices)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
U.S.\$'000,000	–2,352	–1,957	–1,872	–2,087	–2,328	–2,567
% of total	92.2%	87.2%	75.4%	73.1%	73.7%	73.9%

Imports (2006–07): U.S.\$2,744,000,000 (machinery and equipment 19.4%; household items and medicine 12.0%; food 12.0%; base and fabricated metals 10.0%; mineral fuels 9.3%). **Major import sources** (2005–06): Japan 16.8%; Pakistan 15.9%; China 12.8%; Russia 9.2%; Uzbekistan 8.3%.

Exports (2006–07): U.S.\$416,000,000 (carpets and handicrafts 45.0%; dried fruits 30.3%; fresh fruits 9.4%; skins 5.5%)¹⁵. **Major export destinations** (2005–06): Pakistan 77.6%; India 6.0%; Russia 3.4%; U.A.E. 2.9%.

Transport and communications

Transport. Railroads (2006): route length 10 km. Roads (2006): total length 42,150 km (paved 29%). Vehicles (2005): passenger cars 41,000; trucks and buses 100,000. Air transport (2004–05): passenger-km 681,000,000; metric ton-km cargo 20,624,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	312	14	PCs	2006	1.4	4.0
Telephones				Dailies	2007	27 ¹⁶	1.0 ¹⁶
Cellular	2008	7,899 ¹⁷	290 ¹⁷	Internet users	2007	580	21
Landline	2008	101	3.7	Broadband	2007	0.50 ¹⁷	0.02 ¹⁷

Education and health

Educational attainment: n.a. **Literacy** (2006): total population age 15 and over literate 28.1%; males 43.1%; females 12.6%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–12)	51,802	4,318,819	83.4	...
Secondary/Voc. (age 13–18)	...	651,453	...	...
Tertiary ¹⁸	1,781	27,648	15.5	1 (age 19–23)

Health: physicians (2007) 4,900 (1 per 5,000 persons); hospital beds (2007) 10,290 (1 per 2,381 persons); infant mortality rate (2006) 160.2.

Military

Total active duty personnel (April 2009): 82,780 (army 100%)¹⁹. **Military expenditure as percentage of GDP** (2007): 1.6%²⁰; per capita expenditure c. U.S.\$6²⁰.

¹From promulgation of new constitution on Jan. 26, 2004. ²Six additional locally official languages per the 2004 constitution are Uzbek, Turkmen, Balochi, Kafiri (Nuristani), Pashai, and Pamiri. ³The afghani was re-denominated on Oct. 7, 2002; from that date 100 (old) afghanis equaled 1 (new) afghani. ⁴Refers to settled population only and excludes refugees in Pakistan and Iran. ⁵Created in 2004 from part of Parvān. ⁶Created in 2004 from part of Orūzgān. ⁷Includes Afghan refugees in Pakistan and Iran and nomadic population; the first complete national census since 1976 may be conducted in September 2010. ⁸Services includes Finance, real estate. ⁹Taxes on imports less imputed bank service charges. ¹⁰Detail does not add to total given because of rounding. ¹¹Represents 93% of world production. ¹²Weights of consumer price index components. ¹³ILO estimates. ¹⁴Exports f.o.b.; imports c.i.f. ¹⁵Exports of illegal opiates equalled c. U.S.\$4,000,000,000 in 2007. ¹⁶Circulation. ¹⁷Subscribers. ¹⁸2003–04. ¹⁹Foreign troops (April 2009): 42-country NATO-sponsored security and development force 58,400, of which U.S. 26,200, U.K. 8,300, Germany 3,500, Canada 2,800, France 2,800, Italy 2,400. ²⁰Domestic budget only.

Internet resource for further information:

• Central Statistics Office <http://www.cso.af.net>

Population (2006 estimate)⁴

Province	population ('000)	Province	population ('000)	Province	population ('000)
Badakhshān	823.0	Jowzjān	461.7	Orūzgān	303.6
Bādghīs	429.5	Kābol (Kabul)	3,138.1	Paktiā	477.5
Baghlān	779.0	Kandahār	1,011.7	Paktikā	377.1
Balkh	1,096.1	Kāpīsā	382.6	Panjshīr ⁵	133.2
Bāmīān	387.3	Khovst	498.0	Parvān	573.1
Daykundī ⁶	399.6	Konar	390.2	Samangān	334.8
Farāh	438.0	Kondoz	851.3	Sar-e Pol	482.9
Fāryāb	858.6	Laghman	386.4	Takhār	845.3
Ghaznī	1,062.6	Lowgar	339.7	Vardak	517.2
Ghowr	598.6	Nangarhār	1,289.0	Zābol	263.2
Helmand	799.0	Nimrūz	141.4	TOTAL	22,575.9
Herāt	1,578.2	Nūrestān	128.4		

Demography

Area: 249,347 sq mi, 645,807 sq km.

Population (2009): 28,150,000⁷.

Density (2009): persons per sq mi 112.9, persons per sq km 43.6.

Urban-rural (2006): urban 21.5%; rural 78.5%.

Sex distribution (2006): male 51.14%; female 48.86%.

Age breakdown (2006): under 15, 44.6%; 15–29, 26.7%; 30–44, 16.0%; 45–59, 8.6%; 60–74, 3.5%; 75 and over 0.6%.

Population projection: (2020) 39,585,000; (2030) 50,649,000.

Ethnolinguistic composition (2004): Pashtun c. 42%; Tajik c. 27%; Hazāra c. 9%; Uzbek c. 9%; Chahar Aimak c. 4%; Turkmen c. 3%; other c. 6%.

Religious affiliation (2004): Sunnī Muslim c. 82%; Shī'ī Muslim c. 17%.

Major cities (2006): Kabul 2,536,300; Herāt 349,000; Kandahār (Qandahār) 324,800; Mazār-e Sharīf 300,600; Jalālābād 168,600.

Vital statistics

Birth rate per 1,000 population (2006): 46.6 (world avg. 20.3).

Death rate per 1,000 population (2006): 20.3 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 6.69.

Life expectancy at birth (2006): male 43.2 years; female 43.5 years.

National economy

Budget (2006–07). Revenue: Af 155,394,000,000 (grants 78.1%, taxes on international trade 8.5%, nontax revenue 5.1%). Expenditures: Af 163,884,000,000 (economic affairs 47.3%, general administration 10.9%, public order 9.1%, defense 7.8%, health 3.9%, education 3.5%).

Gross national income (GNI; 2007): U.S.\$10,137,000,000 (U.S.\$373 per capita); purchasing power parity GNI (U.S.\$, n.a.).

Structure of gross domestic product and labour force

	2006–07		2002–03	
	in value Af '000,000	% of total value	labour force ⁴	% of labour force ⁴
Agriculture	117,277	31.7	5,181,400	69.6
Mining	876	0.2		
Manufacturing	62,618	16.9	362,200	4.9
Public utilities	593	0.2		
Transp. and commun.	45,535	12.3	169,500	2.3
Construction	37,412	10.1	98,600	1.3
Trade, hotels, restaurants	33,139	8.9	509,600	6.8
Finance, real estate ⁸	27,543	7.4		
Pub. administration	33,874	9.1	1,126,000	15.1
Services ⁸	11,579 ⁹	3.1 ⁹		
Other				
TOTAL	370,446	100.0 ¹⁰	7,447,300	100.0

Public debt (external, outstanding; 2007): U.S.\$1,961,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006–07): wheat 3,363,000, barley 364,000, rice 361,000, corn (maize) 359,000, grapes (2005) 350,000, potatoes 300,000, berries (2005) 57,000, apricots (2005) 38,448, almonds 20,000, opium poppy (2007) 8,200¹¹; livestock (number of live animals) 9,259,000 sheep, 6,746,000 goats, 174,000 camels; roundwood (2007) 3,290,522 cu m, of which fuelwood 47%; fisheries production (2005) 1,000 (from aquaculture, none). Mining and quarrying: salt (2007) 123,000; chromite 6,800; gemstones, n.a.; marble, n.a. Manufacturing

Albania

Official name: Republika e Shqipërisë (Republic of Albania).

Form of government: unitary multiparty republic with one legislative house (Assembly [140]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Tirana (Tiranë).

Official language: Albanian.

Official religion: none.

Monetary unit: lek (L); valuation (Sept. 1, 2009)

1 U.S.\$ = 92.59 leks;

1 £ = 150.23 leks.



Area and population		area		population
Counties	Capitals	sq mi	sq km	2006 estimate
Berat	Berat	696	1,802	172,478
Dibër	Peshkopi	968	2,507	144,203
Durrës	Durrës	319	827	303,742
Elbasan	Elbasan	1,266	3,278	343,959
Fier	Fier	729	1,887	373,913
Gjirokastrë	Gjirokastrë	1,113	2,883	103,406
Korçë	Korçë	1,433	3,711	257,387
Kukës	Kukës	916	2,373	78,031
Lezhë	Lezhë	610	1,581	157,940
Shkodër	Shkodër	1,375	3,562	246,712
Tiranë	Tirana (Tiranë)	612	1,586	778,903
Vlorë	Vlorë	1,045	2,706	181,565
TOTAL		11,082	28,703	3,142,239¹

Demography

Population (2009): 3,191,000.

Density (2009): persons per sq mi 287.9, persons per sq km 111.2.

Urban-rural (2005²): urban 44.5%; rural 55.5%.

Sex distribution (2007): male 49.78%; female 50.22%.

Age breakdown (2006²): under 15, 25.3%; 15–29, 26.4%; 30–44, 19.9%; 45–59, 16.2%; 60–74, 9.2%; 75–84, 2.5%; 85 and over, 0.5%.

Population projection: (2020) 3,376,000; (2030) 3,455,000.

Ethnic composition (2000): Albanian 91.7%; Greek 2.3%; Aromanian 1.8%; Rom 1.8%; other 2.4%.

Traditional religious groups (2005³): Muslim c. 68%, of which Sunni c. 51%, Bektashi c. 17%; Orthodox c. 22%; Roman Catholic c. 10%.

Major cities (2001): Tirana (Tiranë) 343,078 (urban agglomeration [2007]) 406,000; Durrës 99,546; Elbasan 87,797; Shkodër 82,455; Vlorë 77,691.

Vital statistics

Birth rate per 1,000 population (2008): 11.4 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 6.3 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2008/2005): 6.7/0.9.

Total fertility rate (avg. births per childbearing woman; 2008): 1.40.

Life expectancy at birth (2008): male 72.9 years; female 77.8 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 419.4, of which cerebrovascular disease 151.5, ischemic heart disease 121.4; malignant neoplasms (cancers) 114.9; diseases of the respiratory system 43.3; accidents 41.9.

National economy

Budget (2006). Revenue: 229,444,000,000 leks (tax revenue 89.6%, nontax revenue 6.9%, grants 3.5%). Expenditures: 258,816,000,000 leks (social security and welfare 25.7%, transport and communications 11.8%, education 10.7%, general administration 10.3%, health 9.2%, police 6.3%, defense 4.5%).

Gross national income (GNI; 2008): U.S.\$12,057,000,000 (U.S.\$3,840 per capita); purchasing power parity GNI (U.S.\$7,950 per capita).

Structure of gross domestic product and labour force				
2006				
	in value '000,000 leks	% of total value	labour force	% of labour force
Agriculture	156,592	17.6	542,000	50.0
Mining	5,809	0.7	5,000	0.5
Manufacturing	82,512	9.3	58,000	5.4
Public utilities	...	...	10,900	1.0
Construction	114,214	12.8	53,200	4.9
Transp. and commun.	73,963	8.3	19,000	1.8
Trade, restaurants	167,002	18.7	83,900	7.7
Finance, real estate	203,884	22.9	162,700	15.0
Pub. admin., defense				
Services				
Other	87,024 ⁴	9.8 ⁴	150,000	13.8
TOTAL	891,000⁵	100.0⁶	1,084,000⁶	100.0⁶

Public debt (external, outstanding; end of 2007): U.S.\$2,150,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): alfalfa for forage and silage 2,962,000, corn (maize) 245,400, wheat 230,900, watermelons 169,100, tomatoes 164,900, potatoes 150,000, grapes 127,800; livestock (number of live animals) 1,830,000 sheep, 940,000 goats, 634,000 cattle, 4,572,000 chickens; roundwood (2007) 296,200 cu m, of which fuelwood 75%; fisheries production 7,699 (from aquaculture 26%). Mining and quarrying (2006): chromium ore 50,000. Manufacturing (value added in U.S.\$'000,000; 2005): basic chemicals 33; textiles 33; base metals 32; leather

(all forms) 28; glass and glass products 28; beverages 15. Energy production (consumption): electricity (kW-hr; 2006) 5,094,000,000 (5,705,000,000); lignite (metric tons; 2006) 92,000 (105,000); crude petroleum (barrels; 2008) 2,190,000 ([2005] 2,950,000); petroleum products (metric tons; 2006) 271,000 (1,033,000); natural gas (cu m; 2006) 17,170,000 (17,170,000).

Population economically active (2006): total 1,084,000; activity rate of total population 34.6% (participation rates: ages 15–64, 53.7%; female 39.6%; unemployed [2008] 13.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	80.9	85.9	95.2	100.0	102.4	105.4	108.9
Monthly earnings index	73.3	79.5	91.0	100.0	107.5	...	...

Household income and expenditure. Average household size (2002) 4.3; average annual income per household (2002) 416,556 leks (U.S.\$2,972); sources of urban income (2000): wages and salaries/self-employment 64.2%, transfers/pensions 14.8%; expenditure (2001)⁷: food and nonalcoholic beverages 42.6%, housing/energy 24.4%, hotels and restaurants 7.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,002; remittances (2008) 1,495; foreign direct investment (FDI; 2005–07 avg.) 414; official development assistance (2007) 305. Disbursements for (U.S.\$'000,000): tourism (2007) 923; remittances (2008) 10; FDI (2005–07 avg.) 10.

Land use as % of total land area (2007): in temporary crops 21.1%, in permanent crops 4.4%, in pasture 15.4%, forest area 29.3%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
'000,000,000 leks	–171	–174	–196	–222	–282	–326
% of total	61.1%	58.3%	59.9%	58.8%	59.2%	59.2%

Imports (2007): 379,887,000,000 leks (machinery and apparatus 14.2%; food 12.4%; chemicals and chemical products 8.8%; refined petroleum 7.1%; road vehicles 6.4%; electricity 5.9%; clothing and apparel 5.5%; iron and steel 5.3%). **Major import sources:** Italy 27.1%; Greece 14.6%; Turkey 7.3%; China 6.6%; Germany 5.5%.

Exports (2007): 97,456,000,000 leks (clothing and apparel 26.9%, of which men's or boys' outerwear 11.9%; footwear/insoles/gaiters 21.0%; metal ore and scrap 11.6%; mineral fuels 7.5%; locks and safes 4.4%). **Major export destinations:** Italy 68.1%; Greece 8.3%; Serbia (incl. Kosovo) 6.7%; China 2.6%; Germany 2.4%.

Transport and communications

Transport. Railroads (2007): operational route length 399 km; passenger-km 51,000,000; metric ton-km cargo 53,000,000. Roads (2002): total length 18,000 km (paved 39%). Vehicles (2007): passenger cars 237,932; trucks and buses 89,151. Air transport (2005)⁹: passenger-km 152,000,000; metric ton-km, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	989	318	PCs	2007	120	38
Telephones				Dailies	2007	75 ¹⁰	24 ¹⁰
Cellular	2008	3,141 ¹¹	989 ¹¹	Internet users	2006	471	150
Landline	2008	316	100	Broadband	2008	36 ¹¹	11 ¹¹

Education and health

Educational attainment (2001). Population age 20 and over having: no formal schooling/incomplete primary education 7.8%; primary 55.6%; lower secondary 2.7%; upper secondary 17.9%; vocational 8.8%; university 7.2%. **Literacy** (2006): total population age 15 and over literate 98.7%.

Education (2003–04)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–9)	11,653	250,487	21.5	94
Secondary/Voc. (age 10–17)	22,560	397,056	17.6	73
Tertiary	2,066	53,014	25.7	19 (age 18–22)

Health: physicians (2004) 3,699 (1 per 845 persons); hospital beds (2007) 9,191 (1 per 346 persons); infant mortality rate per 1,000 live births (2008) 6.0; undernourished population (2002–04) 200,000 (6% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2008): 14,295¹². **Military expenditure as percentage of GDP** (2008): 1.1%; per capita expenditure U.S.\$73.

¹Summed total of average annual population. ²January 1. ³In actuality, a majority of citizens are secular after decades of rigidly enforced atheism. ⁴Net taxes less subsidies and less imputed bank service charges. ⁵Excludes legal but unauthorized gray economy that may be as large as 50% of official GDP. ⁶Detail does not add to total given because of rounding. ⁷Weights of consumer price index components. ⁸Imports c.i.f.; exports f.o.b. ⁹Albanian Air only. ¹⁰Circulation. ¹¹Subscribers. ¹²Primarily a land-oriented force supported by naval and air units.

Internet resources for further information:

- Bank of Albania <http://www.bankofalbania.org>
- Institute of Statistics <http://www.instat.gov.al>

Algeria

Official name: Al-Jumhūriyah al-Jazā'irīyah ad-Dīmuqrāṭīyah ash-Sha'bīyah (Arabic) (People's Democratic Republic of Algeria).

Form of government: multiparty republic with two legislative bodies (Council of the Nation [144¹]; National People's Assembly [389]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Algiers.

Official language: Arabic².

Official religion: Islam.

Monetary unit: Algerian dinar (DA); valuation (Sept. 1, 2009) 1 U.S.\$ = DA 72.69; 1 £ = DA 117.95.



Population (2008 preliminary census)

Provinces	population	Provinces	population	Provinces	population
Adrar	402,197	El-Bayadh	262,187	Ouargla	552,539
Ain Defla	771,890	El-Oued	673,934	Oum el-Bouaghi	644,364
Ain Temouchent	368,713	El-Tarf	411,783	Relizane	733,060
Alger	2,947,461	Ghardaïa	375,988	Saïda	328,685
Annaba	640,050	Guelma	482,261	Sétif	1,496,150
Batna	1,128,030	Illizi	54,490	Sidi bel-Abbès	603,369
Béchar	274,866	Jijel	634,412	Skikda	904,195
Bejaïa	915,835	Khenchela	384,268	Souk Ahras	440,299
Biskra	730,262	Laghouat	477,328	Tamanrasset	198,691
Blida	1,009,892	Mascara	780,959	Tébessa	657,227
Bordj Bou Arreridj	634,396	Medéa	830,943	Tiaret	842,060
Bouira	694,750	Mila	768,419	Tindouf	58,193
Boumerdes	795,019	Mostaganem	746,947	Tipaza	617,661
Constantine	943,112	M'Sila	991,846	Tissemsilt	296,366
Djelfa	1,223,223	Naâma	209,470	Tizi Ouzou	1,119,646
Ech-Cheliff	1,013,718	Oran	1,443,052	Tlemcen	945,525
				TOTAL	34,459,729³

Demography

Area: 919,595 sq mi, 2,381,741 sq km.

Population (2009): 35,369,000.

Density (2009): persons per sq mi 38.5, persons per sq km 14.9.

Urban-rural (2005): urban 60.0%; rural 40.0%.

Sex distribution (2008): male 50.52%; female 49.48%.

Age breakdown (2007): under 15, 27.2%; 15–29, 32.1%; 30–44, 21.8%; 45–59, 11.9%; 60–74, 5.2%; 75–84, 1.5%; 85 and over, 0.3%.

Population projection: (2020) 41,229,000; (2030) 45,385,000.

Doubling time: 56 years.

Ethnic composition (2000): Algerian Arab 59.1%; Berber 26.2%, of which Arabized Berber 3.0%; Bedouin Arab 14.5%; other 0.2%.

Religious affiliation (2000): Muslim 99.7%, of which Sunni 99.1%, Ibāḍīyah 0.6%; Christian 0.3%.

Major cities (2005): Algiers 1,532,000 (urban agglom. [2007] 3,354,000); Oran 724,000; Constantine 475,000; Annaba (2004) 410,700; Batna (2004) 285,800.

Vital statistics

Birth rate per 1,000 population (2007): 17.1 (world avg. 20.3).

Death rate per 1,000 population (2007): 4.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 12.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.86.

Marriage rate per 1,000 population (2005): 8.5.

Life expectancy at birth (2007): male 71.9 years; female 75.2 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 150.0; infectious and parasitic diseases 96.5; malignant neoplasms (cancers) 54.2; respiratory infections 45.2; accidents 41.2.

National economy

Budget (2007). Revenue: DA 3,688,500,000,000 (hydrocarbon revenue 75.8%, nonhydrocarbon revenue 24.2%). Expenditures: DA 3,092,700,000,000 (current expenditure 54.1%, capital expenditure 45.9%).

Public debt (external, outstanding; 2007): U.S.\$3,756,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): wheat 2,687,930, potatoes 2,180,961, barley 1,235,880, tomatoes 796,160, onions 703,873, dates 491,188, oranges 474,453, grapes 398,018, olives 364,733; livestock (number of live animals) 19,615,730 sheep, 3,754,590 goats; roundwood (2007) 7,969,540 cu m, of which fuelwood 99%; fisheries production 146,050 (from aquaculture, negligible). Mining and quarrying (2006): iron ore 1,996,000; phosphate rock 1,510,000; zinc (metal content) 572; liquid helium 15,000,000 cu m. Manufacturing (value added in U.S.\$'000,000; 2005): food and beverages 1,230; fabricated metals 880; refined petroleum/manufactured gas 720; motor vehicles and parts 400. Energy production (consumption): electricity (kW-hr; 2006) 35,226,000,000 (35,308,000,000); hard coal (metric tons; 2006) none (948,000); crude petroleum (barrels; 2008) 485,000,000 (2006) 148,550,000; petroleum products (metric tons; 2006) 38,294,000 (10,364,000); natural gas (cu m; 2006) 84,900,000,000 (28,153,000,000).

Land use as % of total land area (2007): in temporary crops 1.6%, in permanent crops 0.4%, in pasture 13.8%, forest area 1.0%.

Household income and expenditure. Average household size (2004) 6.2; disposable income per household (2002) c. U.S.\$5,700; sources of income (2006): self-employment 45.9%, wages and salaries 34.1%, transfers 20.0%; expenditure (1989)*: food and beverages 44.1%, clothing and footwear 11.6%.

Gross national income (GNI; 2008): U.S.\$146,365,000,000 (U.S.\$4,260 per capita); purchasing power parity GNI (U.S.\$7,940 per capita [estimate]).

Structure of gross domestic product and labour force

	2007		2004	
	in value DA '000,000	% of total value	labour force ⁵	% of labour force ⁵
Agriculture	716,000	7.6	1,616,200	17.1
Petroleum and natural gas	4,157,000 ⁶	44.3 ⁶	135,100 ⁶	1.4 ⁶
Other mining	443,000 ⁶	4.7 ⁶	846,700 ⁶	8.9 ⁶
Manufacturing				
Public utilities	815,000	8.7	79,100	0.8
Construction			967,600	10.2
Transp. and commun.	1,923,000	20.5	435,900	4.6
Trade, restaurants			1,339,200	14.1
Finance, real estate			141,200	1.5
Services			1,113,300	11.8
Pub. admin., defense	789,000	8.4	1,104,100	11.7
Other	547,000 ⁷	5.8 ⁷	1,691,600 ⁸	17.9 ⁸
TOTAL	9,390,000	100.0	9,470,000	100.0

Population economically active (2006): total 10,109,600; activity rate of population c. 30% (participation rates: ages 15–64 [2004] c. 74%; female 16.9%; unemployed [June 2008] 12.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.6	95.0	98.4	100.0	102.5	106.1	110.9

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 219; remittances (2008) 2,202; foreign direct investment (FDI; 2005–07 avg.) 1,514; official development assistance (2007) 390. Disbursements for (U.S.\$'000,000): tourism (2007) 377; FDI (2005–07 avg.) 116.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008 ¹⁰
U.S.\$'000,000	+11,140	+14,270	+26,470	+34,060	+34,240	+39,060
% of total	29.5%	28.4%	40.0%	45.2%	39.4%	42.8%

Imports (2006): U.S.\$21,456,000,000 (food and live animals 16.9%, nonelectrical machinery 16.0%, iron and steel 12.9%, motor vehicles 11.1%). **Major import sources:** France 20.4%; Italy 8.8%; China 8.0%; Germany 6.9%; U.S. 6.6%.

Exports (2006): U.S.\$54,613,000,000 (crude petroleum 55.6%, natural gas 27.7%, manufactured gas 7.4%, refined petroleum 7.2%). **Major export destinations:** U.S. 27.2%; Italy 17.1%; Spain 11.0%; France 8.4%; Canada 6.6%.

Transport and communications

Transport. Railroads (2004): route length 2,468 mi, 3,973 km; (2003) passenger-km 946,000,000; metric ton-km cargo 2,041,000,000. Roads (2004): total length 67,295 mi, 108,302 km (paved 70%). Vehicles (2005): passenger cars 1,905,892; trucks and buses 1,068,520. Air transport (2007)¹¹: passenger-km 3,162,000,000; metric ton-km cargo 2,420,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,633	114	PCs	2007	377	11
Telephones				Dailies	2004	1,000 ¹²	29 ¹²
Cellular	2007	27,562 ¹³	814 ¹³	Internet users	2007	3,500	103
Landline	2008	3,068	88	Broadband	2007	287 ¹³	8.4 ¹³

Education and health

Educational attainment (1998). Percentage of economically active population age 6 and over having: no formal schooling 30.1%; primary education 29.9%; lower secondary 20.7%; upper secondary 13.4%; higher 4.3%; other 1.6%. **Literacy** (2005): total population age 15 and over literate 76.3%; males literate 84.5%; females literate 68.0%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	170,207	4,078,954	24.0	95
Secondary/Voc. (age 12–17) ¹⁴	176,375	3,677,107	20.8	66
Tertiary	31,683	901,562	28.5	24 (age 18–22)

Health: physicians (2003) 36,347 (1 per 877 persons); hospital beds (2004) 55,089 (1 per 588 persons); infant mortality rate (2007) 29.8; undernourished population (2002–04) 1,400,000 (4% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

Total active duty personnel (November 2008): 147,000 (army 86.4%, navy 4.1%, air force 9.5%). **Military expenditure as percentage of GDP** (2007): 3.3%; per capita expenditure U.S.\$126.

¹Includes 48 nonelected seats. ²The Berber language, Tamazight, became a national language in April 2002. ³Reported total; summed total equals 34,459,731; includes nomads, excludes other non-household residents. ⁴Weights of consumer price index components; Algiers only. ⁵Based on labour force survey. ⁶Petroleum and natural gas excludes (and Manufacturing includes) refined petroleum. ⁷Import taxes and duties. ⁸Nearly all unemployed including 1,149,400 seeking first employment. ⁹Imports c.i.f. in balance of trade and c.i.f. in commodities and trading partners. ¹⁰Excludes December. ¹¹Air Algérie. ¹²Circulation. ¹³Subscribers. ¹⁴2003–04.

Internet resources for further information:

- **Statistiques Algérie** http://www.ons.dz/then_sta.htm
- **Banque d'Algerie** <http://www.bank-of-algeria.dz>

American Samoa

Official name: American Samoa
(English); Amerika Samoa (Samoan).
Political status: unincorporated and unorganized territory of the United States with two legislative houses (Senate [18]; House of Representatives [21]).

Chief of state: President of the United States.

Head of government: Governor.

Capital: Fagatogo² (legislative and judicial) and Utulei (executive).

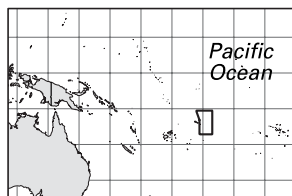
Official languages: English; Samoan.

Official religion: none.

Monetary unit: dollar (U.S.);

valuation (Sept. 1, 2009)

1 U.S.\$ = £0.62.



Area and population	area		population
	sq mi	sq km	2000 census
Districts and islands			
Eastern District	25.9	67.1	23,441
Tutuila Island (part)	25.3	65.5	21,673
Aunu'u Island	0.6	1.6	1,768
Western District	28.8	74.6	32,435
Tutuila Island (part)	28.8	74.6	32,435
Manu'a District (Manu'a Islands)	21.9	56.7	1,378
Ofu Island	2.8	7.2	289
Olosega Island	2.0	5.2	216
Ta'u Island	17.1	44.3	873
Rose Island ³	0.1	0.3	0
Swains Island ³	0.6	1.5	37
TOTAL	77.3⁴	200.2⁴	57,291

Demography

Population (2009): 64,800.

Density (2009): persons per sq mi 838.3, persons per sq km 323.7.

Urban-rural (2007): urban 92.0%; rural 8.0%.

Sex distribution (2007): male 50.68%; female 49.32%.

Age breakdown (2007): under 15, 35.4%; 15–29, 25.7%; 30–44, 19.7%; 45–59, 13.1%; 60–74, 5.1%; 75–84, 0.8%; 85 and over, 0.2%.

Population projection: (2020) 75,000; (2030) 84,000.

Doubling time: 40 years.

Ethnic composition (2005): Samoan 91.6%, of whom born in the nearby independent nation of Samoa 29.3%; Tongan 3.2%; other 5.2%.

Religious affiliation (2005): Protestant c. 38%, of which Congregational c. 21%; Mormon c. 19%; Roman Catholic c. 15%; other (including nonreligious) c. 28%.

Major villages (2000): Tafuna 8,406; Nu'uuli 5,154; Pago Pago 4,278 (urban agglomeration [2001] 15,000); Leone 3,568; Fagatogo 2,096².

Vital statistics

Birth rate per 1,000 population (2007): 21.6 (world avg. 20.3); (2006) within marriage 65.3%; outside of marriage 34.7%.

Death rate per 1,000 population (2007): 4.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 17.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 3.16.

Marriage/divorce rates per 1,000 population: (2006) 2.6/(1993) 0.5.

Life expectancy at birth (2007): male 70.3 years; female 76.3 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 121.7; malignant neoplasms (cancers) 59.3; diseases of the respiratory system 54.6; diabetes mellitus 39.0; accidents, injuries, and violence 34.3.

National economy

Budget (2005). Revenue: U.S.\$182,014,612 (U.S. government grants 48.5%, taxes 27.7%, charges for services 4.6%, other 19.2%). Expenditures: U.S.\$192,498,724 (education and culture 34.2%, general government 23.7%, health and welfare 16.6%, economic development 10.4%, public safety 6.1%, capital projects 3.9%, public works and parks 3.0%, debt 2.1%).

Gross domestic product (2005): U.S.\$462,200,000 (U.S.\$7,407 per capita).

Structure of labour force	2005	
	labour force	% of labour force
Agriculture, forestry, and fishing	360	1.5
Mining	30	0.1
Manufacturing	5,030	21.3
Construction	1,210	5.1
Public utilities	500	2.1
Transp. and commun.	800	3.4
Trade and hotels	2,690	11.4
Finance, real estate	1,200	5.1
Public administration	1,410	6.0
Services	4,530	19.1
Other	5,890 ⁵	24.9 ⁵
TOTAL	23,650	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): coconuts 4,642, taros 1,500, bananas 678, yams 100, coconut oil 65, citrus fruits 26, pineapples 20; livestock (number of live animals) 10,500 pigs, 38,000 chickens; roundwood, n.a.; fisheries production 5,421⁶ (from aqua-

culture, none). Mining and quarrying: pumice, n.a. Manufacturing (value of exports in U.S.\$; 2007): canned tuna 451,500,000; pet food 8,300,000; other manufactures include garments, handicrafts, soap, and alcoholic beverages. Energy production (consumption): electricity (kW-hr; 2006) 193,000,000 (193,000,000); coal, none (n.a.); crude petroleum, none (n.a.); petroleum products (metric tons; 2002) none (93,000); natural gas, none (none).

Public debt: n.a.

Population economically active (2005): total 23,650; activity rate of total population 37.1% (participation rates: ages 16 and over 59.9%; female 43.7%; unemployed 10.0%).

Price index (2000 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index	103.4	108.4	116.1	122.1	125.8	134.2

Household income and expenditure. Average household size (2005) 5.7; average annual income per household (2004) U.S.\$32,028; sources of income: n.a.; expenditure (1995): food and beverages 30.9%, housing and furnishings 25.8%, church donations 20.7%, transportation and communications 9.4%, clothing 2.9%, other 10.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (1998) 10; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism (1996) 2.0; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 10%, in permanent crops 15%, in pasture, n.a.; overall forest area (overlapping with other categories) 89.0%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	-203.0	-111.1	-164.3	-158.1	-132.4	-140.7
% of total	24.2%	12.5%	15.2%	15.1%	15.0%	13.8%

Imports (2006): U.S.\$579,200,000 (fish for cannery 41.0%, other food 24.4%, tin plates 8.3%, mineral fuels 6.1%). **Major import sources** (2006): United States 39.1%; New Zealand 9.1%; Singapore 8.0%; Thailand 6.6%; Fiji 6.6%. **Exports** (2007): U.S.\$462,300,000 (canned tuna 97.7%, pet food 1.8%). **Major export destination** (2006): nearly all United States.

Transport and communications

Transport. Railroads: none. Roads (1991): total length 217 mi, 350 km (paved, 43%). Vehicles (2006): passenger cars 7,758; trucks and buses 602. Air transport (2006): passenger arrivals 75,116; passenger departures 81,907; incoming cargo 1,376 metric tons, outgoing cargo 1,411 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	13	211	PCs	2007	...	...
Telephones	2000	13	211	Dailies	2007	7.0 ⁸	103 ⁸
Cellular	2006	8.5 ⁹	127 ⁹	Internet users	2005	...	...
Landline	2006	11	160	Broadband	2005	...	...

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling to some secondary education 31.2%; completed secondary 42.6%; some college 19.0%; bachelor's degree 5.0%; graduate degree 2.2%. **Literacy** (2000): total population age 10 and over literate 99.4%; males literate 99.4%; females literate 99.5%.

Education (2006)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary	450	11,100	24.7	...
Secondary/Voc.	213	5,074	23.8	...
Tertiary ¹⁰	...	1,607	...	...

Health (2003): physicians 49 (1 per 1,253 persons); hospital beds 128 (1 per 480 persons); infant mortality rate per 1,000 live births (2007) 11.8; undernourished population, n.a.

Military

Military defense is the responsibility of the United States.

¹Including the appointed nonvoting delegate from Swains Island. ²The seat of the legislature, as defined by the Constitution of American Samoa, is at Fagatogo, one of a number of villages within an urban agglomeration collectively known as Pago Pago. ³Not within district administrative structure. Swains Island is administered by a village government and a representative of the governor. ⁴Area of American Samoa including deeply indented harbour is 84.4 sq mi (218.6 sq km). ⁵Includes 3,530 inadequately defined and 2,360 unemployed. ⁶Mostly tuna. ⁷To U.S. only. ⁸Circulation. ⁹Subscribers. ¹⁰American Samoa Community College at Mapusaga.

Internet resources for further information:

- U.S. Department of the Interior: Pacific Web <http://www.pacificweb.org>
- American Samoa Government Department of Commerce <http://www.spc.int/prism/Country/AS/stats/IndexCSSDOC.htm>

Andorra

Official name: Principat d'Andorra (Principality of Andorra).

Form of government: parliamentary coprincipality with one legislative house (General Council [28]).

Chiefs of state: President of France; Bishop of Urgell, Spain.

Head of government: Head of Government.

Capital: Andorra la Vella.

Official language: Catalan.

Official religion: none¹.

Monetary unit: euro (€)²; valuation (Sept. 1, 2009)

1 U.S.\$ = €0.70; 1 £ = €1.13.



Structure of gross domestic product and labour force

	2007			
	value in U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	17.2	0.5	147	0.3
Mining	...	...	...	...
Public utilities	21.2	0.7	159	0.4
Manufacturing	84.9	2.6	1,730	4.0
Construction	332.6	10.2	6,682	15.5
Transportation and communications	104.5	3.2	1,300	3.0
Trade	...	...	11,316	26.2
Restaurants, hotels	829.9	25.6	5,523	12.8
Finance, real estate	...	...	5,824	13.5
Pub. admin., defense	1,475.0	45.4	4,452	10.3
Services	...	...	5,876	13.6
Other	380.1 ⁸	11.7 ⁸	225	0.5
TOTAL	3,245.4	100.0⁹	43,234	100.0⁸

Public debt (2007): c. U.S.\$573,000,000.

Land use as % of total land area (2007): in temporary crops 2.2%, in permanent crops, n.a., in pasture 53.2%, forest area 34.0%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	-1,258	-1,313	-1,328	-1,297	-1,303	-1,248
% of total	88.9%	87.0%	85.4%	84.4%	87.5%	95.3%

Imports (2007): €1,396,000,000 (machinery and apparatus 26.4%; food and beverages 16.2%; motor vehicles 9.2%; clothing and knitwear 9.1%; perfumes, cosmetics, and soaps 7.7%; mineral fuels 6.7%). **Major import sources:** Spain 58.7%; France 18.8%; Germany 5.1%; Italy 3.3%; Japan 2.7%.

Exports (2007): €93,000,000 (electrical machinery and apparatus 25.0%; motor vehicles 18.5%; optical equipment, photo equipment, and other professional goods 10.9%; iron and steel products 6.8%; perfumes, cosmetics, and soaps 3.7%). **Major export destinations:** Spain 61.6%; France 16.2%; Germany 15.7%; Italy 2.2%.

Transport and communications

Transport. Railroads: none; however, both French and Spanish railways stop near the border. Roads (1999): total length 167 mi, 269 km (paved 74%). Vehicles (2007): passenger cars 51,889; trucks and buses 5,395.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	36	461	PCs	...	...	...
Telephones	...	...	...	Dailies	2007	32 ¹⁰	389 ¹⁰
Cellular	2008	64 ¹¹	766 ¹¹	Internet users	2008	59	705
Landline	2008	37	444	Broadband	2008	21 ¹¹	247 ¹¹

Education and health

Educational attainment, n.a. **Literacy:** resident population is virtually 100% literate.

Education (2006–07)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	432	4,427	10.2	81
Secondary/Voc. (age 12–17)	482 ¹²	3,819	7.8 ¹²	72
Tertiary ¹³	81	401 ¹⁴	5.0	10 (age 18–22)

Health (2006): physicians 244 (1 per 327 persons); hospital beds 208 (1 per 385 persons); infant mortality rate per 1,000 live births (2006–07) 2.4; undernourished population, n.a.

Military

Total active duty personnel: none. France and Spain are responsible for Andorra's external security; the police force is assisted in alternate years by either French gendarmerie or Barcelona police. Andorra has no defense budget.

Area and population

Parishes	Capitals	area		population
		sq mi	sq km	2008 ³ estimate
Andorra la Vella	Andorra la Vella	11	27	24,574
Canillo	Canillo	47	121	5,422
Encamp	Encamp	29	74	14,029
Escaldes-Engordany	Escaldes-Engordany	12	32	16,475
La Massana	La Massana	23	61	9,357
Ordino	Ordino	34	89	3,685
Sant Julià de Lòria	Sant Julià de Lòria	23	60	9,595
TOTAL		179	464	83,137

Demography

Population (2009): 85,200.

Density (2009): persons per sq mi 476.0, persons per sq km 183.6.

Urban-rural (2003): urban 93%; rural 7%.

Sex distribution (2005): male 52.16%; female 47.84%.

Age breakdown (2008³): under 15, 14.6%; 15–29, 19.0%; 30–44, 29.1%; 45–59, 20.8%; 60–74, 10.3%; 75–84, 4.2%; 85 and over, 2.0%.

Population projection: (2020) 94,000; (2030) 94,000.

Doubling time: 98 years.

Ethnic composition (by nationality; 2008³): Andorran 36.7%; Spanish 33.0%; Portuguese 16.3%; French 6.3%; British 1.3%; Argentinian 0.8%; Moroccan 0.6%; other 5.0%.

Religious affiliation (2000): Roman Catholic 89.1%; other Christian 4.3%; Muslim 0.6%; Hindu 0.5%; nonreligious 5.0%; other 0.5%.

Major towns (2008³): Andorra la Vella 21,556; Escaldes-Engordany 16,475; Encamp 8,704; Sant Julià de Lòria 8,077; La Massana 4,662.

Vital statistics

Birth rate per 1,000 population (2007): 10.0 (world avg. 20.3).

Death rate per 1,000 population (2007): 2.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 7.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.17.

Marriage rate per 1,000 population (2007): 3.1.

Life expectancy at birth (2007): male 80.4 years; female 85.4 years.

Major causes of death per 100,000 population (2002–06 avg.): malignant neoplasms (cancers) 108.2; diseases of the circulatory system 100.6; diseases of the respiratory system 28.5; injuries and poisoning 27.7; diseases of the digestive system 18.2.

National economy

Budget (2006). Revenue: €340,500,000 (indirect taxes 75.7%, property income 4.3%, other taxes and income 20.0%). Expenditures: €340,500,000 (current expenditures 53.5%; development expenditures 46.5%).

Production. Agriculture, forestry, fishing (2006): tobacco 315 metric tons; other traditional crops include hay, potatoes, and grapes; livestock (number of live animals; 2007) 2,058 sheep, 1,478 cattle, 847 horses; roundwood, n.a.; fisheries production, n.a. Quarrying: small amounts of marble are quarried. Manufacturing (2006): local manufactured goods include cigarettes, furniture, food and beverages, newspapers and magazines, and worked metals; many manufactures are imported for resale to tourists. Energy production (consumption): electricity (kW-hr; 2006) 73,900,000 ([2007] 577,000,000); coal, none (n.a.); crude petroleum, none (n.a.); petroleum products, none (n.a.); natural gas, none (n.a.).

Household income and expenditure (2003): average household size 2.8; expenditure per household €35,470 (U.S.\$40,034); sources of income: n.a.; expenditure: transportation 22.1%, food, beverages, and tobacco products 19.4%, housing and energy 16.1%, hotels and restaurants 7.8%, clothing and footwear 7.6%, recreation and culture 6.9%.

Population economically active (2007): total 43,234; activity rate of total population c. 55% (participation rates: ages 15–64 [2003] 75.1%; female 46.6%; unemployed, n.a.⁴).

Price and earnings indexes (2000 = 100) ⁵							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	106.3	109.3	113.0	116.5	120.2	124.9	127.4
Monthly earnings index	111.4	116.8	123.5	130.0	138.4	...	...

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism⁶; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances (2001–02) 12.

Gross national income (at current market prices; 2007): U.S.\$3,250,000,000 (U.S.\$43,504 per capita)⁷.

¹Roman Catholicism enjoys special recognition in accordance with Andorran tradition.

²Andorra uses the euro as its official currency even though it is not a member of the EU.

³January 1. ⁴The restricted size of the indigenous labour force necessitates immigration to serve the tourist trade, especially seasonal cross-border workers from Portugal and Spain.

⁵All indexes are end of year. ⁶In 2006, Andorra had 10,736,722 visitors, of which daily excursionists from Spain 4,612,061, daily excursionists from France 3,705,536.

⁷Tourism and the banking system (c. 60% in 2007) are the primary sources of gross national income. ⁸Includes taxes and customs duties. ⁹Detail does not add to total given because of rounding.

¹⁰Circulation. ¹¹Subscribers. ¹²2004–05. ¹³2005–06. ¹⁴Other students are enrolled in Spain (644 in 2004–05), in France (181 in 2004–05), and elsewhere (6 in 2004–05).

Internet resources for further information:

- Andorra Statistical Yearbook
<http://www.estadistica.ad>
- Cambra de Comerç Indústria i Serveis d'Andorra
<http://www.ccis.ad/ing/index.html>

Angola

Official name: República de Angola
(Republic of Angola).

Form of government: unitary multiparty
republic with one legislative house
(National Assembly [2201]).

Head of state and government:

President assisted by Prime Minister.

Capital: Luanda.

Official language: Portuguese.

Official religion: none.

Monetary unit: kwanza (AOA); valuation
(Sept. 1, 2009) 1 U.S.\$ = AOA 77.81;
1 £ = AOA 126.25.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2008 estimate
Bengo	Caxito	12,112	31,371	...
Benguela	Benguela	12,273	31,788	...
Bié	Kuito	27,148	70,314	...
Cabinda	Cabinda	2,807	7,270	...
Cuando Cubango	Menongue	76,853	199,049	...
Cuanza Norte	N'dalatando	9,340	24,190	...
Cuanza Sul	Sumbe	21,491	55,660	...
Cunene	Ondjiva	34,495	89,342	...
Huambo	Huambo	13,233	34,274	...
Huíla	Lubango	28,959	75,002	...
Luanda	Luanda	934	2,418	...
Lunda Norte	Lucapa	39,685	102,783	...
Lunda Sul	Saurimo	17,625	45,649	...
Malanje	Malanje	37,684	97,602	...
Moxico	Luenha	86,110	223,023	...
Namibe	Namibe	22,447	58,137	...
Uíge	Uíge	22,664	58,698	...
Zaire	M'banza Congo	15,494	40,130	...
TOTAL		481,354	1,246,700	18,021,000

Demography

Population (2009): 18,498,000.

Density (2009): persons per sq mi 38.4, persons per sq km 14.8.

Urban-rural (2006): urban 55.8%; rural 44.2%.

Sex distribution (2007): male 50.51%; female 49.49%.

Age breakdown (2007): under 15, 43.7%; 15–29, 27.1%; 30–44, 16.2%; 45–59, 8.5%; 60–74, 3.9%; 75–84, 0.6%; 85 and over, negligible.

Population projection: (2020) 24,507,000; (2030) 30,416,000.

Doubling time: 36 years.

Ethnic composition (2000): Ovimbundu 25.2%; Kimbundu 23.1%; Kongo 12.6%; Lwena (Luvale) 8.2%; Chokwe 5.0%; Kwanyama 4.1%; Nyaneka 3.9%; Luchazi 2.3%; Ambo (Ovambo) 2.0%; Mbwele 1.7%; Nyemba 1.7%; mixed race (Eurafrican) 1.0%; white 0.9%; other 8.3%.

Religious affiliation (2006): Roman Catholic c. 55%; independent Christian c. 30%, of which African indigenous c. 25%; Brazilian evangelical c. 5%; Protestant c. 10%; Muslim c. 0.7%; traditional beliefs/other c. 4.3%.

Major cities (2004): Luanda (urban agglomeration; 2005) 2,766,000; Huambo 173,600; Lobito 137,400; Benguela 134,500; Namibe 132,900.

Vital statistics

Birth rate per 1,000 population (2007): 44.5 (world avg. 20.3).

Death rate per 1,000 population (2007): 24.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 19.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 6.27.

Life expectancy at birth (2007): male 36.7 years; female 38.6 years.

Major causes of death (percentage of total deaths; 2002): diarrheal diseases 16%; respiratory infections 15%; HIV/AIDS 7%; perinatal conditions 6%; malaria 6%.

Adult population (ages 15–49) living with HIV (2007): 2.1% (world avg. 0.8%).

National economy

Budget (2006). Revenue: U.S.\$20,966,000,000 (petroleum revenue 80.1%, non-petroleum revenue 19.9%). Expenditure: U.S.\$14,269,000,000 (current expenditure 71.8%, development expenditure 28.2%).

Household income and expenditure (2002). Average household size 5.0; annual income per household: n.a.; sources of income: n.a.; expenditure²: food and nonalcoholic beverages 46.1%, housing and energy 12.3%, household furnishings 6.5%, transportation 6.5%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): cassava 8,810,000, sweet potatoes 685,000, potatoes 593,000, corn (maize) 566,000, sugarcane 360,000, bananas 305,851, oil palm fruit 291,233, millet 137,864, dry beans 100,000, peanuts (groundnuts) 57,000, pineapples 40,741, coffee 1,860; livestock (number of live animals) 4,150,000 cattle, 2,050,000 goats, 780,000 pigs; roundwood (2007) 4,836,000 cu m, of which fuelwood 77%; fisheries production 213,948 (from aquaculture, none). Mining and quarrying (2007): diamonds 9,702,000 carats (90% gem grade); granite 46,000 cu m. Manufacturing (2003): fuel oil 609,000³; cement 500,620; diesel fuel 461,000³; jet fuel 290,000³; wheat flour 38,168; frozen fish 36,173; beer 1,920,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2006) 2,959,000,000 (2,959,000,000); coal, none (none); crude petroleum (barrels; 2008) 694,980,000 ([2006] 15,883,000); petroleum products (metric tons; 2006) 1,821,000 (2,075,000); natural gas (cu m; 2006) 793,000,000 (793,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 75; remittances, n.a.; foreign direct investment (2005–07 avg.) –947; official development assistance (2007) 241. Disbursements from (U.S.\$'000,-

000): tourism (2006) 148; remittances (2008) 603; foreign direct investment (2005–07 avg.) 247.

Gross national income (GNI; 2008): U.S.\$62,113,000,000 (U.S.\$3,450 per capita); purchasing power parity GNI (U.S.\$5,020 per capita).

Structure of gross domestic product and labour force

	2006		2003		
	in value AOA '000,000	% of total value	labour force	% of labour force	
Agriculture	322,900	8.9	4,406,000	71.0	
Crude petroleum ^{4, 5}	2,120,700	58.4			
Diamond mining	120,600	3.3			
Manufacturing	154,400	4.3			
Construction	131,700	3.6			
Public utilities	1,200	0.1	1,796,000	29.0	
Trade, restaurants	566,100	15.6			
Finance	210,400	5.8			
Transp. and commun.					
Pub. admin., defense					
Services					
Other ⁶	1,600	0.1	...	...
TOTAL	3,629,700 ⁷	100.0 ⁷	6,202,000	100.0	

Public debt (external, outstanding; 2007): U.S.\$10,474,000,000.

Population economically active (2006)⁸: total 7,246,000; activity rate of total population 43.8% (participation rates: ages 15–64, 82.8%; female 46.7%; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	28.6	56.7	81.3	100.0	113.3	127.2	143.0

Land use as % of total land area (2007): in temporary crops 2.6%, in permanent crops 0.2%, in pasture 43.3%, forest area 47.2%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+4,568	+4,028	+7,643	+15,756	+22,277	+30,735
% of total	37.8%	26.9%	39.6%	48.5%	53.7%	52.9%

Imports (2006): U.S.\$10,776,000,000 (consumer goods 60.3%, capital goods 28.8%, intermediate goods 10.9%). **Major import sources** (2005): South Korea 20.5%; Portugal 13.4%; U.S. 12.5%; South Africa 7.4%; Brazil 7.0%.

Exports (2006): U.S.\$31,817,000,000 (crude petroleum 94.2%, diamonds 3.6%, refined petroleum 0.9%). **Major export destinations** (2005): U.S. 39.8%; China 29.6%; France 7.8%; Chile 5.4%; Taiwan 4.4%.

Transport and communications

Transport. Railroads (2008): route length of lines in operation c. 750 km; (2006) passenger-km 69,900,000⁹; (2006) metric ton-km cargo 510,000⁹. Roads (2006): total length c. 72,000 km (paved c. 25%)¹⁰. Vehicles (2001): passenger cars 117,200; trucks and buses 118,300. Air transport: passenger-km (2004) 479,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	582	52	PCs	2006	84	7.0
Telephones				Dailies	2007	41 ¹¹	3.3 ¹¹
Cellular	2008	6,673 ¹²	370 ¹²	Internet users	2008	550	31
Landline	2008	114	6.3	Broadband	2007	12 ¹²	0.7 ¹²

Education and health

Educational attainment: n.a. **Literacy** (2006): percentage of population age 15 and over literate 67.4%; males literate 82.9%; females literate 54.2%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	...	3,707,087	...	...
Secondary/Voc. (age 10–16)	21,818 ¹³	460,844 ¹⁴	19.0 ¹³	...
Tertiary	1,286	48,694	37.9	3 (age 17–21)

Health: physicians (2004) 1,165 (1 per 9,890 persons); hospital beds (2005) 1,170 (1 per 10,000 persons); infant mortality rate per 1,000 live births (2007) 184.4; undernourished population (2002–04) 4,800,000 (35% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 107,000 (army 93.5%, navy 0.9%, air force 5.6%). **Military expenditure as percentage of GDP** (2008): 3.9%; per capita expenditure U.S.\$194.

¹Excludes 3 unfilled seats reserved for Angolans living abroad. ²Weights of consumer price index components; Luanda only. ³2005. ⁴Includes liquefied petroleum gas. ⁵In 2008 about half of crude petroleum production came from offshore Cabinda, an enclave separated from Angola proper by a sliver of the Dem. Rep. of the Congo. Onshore production in Cabinda has been stymied by the possibility of secessionist unrest. ⁶Import duties. ⁷Detail does not add to total given because of rounding. ⁸ILO estimates. ⁹Benguela Railway only. ¹⁰General condition of even paved roads is poor. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2000–01. ¹⁴2001–02.

Internet resources for further information:

- Bank of Angola <http://www.bna.ao>
- Ministério das Finanças <http://www.minfin.gv.ao>

Antigua and Barbuda

Official name: Antigua and Barbuda.

Form of government: constitutional monarchy with two legislative houses (Senate [17]; House of Representatives [17]).

Chief of state: British Monarch represented by Governor-General.

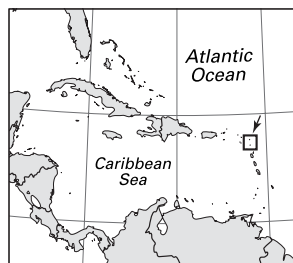
Head of government: Prime Minister.

Capital: Saint John's.

Official language: English.

Official religion: none.

Monetary unit: Eastern Caribbean dollar (EC\$); valuation (Sept. 1, 2009) 1 U.S.\$ = EC\$2.70; 1 £ = EC\$4.38.



Gross national income (GNI; 2008): U.S.\$1,165,000,000 (U.S.\$13,620 per capita); purchasing power parity GNI (U.S.\$20,570 per capita [estimate]).

Structure of gross domestic product and labour force

	2007		2001	
	in value EC\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	79.5	2.5	946	2.4
Quarrying	63.2	2.0	106	0.3
Manufacturing	48.2	1.5	1,541	3.9
Construction	519.1	16.6	3,122	7.9
Public utilities	70.9	2.3	513	1.3
Transp. and commun.	510.1	16.4	2,808	7.1
Trade, restaurants, and hotels	466.7	15.0	9,927	25.1
Finance, real estate	400.4	12.8	2,509	6.3
Pub. admin., defense	433.1	13.9	4,376	11.1
Services	155.2	5.0	7,417	18.7
Other	371.5 ⁶	11.9 ⁶	6,299 ⁷	15.9 ⁷
TOTAL	3,117.9	100.0⁸	39,564	100.0

Public debt (external, outstanding; December 2007): U.S.\$615,400,000.

Land use as % of total land area (2007): in temporary crops 18.2%, in permanent crops 2.3%, in pasture 9.1%, forest area 21.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 338; remittances (2008) 26; foreign direct investment (2005–07 avg.) 326; official development assistance (2007) 4. Disbursements for (U.S.\$'000,000): tourism (2007) 51; remittances (2008) 2.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–269	–308	–345	–373	–486	–475
% of total	80.0%	77.5%	75.1%	69.3%	76.6%	70.6%

Imports (2007): U.S.\$573,000,000 (machinery and apparatus 20.3%; manufactured goods 16.3%; food and live animals 15.0%; road vehicles 8.1%; refined petroleum 6.2%⁹). **Major import sources:** U.S. 58.2%; U.K. 6.4%; Japan 4.3%; Netherlands Antilles 4.2%; Trinidad and Tobago 3.9%.

Exports (2007): U.S.\$99,000,000 (refined petroleum 57.6%⁹; telecommunications equipment 6.6%; generators 3.0%; sails 2.9%). **Major export destinations:** Netherlands Antilles 30.9%; U.S. 23.5%; Barbados 8.2%; Dominica 6.1%; U.K. 4.2%.

Transport and communications

Transport. Railroad¹⁰. Roads (2002): total length 725 mi, 1,165 km (paved 33%). Vehicles: n.a. Air transport (2006): passenger-km 118,200,000; metric ton-km cargo 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	34	449	PCs	...	...	...
Telephones				Dailies	2007	91 ¹	105 ¹¹
Cellular	2008	137 ¹²	1,616 ¹²	Internet users	2008	65	769
Landline	2008	38	450	Broadband	2008	13 ¹²	149 ¹²

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.6%; incomplete primary education 2.6%; complete primary 27.9%; secondary 43.6%; higher (not university) 14.4%; university 10.9%. **Literacy** (2003): percentage of total population age 15 and over literate 85.8%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–11)	538	11,569	21.5	74
Secondary/Voc. (age 12–16)	361 ¹³	7,838	16 ¹³	...
Tertiary ¹⁴	32	203	6.3	... (age 17–21)

Health: physicians, n.a.; hospital beds (2009) 211 (1 per 420 persons); infant mortality rate per 1,000 live births (2007) 18.8; undernourished population, n.a.

Military

Total active duty personnel (November 2008): a 170-member defense force (army 73.5%, navy 26.5%) is part of the Eastern Caribbean regional security system. **Military expenditure as percentage of GDP** (2007): 0.5%; per capita expenditure U.S.\$61.

¹Directly elected seats only; attorney general and speaker may serve ex officio if they are not elected to House of Representatives. ²Community councils on Antigua and the local government council on Barbuda are the organs of local government. ³Based on table of detailed de facto census results released in July 2004. ⁴Large settlements include (2006): All Saints 2,550; Liberta 1,680; Bolans 1,670; Codrington (on Barbuda) 680. ⁵Weights of consumer price index components. ⁶Net indirect taxes less subsidies and imputed bank service charges. ⁷Includes 3,329 unemployed and 2,970 inadequately defined activities. ⁸Detail does not add to total given because of rounding. ⁹Fuel storage facilities on Antigua supply petroleum to eastern Caribbean countries. ¹⁰Mostly nonoperative privately owned tracks. ¹¹Circulation. ¹²Subscribers. ¹³2000–01. ¹⁴University of Health Sciences Antigua only.

Internet resources for further information:

- Eastern Caribbean Central Bank <http://www.eccb-centralbank.org>
- Reports and Statistics http://www.antigua.gov.ag/gov_v2/government/statsandreports/index.html

Area and population

Parishes (of Antigua) ²	area		population
	sq mi	sq km	2001 census
Saint George	9.3	24.1	6,673
Saint John's (city)	2.9	7.5	24,451
Saint John's (rural)	25.6	66.3	20,895
Saint Mary	22.0	57.0	6,793
Saint Paul	18.5	47.9	7,848
Saint Peter	12.7	32.9	5,439
Saint Phillip	17.0	44.0	3,462
Other islands²			
Barbuda	62.0	160.6	1,325
Redonda	0.5	1.3	0
TOTAL	170.5	441.6	76,886³

Demography

Population (2009): 85,600.

Density (2009): persons per sq mi 502.1, persons per sq km 193.8.

Urban-rural (2003): urban 37.7%; rural 62.3%.

Sex distribution (2007): male 47.61%; female 52.39%.

Age breakdown (2001): under 15, 27.6%; 15–29, 23.6%; 30–44, 23.3%; 45–59, 16.0%; 60–74, 6.7%; 75–84, 2.1%; 85 and over, 0.7%.

Population projection: (2020) 98,000; (2030) 109,000.

Ethnic composition (2000): black 82.4%; U.S. white 12.0%; mulatto 3.5%; British 1.3%; other 0.8%.

Religious affiliation (2001): Christian c. 74%, of which Anglican c. 23%, independent Christian c. 23%, other Protestant (including Methodist, Moravian, and Seventh-day Adventist) c. 28%; Rastafarian c. 2%; atheist/nonreligious c. 5%; other/unknown c. 19%.

Major town (2006): Saint John's 25,300⁴.

Vital statistics

Birth rate per 1,000 population (2007): 17.0 (world avg. 20.3); (2001) within marriage 25.7%; outside of marriage 74.3%.

Death rate per 1,000 population (2007): 6.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 10.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.09.

Marriage/divorce rates per 1,000 population (2001): 23.6/1.2.

Life expectancy at birth (2007): male 71.9 years; female 75.7 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 215, of which cerebrovascular disease 63, ischemic heart disease 59, hypertensive diseases 42; malignant neoplasms (cancers) 118; diabetes mellitus 81; perinatal conditions 37.

National economy

Budget (2007). Revenue: EC\$718,300,000 (tax revenue 91.4%, of which taxes on international transactions 38.3%, taxes on income and profits 14.0%; current nontax revenue 5.1%; grants 2.8%; development revenue 0.7%). Expenditures: EC\$923,800,000 (current expenditures 78.3%, of which transfers and subsidies 21.7%; development expenditures 21.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): milk 5,400, mangoes, mangosteens, and guavas 1,430, melons 840, tomatoes 395, eggplants 345, lemons and limes 305, "Antiguan Black" pineapples 210; livestock (number of live animals) 19,000 sheep, 14,500 cattle; roundwood, n.a.; fisheries production (2006) 3,092 (from aquaculture, none). Mining and quarrying: crushed stone for local use. Manufacturing: manufactures include cement, bricks, and tiles, handicrafts, alcoholic and nonalcoholic beverages, and jams and jellies. Energy production (consumption): electricity (kW-hr; 2006) 116,000,000 (116,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (139,000); natural gas, none (none).

Population economically active (2001): total 39,564; activity rate of total population 51.5% (participation rates: ages 15–64, 77.0%; female c. 50%; unemployed [late 2005, early 2006] c. 4%).

Price index (2000 = 100)

	2002	2003	2004	2005	2006	2007
Consumer price index	103.9	105.9	108.0	110.3	113.2	116.7

Household income and expenditure (2001). Average household size 3.1; income per household: n.a.; sources of income: n.a.; expenditure⁵: housing 21.8%, food 21.4%, transportation and communications 15.4%, household furnishings 12.6%, clothing and footwear 11.1%.

Argentina

Official name: República Argentina (Argentine Republic).

Form of government: federal republic with two legislative houses (Senate [72]; Chamber of Deputies [257]).

Head of state and government: President.

Capital: Buenos Aires.

Official language: Spanish.

Official religion: none¹.

Monetary unit: peso (ARS); valuation (Sept. 1, 2009) 1 U.S.\$ = ARS 3.85; 1 £ = ARS 6.25.



Area and population

area		population		area		population	
Provinces	sq km	2001 census	Provinces	sq km	2001 census		
Buenos Aires	307,571	13,827,203	Neuquén	94,078	474,155		
Catamarca	102,602	334,568	Río Negro	203,013	552,822		
Chaco	99,633	984,446	Salta	155,488	1,079,051		
Chubut	224,686	413,237	San Juan	89,651	620,023		
Córdoba	165,321	3,066,801	San Luis	76,748	367,933		
Corrientes	88,199	930,991	Santa Cruz	243,943	196,958		
Entre Ríos	78,781	1,158,147	Santa Fe	133,007	3,000,701		
Formosa	72,066	486,559	Santiago del Estero	136,351	804,457		
Jujuy	53,219	611,888	Tierra del Fuego ²	21,571	101,079		
La Pampa	143,440	299,294	Tucumán	22,524	1,338,523		
La Rioja	89,680	289,983	Autonomous city				
Mendoza	148,827	1,579,651	Buenos Aires	203	2,776,138		
Misiones	29,801	965,522	TOTAL	2,780,403	36,260,130		

Demography

Population (2009): 40,276,000.

Density (2009): persons per sq mi 37.5, persons per sq km 14.5.

Urban-rural (2005): urban 91.4%; rural 8.6%.

Sex distribution (2007): male 49.23%; female 50.77%.

Age breakdown (2007): under 15, 25.9%; 15–29, 24.9%; 30–44, 19.2%; 45–59, 15.4%; 60–74, 9.8%; 75–84, 3.6%; 85 and over, 1.2%.

Population projection: (2020) 44,304,000; (2030) 47,255,000.

Doubling time: 65 years.

Ethnic composition (2000): European extraction 86.4%; mestizo 6.5%; Amerindian 3.4%; Arab 3.3%; other 0.4%.

Religious affiliation (2005): Roman Catholic c. 70%³; Protestant c. 9%; Muslim (mostly Sunni) c. 1.5%; Jewish c. 0.8%; nonreligious/unknown c. 16.2%; other (significantly Middle East–based Christian) c. 2.5%.

Major urban agglomerations (2007): Buenos Aires 12,795,000; Córdoba 1,452,000; Rosario 1,203,000; Mendoza 918,000; San Miguel de Tucumán 832,000.

Vital statistics

Birth rate per 1,000 population (2007): 18.3 (world avg. 20.3).

Death rate per 1,000 population (2007): 7.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 10.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.39.

Marriage/divorce rates per 1,000 population (2006): 3.5/n.a.

Life expectancy at birth (2007): male 72.9 years; female 79.6 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 239.8; malignant neoplasms (cancers) 144.8; accidents and violence 47.7; infectious and parasitic diseases 35.2; diabetes mellitus 24.4.

Adult population (ages 15–49) **living with HIV** (2007): 0.5% (world avg. 0.8%).

National economy

Budget (2008)⁴. Revenue: ARS 169,463,000,000 (indirect taxes 57.1%; social security contributions 23.7%; direct taxes 12.9%). Expenditure: ARS 161,486,000,000 (current expenditure 88.2%, of which social security 41.2%, debt servicing 11.9%, economic development 9.4%, education 6.3%, health 3.7%, defense 2.6%; capital expenditure 11.8%).

Public debt (external, outstanding; 2007): U.S.\$66,110,000,000.

Gross national income (GNI; 2008): U.S.\$287,160,000,000 (U.S.\$7,200 per capita); purchasing power parity GNI (U.S.\$14,020 per capita).

Structure of gross domestic product and labour force

	2006		2001	
	in value ARS '000,000	% of total value	labour force	% of labour force
Agriculture	50,760	7.7	910,996	6.0
Mining	36,235	5.5	37,979	0.2
Manufacturing	134,709	20.6	1,245,544	8.2
Construction	34,897	5.3	638,566	4.2
Public utilities	9,712	1.5	90,165	0.6
Transp. and commun.	53,565	8.2	717,573	4.7
Trade, restaurants	85,471	13.1	2,213,065	14.5
Finance, real estate	94,010	14.4	898,264	5.9
Pub. admin., defense	33,629	5.1	969,280	6.3
Services	71,805	11.0	2,762,447	18.1
Other	49,647 ⁵	7.6 ⁵	4,780,904 ⁶	31.3 ⁶
TOTAL	654,440	100.0	15,264,783	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): soybeans 45,500,000, alfalfa (2006) 38,783,332, corn (maize) 21,775,364, sugarcane 19,200,000, wheat 14,000,000, cow's milk 10,500,000, sunflower seeds 3,500,000, grapes 2,900,000, beef 2,830,000, apples 1,300,000, lemons and limes 1,260,000, maté 270,000; livestock (number of live animals) 50,750,000

cattle, 12,450,000 sheep, 3,680,000 horses; roundwood 13,871,000 cu m, of which fuelwood 32%; fisheries production (2006) 1,184,713 (from aquaculture, negligible). Mining and quarrying (2006): boron 533,535; copper (metal content) 180,144; silver 248,227 kg; gold 44,131 kg. Manufacturing (value added in U.S.\$'000,000; 2002): food products 10,152, of which vegetable oils and fats 3,864; base metals 4,031; industrial and agricultural chemicals 2,770; refined petroleum products 2,514; beverages 1,977; transport equipment 1,958. Energy production (consumption): electricity (kW-hr; 2007) 104,448,000,000 ([2006] 117,555,000,000); coal (metric tons; 2006) 427,000 (1,254,000); crude petroleum (barrels; 2008) 241,400,000 ([2006] 202,307,000); petroleum products (metric tons; 2006) 26,785,000 (22,541,000); natural gas (cu m; 2007) 59,484,000,000 ([2006] 45,641,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,314; remittances (2008) 691; foreign direct investment (FDI; 2005–07 avg.) 5,341. Disbursements for (U.S.\$'000,000): tourism (2007) 3,921; remittances (2008) 732; FDI (2005–07 avg.) 1,542.

Population economically active (2006)⁷: total 11,089,700; activity rate of total population 46.2% (participation rates: ages 15–64, 68.5%; female 43.4%; unemployed [April 2007–March 2008] 8.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	77.0	87.4	91.2	100.0	110.9	120.7	131.1

Household size and expenditure. Average household size (2001) 3.6; average annual income per household (1996–97) ARS 12,972 (U.S.\$12,978); sources of income: n.a.; expenditure (1996–97): food products 26.8%, transportation and communications 15.0%, housing and energy 13.4%, health 10.2%.

Land use as % of total land area (2007): in temporary crops 11.9%, in permanent crops 0.4%, in pasture 36.5%, forest area 12.0%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008 ⁹
U.S.\$'000,000	+16,448	+13,265	+13,051	+13,977	+13,245	+14,506
% of total	38.5%	23.7%	19.3%	17.7%	13.5%	12.3%

Imports (2007): U.S.\$44,707,000,000 (machinery and apparatus 30.3%, chemicals and chemical products 18.5%, road vehicles 15.0%, mineral fuels 6.0%). **Major import sources:** Brazil 32.8%; U.S. 11.9%; China 11.4%; Germany 4.8%; Mexico 3.0%.

Exports (2007): U.S.\$55,780,000,000 (soybean animal foodstuffs 10.3%, road vehicles 9.5%, cereals 9.3%, petroleum 8.4%, soybean oil 7.9%, soybeans 6.2%, fruits and vegetables 4.1%). **Major export destinations:** Brazil 18.8%; China 9.3%; U.S. 7.8%; Chile 7.5%; Spain 3.7%.

Transport and communications

Transport. Railroads: (2006) route length 30,818 km; (2005) passenger-km 8,327,000,000; (2001) metric ton-km cargo 12,262,000,000. Roads (2003): total length 231,374 km (paved 30%). Vehicles (2005): passenger cars 5,230,000; trucks and buses 1,775,000. Air transport (2007): passenger-km 14,616,000,000; metric ton-km cargo 130,668,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	12,500	323	PCs	2006	3,500	90
Telephones				Dailies	2007	1,501 ¹⁰	38 ¹⁰
Cellular	2008	46,509 ¹¹	1,166 ¹¹	Internet users	2008	11,212	281
Landline	2008	9,631	241	Broadband	2008	3,185 ¹¹	80 ¹¹

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal schooling 3.7%; incomplete primary education 14.2%; complete primary 28.0%; secondary 37.1%; some higher 8.3%; complete higher 8.7%. **Literacy** (2005): percentage of total population age 15 and over literate 97.5%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	279,349	4,651,255	16.7	99
Secondary/Voc. (age 12–17)	256,884	3,476,306	13.5	78
Tertiary	139,330	2,082,577	14.9	52 (age 18–22)

Health: physicians (2005) 120,978 (1 per 319 persons); hospital beds (2004) 76,446 (1 per 500 persons); infant mortality rate (2007) 12.1; undernourished population (2002–04) 1,200,000 (3% of total population based on the consumption of a minimum daily requirement of 1,940 calories).

Military

Total active duty personnel (November 2008): 76,000 (army 54.5%, navy 26.3%, air force 19.2%). **Military expenditure as percentage of GDP** (2008): 0.7%; per capita expenditure U.S.\$50.

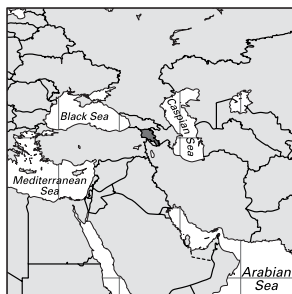
¹Roman Catholicism has special status and receives financial support from the state, but it is not an official religion. ²Area of Tierra del Fuego excludes claims to British-held islands in the South Atlantic Ocean. ³Less than 20% practicing. ⁴Forecast. ⁵Import duties and VAT less imputed bank service charges. ⁶Includes 427,307 (2.8%) not defined and 4,351,596 (28.5%) unemployed. ⁷Based on a survey of 31 urban agglomerations. ⁸Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ⁹Excludes December. ¹⁰Circulation. ¹¹Subscribers.

Internet resource for further information:

• National Institute of Statistics and Censuses <http://www.indec.mecon.ar>

Armenia

Official name: Hayastani Hanrapetut'yun (Republic of Armenia).
Form of government: unitary multiparty republic with a single legislative body (National Assembly [131]).
Head of state: President.
Head of government: Prime Minister.
Capital: Yerevan.
Official language: Armenian.
Official religion: none¹.
Monetary unit: dram (AMD); valuation (Sept. 1, 2009)
 1 U.S.\$ = AMD 374.50;
 1 £ = AMD 607.66.



Area and population		area		population
Provinces	Centres	sq mi	sq km	2008 ² estimate
Aragatsotn	Ashtarak	1,063	2,753	140,500
Ararat	Artashat	809	2,096	276,500
Armavir	Armavir	479	1,242	281,600
Gegharkunik	Gavar	2,065 ³	5,348 ³	240,100
Kotayk	Hrazdan	807	2,089	277,800
Lori	Vanadzor	1,463	3,789	282,000
Shirak	Gyumri	1,035	2,681	281,000
Syunik	Kapan	1,740	4,506	152,800
Tavush	Ijevan	1,044	2,704	134,200
Vayots-Dzor	Yeghegnadzor	891	2,308	55,800
City⁴				
Yerevan	—	88	227	1,107,800
TOTAL		11,484 ⁵	29,743 ⁵	3,230,100

Demography

Population (2009)⁶: 3,083,000.
Density (2009): persons per sq mi 268.5, persons per sq km 103.7.
Urban-rural (2008²): urban 64.1%; rural 35.9%.
Sex distribution (2008²): male 48.38%; female 51.62%.
Age breakdown (2005): under 15, 20.9%; 15–29, 27.2%; 30–44, 19.5%; 45–59, 17.9%; 60–74, 10.2%; 75–84, 3.8%; 85 and over, 0.5%.
Population projection⁶: (2020) 3,175,000; (2030) 3,170,000.
Ethnic composition (2001): Armenian 97.9%; Kurdish 1.3%; Russian 0.5%; other 0.3%.
Religious affiliation (2005): Armenian Apostolic (Orthodox) 72.9%; Roman Catholic 4.0%; Sunni Muslim 2.4%; other Christian 1.3%; Yazidi 1.3%; other/nonreligious 18.1%.
Major cities (2008²): Yerevan 1,107,800; Gyumri 147,000; Vanadzor 105,000; Vagharshapat 57,300; Hrazdan 52,900.

Vital statistics

Birth rate per 1,000 population (2007): 12.4 (world avg. 20.3); within marriage 64.5%; outside of marriage 35.5%.
Death rate per 1,000 population (2007): 8.3 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 4.1 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2006): 1.30.
Marriage/divorce rates per 1,000 population (2007): 5.6/0.9.
Life expectancy at birth (2006): male 70.0 years; female 76.4 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 453.1; malignant neoplasms (cancers) 145.0; diabetes mellitus 48.8; diseases of the respiratory system 46.1; accidents and violence 34.8.

National economy

Budget (2007). Revenue: AMD 588,080,000,000 (tax revenue 82.3%, of which VAT 42.2%, tax on profits 12.8%, income tax 8.0%, excise tax 7.1%; nontax revenue 17.7%). Expenditures: AMD 634,735,000,000 (defense 15.1%; education and science 15.0%; social security 9.9%; public administration 9.8%; police 8.2%; health 7.4%).
Public debt (external, outstanding; 2007): U.S.\$1,272,000,000.
Household income and expenditure (2005). Average household size 3.8; money income per household AMD 1,720,195 (U.S.\$3,758); sources of money income: rent, self-employment, and remittances 38.9%, wages and salaries 34.5%, transfers 7.1%, other 19.5%; expenditure: food and beverages 56.6%, services 24.0%, non-food goods 14.3%, tobacco 5.1%.
Land use as % of total land area (2007): in temporary crops 14.4%, in permanent crops 1.9%, in pasture 41.0%; forest area 9.7%.
Gross national income (GNI; 2008): U.S.\$10,320,000,000 (U.S.\$3,350 per capita); purchasing power parity GNI (U.S.\$6,310 per capita).

Structure of gross domestic product and labour force				
2006				
	in value AMD '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	497,121	18.7	504,500	42.7
Mining	68,541	2.6	7,600	0.6
Manufacturing	288,141	10.8	110,500	9.4
Public utilities	100,254	3.8	22,800	1.9
Construction	628,592	23.7	29,700	2.5
Transp. and commun.	168,171	6.3	48,600	4.1
Trade, hotels	309,577	11.7	113,600	9.6
Finance, real estate	153,400	5.8	29,900	2.5
Pub. admin., defense	68,479	2.6	34,900	3.0
Services	176,541	6.6	190,400	16.1
Other	197,373 ⁷	7.4 ⁷	88,800 ⁸	7.5 ⁸
TOTAL	2,656,190	100.0	1,181,300	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 540,000, tomatoes 250,000, grapes 200,000, wheat 150,000, watermelons 130,000, cabbages 100,000⁹, barley 96,000, apples 75,000; beef 43,400; livestock (number of live animals) 620,200 cattle, 587,200 sheep; roundwood 44,000 cu m, of which fuelwood 89%; fisheries production (2006) 1,406 (from aquaculture 75%). Mining and quarrying (2005): copper concentrate (metal content) 16,256; molybdenum (metal content) 3,030; gold (metal content) 1,400 kg. Manufacturing (value of production in AMD '000,000; 2007): food products and beverages 208,733; base metals 122,269; construction materials 40,207; 320,000 carats of cut diamonds were processed in 2004. Energy production (consumption): electricity (kW-hr; 2008) 6,114,000,000 ([2006] 5,145,000,000); coal (metric tons; 2005), none (negligible); crude petroleum, none (none); petroleum products (metric tons; 2005) none (320,000); natural gas (cu m; 2005) none (1,596,000,000).

Population economically active: total (2006) 1,181,300; activity rate of total population (2001) 49.5% (participation rates: ages 15–64 [2001] 72.1%; female 45.7%; unemployed [2008] 6.3%).

Price and earnings indexes (2000 = 100)						
	2002	2003	2004	2005	2006	2007
Consumer price index	104.2	109.2	116.8	117.5	120.9	126.7
Monthly earnings index	124.2	157.4	194.7	241.2	296.4	358.3

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 305; remittances (2008) 1,062; foreign direct investment (FDI; 2005–07 avg.) 451; official development assistance (2007) 352. Disbursements for (U.S.\$'000,000): tourism (2007) 294; remittances (2008) 185.

Foreign trade¹¹

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–593	–627	–755	–1,190	–1,932	–3,342
% of total	30.2%	30.2%	28.7%	37.2%	46.3%	61.0%

Imports (2007): U.S.\$3,053,000,000 (machinery and apparatus 14.0%; food products 12.4%; refined petroleum 7.4%; natural gas 7.4%; iron and steel 6.7%; road vehicles 5.7%; diamonds 5.4%; gold 4.3%). **Major import sources:** Russia 15.8%; Ukraine 8.2%; Kazakhstan 7.9%; China 6.3%; France 4.9%; Iran 4.6%.

Exports (2007): U.S.\$1,121,000,000 (ferroalloys 21.0%; cut diamonds 14.0%; nonferrous metals 11.6%, of which unrefined copper 5.9%, aluminum foil 3.3%; wine/grape brandy 10.3%; copper ore and concentrates 7.9%). **Major export destinations:** Russia 17.7%; Germany 15.0%; The Netherlands 13.9%; Belgium 8.9%; Georgia 6.2%.

Transport and communications

Transport (2007). Railroads: length 732 km; passenger-km 23,900,000; metric ton-km cargo 770,500,000. Roads: length 7,515 km (paved 68%). Vehicles: n.a. Air transport¹²: passenger-km 993,600,000; metric ton-km cargo 6,100,000.

Communications		units per 1,000 persons	units per 1,000 persons	
Medium	date	number in '000s	Medium	date
Televisions	2003	687	PCs	2007
Telephones			Dailies	2007
Cellular	2007	1,876 ¹⁴	Internet users	2006
Landline	2005	537	Broadband	2006

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.7%; primary education 13.0%; completed secondary and some postsecondary 66.0%; higher 20.3%. **Literacy** (2006): total population age 15 and over literate 99.4%; male 99.7%; female 99.2%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–9)	5,720	121,473	21.2	82
Secondary/Voc. (age 10–16)	42,806	356,355	8.3	86
Tertiary ¹⁵	12,521	111,544	8.9	36 (age 17–21)

Health (2007): physicians 12,251 (1 per 264 persons); hospital beds 13,126 (1 per 246 persons); infant mortality rate per 1,000 live births (2007) 10.8; undernourished population (2002–04) 700,000 (24% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2008): 42,080 (army 94.7%, air force 5.3%); Russian troops (November 2008) 3,210. **Military expenditure** as percentage of GDP (2008): 3.2%; per capita expenditure U.S.\$132.

¹The Armenian Apostolic Church (Armenian Orthodox Church) has special status per 1991 religious law. ²January 1 de jure estimate. ³Includes the 485 sq mi (1,256 sq km) area of Lake Sevan. ⁴City has province status. ⁵In addition, about 13% of neighbouring Azerbaijan (including the 4,400 sq km geographic region of Nagorno-Karabakh [Armenian: Artsakh]) has been occupied by Armenian forces since 1993. ⁶De facto population. ⁷Taxes less subsidies and less imputed bank service charges. ⁸Officially registered unemployed. ⁹Includes other brassicas. ¹⁰Average of 2nd and 3rd quarters. ¹¹Imports c.i.f.; exports f.o.b. ¹²Armavia airlines only. ¹³Circulation. ¹⁴Subscribers. ¹⁵2006–07.

Internet resources for further information:

- National Statistical Service <http://www.armstat.am>
- Central Bank of Armenia <http://www.cba.am/index.html>

Aruba

Official name: Aruba¹.

Political status: nonmetropolitan territory of The Netherlands with one legislative house (States of Aruba [21]).

Chief of state: Dutch Monarch represented by Governor.

Head of government: Prime Minister.

Capital: Oranjestad.

Official languages: Dutch; Papiamentu.

Official religion: none.

Monetary unit: Aruban florin (Af.);

valuation (Sept. 1, 2009)

1 U.S.\$ = Af. 1.79; 1 £ = Af. 2.90.



Area and population	area ²		population
	sq mi	sq km	2000 census
Census region			
Noord/Tanki Leendert	14	37	16,944
Oranjestad East	5	13	14,224
Oranjestad West	4	10	12,131
Paradera	10	25	9,037
San Nicolas North	9	23	10,118
San Nicolas South	4	10	5,730
Santa Cruz	18	47	12,326
Savaneta	11	28	9,996
TOTAL	75	193	90,506

Demography

Population (2009): 107,000.

Density (2009): persons per sq mi 1,426.7, persons per sq km 554.4.

Urban-rural (2003): urban 45.4%; rural 54.6%.

Sex distribution (2008): male 47.85%; female 52.15%.

Age breakdown (2008): under 15, 19.9%; 15–29, 18.8%; 30–44, 23.9%; 45–59, 23.4%; 60–74, 10.7%; 75–84, 2.6%; 85 and over, 0.7%.

Population projection: (2020) 112,000; (2030) 113,000.

Linguistic composition (2000): Papiamentu 69.4%; Spanish 13.2%; English 8.1%; Dutch 6.1%; Portuguese 0.3%; other 2.0%; unknown 0.9%.³

Religious affiliation (2005): Roman Catholic 82.7%, Protestant 10.2%, other/nonreligious 7.1%.

Major urban areas (2007): Oranjestad 32,000; San Nicolas (2002) 17,400.

Vital statistics

Birth rate per 1,000 population (2008): 11.5 (world avg. 20.3); within marriage 43.7%; outside of marriage 56.3%.

Death rate per 1,000 population (2008): 4.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 6.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.70.

Marriage/divorce rates per 1,000 population (2007): 5.14/4.0.

Life expectancy at birth (2006): male 76.0 years; female 82.8 years.

Major causes of death per 100,000 population (2001–04): diseases of the circulatory system 177.7, malignant neoplasms (cancers) 129.2, communicable diseases 36.2, diabetes mellitus 32.5, suicide or accidents 31.5, violence 13.2.

National economy

Budget (2007–08). Revenue: Af. 1,107,500,000 (tax revenue 86.4%, of which taxes on wages 22.3%, import duties 14.5%, taxes on profits 8.0%; nontax revenue 10.5%; grants 3.1%). Expenditures: Af. 1,170,700,000 (wages 27.2%, goods and services 16.9%, interest 9.7%).

Public debt (external, outstanding; end of June 2008): U.S.\$577,400,000.

Production (metric tons except as noted). Agriculture, forestry, fishing: aloes are cultivated for export; small amounts of tomatoes, beans, cucumbers, gherkins, watermelons, and lettuce are grown on hydroponic farms; divi-divi pods, sour orange fruit, sorghum, and peanuts (groundnuts) are nonhydroponic crops of limited value; livestock (number of live animals) Aruba has very few livestock; roundwood (2007) 150 cu m, of which fuelwood 100%; fisheries production (2006) 145 (from aquaculture, none). Mining and quarrying: excavation of sand for local use. Manufacturing⁵: refined petroleum, rum, cigarettes, aloe products, and soaps. Energy production (consumption): electricity (kW-hr; 2006) 910,000,000 (762,000,000); coal, none (none); crude petroleum (barrels; 2006) 880,000 (3,335,000); petroleum products (metric tons; 2006) 10,000,000 (252,000); natural gas, none (none).

Gross national income (2007): U.S.\$2,470,000,000 (U.S.\$23,755 per capita).

Structure of gross domestic product and labour force				
	2002		2000	
	in value Af. '000,000	% of total value	labour force	% of labour force
Agriculture	11.6	0.3	212	0.5
Mining			38	0.1
Manufacturing	110.7 ⁶	3.2 ⁶	2,440	5.4
Construction	157.8	4.6	3,892	8.6
Public utilities	230.5 ⁷	6.7 ⁷	500	1.1
Transp. and commun.	306.8	9.0	2,905	6.5
Trade, restaurants	746.6	21.8	14,763	32.8
Finance, real estate	942.4	27.6	5,206	11.6
Pub. admin., defense	826.4	24.2	3,528	7.8
Services			8,129	18.1
Other	88.4 ⁸	2.6 ⁸	3,423 ⁹	7.6 ⁹
TOTAL	3,421.2	100.0	45,036	100.0 ¹⁰

Population economically active (2004): total 41,500; activity rate of total population 42.6% (participation rates: ages 15–64 [2000] 70.9%; female [2000] 46.6%; unemployed [2005] 6.9%).

Price and earnings indexes (2000 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	106.7	110.2	113.0	116.9	121.3	128.3	129.2
Monthly earnings index ¹¹	107.9	107.9	111.2	111.2	...	...	...

Household income and expenditure (2006): average household size 2.8; average annual expenditure per household Af. 50,421 (U.S.\$28,168); sources of income: n.a.; expenditure: housing 26.8%, transportation 14.9%, energy and water 9.5%, household furnishings and operation 9.5%, food and nonalcoholic beverages 8.4%, recreation and culture 7.6%, communications 5.3%.

Land use as % of total land area (2007): in temporary crops 11.1%, in permanent crops, n.a., in pasture, n.a., forest area 2.2%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,253; remittances (2008) 13; foreign direct investment (2005–07) 203. Disbursements for (U.S.\$'000,000): tourism (2007) 260; remittances (2008) 80.

Foreign trade¹²

Balance of trade (current prices)

	2003	2004	2005	2006	2007
Af. '000,000	-918	-656	+39	-102	-503
% of total	12.3%	6.0%	0.3%	0.6%	2.8%

Imports (2007): Af. 9,179,000,000 (crude petroleum 78.3%, food products 3.3%, machinery and apparatus 3.1%). **Major import sources**¹³: United States 54.4%; The Netherlands 11.7%; United Kingdom 4.7%; Colombia 3.0%.

Exports (2007): Af. 8,676,000,000 (refined petroleum 98.0%, organic chemicals 0.9%). **Major export destinations**¹³: Panama 29.7%; Colombia 17.0%; Netherlands Antilles 13.1%; United States 11.2%; Venezuela 10.9%.

Transport and communications

Transport. Railroads: none. Roads (1995): total length 497 mi, 800 km (paved 64%). Vehicles (2007): passenger cars 50,211; trucks and buses 1,121. Air transport (2001)¹⁴: passenger-km 800,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	20	218	PCs	...	...	...
Telephones				Dailies	2007	54 ¹⁵	519 ¹⁵
Cellular	2008	127 ¹⁶	1,207 ¹⁶	Internet users	2007	24	231
Landline	2006	39	384	Broadband	2008	18 ¹⁶	175 ¹⁶

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling or incomplete primary education 9.7%; primary education 33.9%; secondary/vocational 39.2%; advanced vocational/higher 16.2%; unknown status 1.0%. **Literacy** (2005): percentage of total population age 15 and over literate 96.9%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	594	10,346	17.4	100
Secondary/Voc. (age 12–16)	518 ¹⁷	7,853	14.4 ¹⁷	82
Tertiary	222	2,232	10.1	27 (age 17–21)

Health (2007): physicians 156 (1 per 681 persons); hospital beds 310¹⁸ (1 per 335 persons); infant mortality rate per 1,000 live births (2003–05) 6.0; undernourished population, n.a.

Military

Total active duty personnel (2005): more than 1,000 Dutch naval personnel (including 400 marines) are stationed in the Aruba/Netherlands Antilles vicinity.

¹Same official name in Dutch and Papiamentu. ²Areas for census regions are approximate. ³Most Arubans are racially and ethnically mixed; the 4 major ethnic groups are Amerindian, Dutch, Spanish, and black. ⁴Excludes tourists. ⁵Service facilities include a free zone, offshore corporate banking facilities, casino/resort complexes, a petroleum transshipment terminal, a cruise ship terminal, and ship repair and bunkering facilities. ⁶Excludes refined petroleum. ⁷Includes refined petroleum. ⁸Taxes less subsidies and imputed bank service charges. ⁹Includes 3,118 unemployed. ¹⁰Detail does not add to total given because of rounding. ¹¹Minimum wage for the manufacturing and service industries. ¹²Includes crude petroleum imports and refined petroleum exports; excludes imports and exports of Aruban free zone totaling (in 2007) Af. 119,000,000 (95% food products, 69% from the U.K.) and Af. 120,000,000 (96% food products, 43% to Panama), respectively. ¹³Excludes petroleum imports and exports. ¹⁴Air Aruba only. ¹⁵Circulation. ¹⁶Subscribers. ¹⁷2005–06. ¹⁸Excludes hospital beds in geriatric homes.

Internet resources for further information:

- Centrale Bank van Aruba <http://www.cbaruba.org>
- Central Bureau of Statistics <http://www.cbs.aw/cbs/home.do>

Australia

Official name: Commonwealth of Australia.

Form of government: federal parliamentary state (formally a constitutional monarchy) with two legislative houses (Senate [76]; House of Representatives [150]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

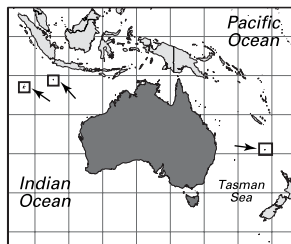
Capital: Canberra.

Official language: English.

Official religion: none.

Monetary unit: Australian dollar (\$A); valuation (Sept. 1, 2009)

1 U.S.\$ = \$A 1.19; 1 £ = \$A 1.94.



Area and population

States	Capitals	area ¹		population 2008 ² estimate
		sq mi	sq km	
New South Wales (NSW)	Sydney	309,130	800,642	6,967,200
Queensland (QLD)	Brisbane	668,207	1,730,648	4,279,400
South Australia (SA)	Adelaide	379,725	983,482	1,601,800
Tasmania (TAS)	Hobart	26,410	68,401	498,200
Victoria (VIC)	Melbourne	87,806	227,416	5,297,600
Western Australia (WA)	Perth	976,790	2,529,875	2,163,200
Territories³				
Australian Capital Territory (ACT)	Canberra	910	2,358	344,200
Christmas Island	The Settlement	52	135	1,347 ⁴
Cocos (Keeling) Islands	West Island	5	14	571 ⁴
Jervis Bay	—	28	73	368 ⁴
Norfolk Island	Kingston	13	35	1,863 ⁴
Northern Territory (NT)	Darwin	520,902	1,349,129	219,900
TOTAL		2,969,978	7,692,208	21,375,649⁵

Demography

Population (2009): 21,829,000.

Density (2009): persons per sq mi 7.3, persons per sq km 2.8.

Urban-rural (2005): urban 88.2%; rural 11.8%.

Sex distribution (2008): male 50.09%; female 49.91%.

Age breakdown (2008): under 15, 18.7%; 15–29, 20.8%; 30–44, 22.0%; 45–59, 20.0%; 60–74, 12.2%; 75–84, 4.5%; 85 and over, 1.8%.

Population projection: (2020) 24,721,000; (2030) 26,907,000.

Ethnic composition (2007): white and others not elsewhere classified 90.2%; Asian (excl. Middle East) 7.3%; aboriginal 2.5%.

Religious affiliation (2006): Christian 63.9%, of which Roman Catholic 25.6%, Anglican Church of Australia 18.7%, other Christian 19.6% (Uniting Church 5.7%, Presbyterian 2.9%, Orthodox 2.6%, Baptist 1.6%, Lutheran 1.3%); Buddhist 2.1%; Muslim 1.7%; Hindu 0.7%; Jewish 0.4%; no religion 18.7%; other 12.5%.

Major urban centres/metropolitan areas (2006): Sydney 3,641,422/4,119,191; Melbourne 3,371,888/3,592,590; Brisbane 1,676,389/1,763,132; Perth 1,256,035/1,445,077; Adelaide 1,040,719/1,105,840; Gold Coast (QLD)—Tweed Heads (NSW) 454,436/541,675; Newcastle 288,732/493,467; Canberra (ACT)—Queanbeyan (NSW) 356,120/368,128; Gosford (Central Coast) 282,726/n.a.; Wollongong 234,482/263,535; Sunshine Coast (Caloundra) 184,662/209,578; Hobart 128,577/200,524; Geelong 137,220/160,992; Townsville 128,808/143,330; Cairns 98,349/122,731; Toowoomba 95,265/114,480; Darwin 66,291/105,990; Launceston 71,395/99,674; Albury (NSW)—Wodonga (VIC) 73,497/96,292.

Place of birth (2006): 70.9% native-born; 29.1% foreign-born, of which Europe 10.5% (United Kingdom 5.2%, Italy 1.0%, Greece 0.6%, Germany 0.5%, The Netherlands 0.4%, Poland 0.3%), Asia and Middle East 7.3% (China [including Hong Kong] 1.4%, Vietnam 0.8%, India 0.7%), New Zealand 2.0%, Africa, the Americas, and other 9.3%.

Mobility (1999). Population age 15 and over living in the same residence as in 1998: 84.4%; different residence between states, regions, and neighbourhoods 15.6%.

Households (2006). Total number of households 8,058,248. Average household size 2.6; 1 person (2003–04) 25.4%, 2 persons (2003–04) 33.9%, 3 or more persons (2003–04) 40.7%. Family households 5,665,000 (70.3%), nonfamily 2,393,000 (29.7%), of which 1-person 26.5%.

Immigration (2006–07): permanent immigrants admitted 140,148, from New Zealand 17.1%, United Kingdom 16.6%, India 9.6%, China 8.6%, Philippines 4.0%, South Africa 2.9%, Vietnam 2.2%, Malaysia 2.1%, Sri Lanka 1.9%, Sudan 1.8%. **Emigration** (2006–07): 72,100, to New Zealand 19.3%, United Kingdom 18.2%, United States 10.0%, Hong Kong 7.5%. Refugee arrivals (2006–07) 13,017.

Vital statistics

Birth rate per 1,000 population (2007–08): 13.6 (world avg. 20.3); (2006) within marriage 67.3%; outside of marriage 32.7%.

Death rate per 1,000 population (2007–08): 6.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2007–08): 6.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007–08): 1.93.

Marriage/divorce rates per 1,000 population (2006): 5.5/2.5.

Life expectancy at birth (2008): male 79.2 years; female 84.0 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 220.6, of which ischemic heart disease 142.3; malignant neoplasms

(cancers) 192.0; diseases of the respiratory system 52.5; accidents and violence 37.9; endocrine, nutritional, and metabolic diseases 24.8; diseases of the nervous system 23.7; diseases of the digestive system 21.7.

Social indicators

Quality of working life. Average workweek (2007): 34.6 hours. Working 50 hours a week or more (2006) 22.5%. Annual rate per 100,000 workers for: accidental injury and industrial disease (2006) 1,070; death (2006) 2.0. Proportion of employed persons insured for damages or income loss resulting from: injury 100%; permanent disability 100%; death 100%. Working days lost to industrial disputes per 1,000 employees (2006): 22. Means of transportation to work (2003): private automobile 74.5%; public transportation 12.0%; motorcycle, bicycle, and foot 5.7%. Discouraged job seekers (2006): 52,900 (0.5% of labour force).

Distribution of household income (2005–06)

percentage of household income by quintile				
lowest	second	third	fourth	highest
7.9%	12.9%	17.5%	23.2%	38.5%

Educational attainment (2005). Percentage of population age 15–64 having: no formal schooling and incomplete secondary education 48.5%; completed secondary and postsecondary, technical, or other certificate/diploma 28.9%; bachelor's degree 14.2%; incomplete graduate and graduate degree or diploma 5.4%; unknown 3.0%.

Social participation. Eligible voters participating in last national election (2007): 94.8%; voting is compulsory. Trade union membership in total workforce (2006): 20.3%. Volunteerism rate of population age 18 and over (2006) 34.1%.

Social deviance (2007). Offense rate per 100,000 population for: murder 1.2; sexual assault 94.1; assault 839; auto theft 364; burglary and housebreaking 1,182; robbery 85.6, of which armed robbery 36.5. Incidence per 100,000 in general population of: prisoners 129; suicide (2006) 8.7.

Material well-being (2005). Households possessing: refrigerator 99.9%; washing machine 96.4%; dishwasher 41.5%; automobiles per 1,000 population (2006) 544.

National economy

Gross national income (GNI; 2008): U.S.\$862,461,000,000 (U.S.\$40,350 per capita); purchasing power parity GNI (U.S.\$34,040 per capita).

Structure of gross domestic product and labour force

	2007–08		2007	
	in value \$A '000,000 ⁶	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	25,085	2.3	356,800	3.3
Mining and quarrying	82,650	7.6	102,000	0.9
Manufacturing	106,776	9.8	1,077,500	9.8
Construction	77,101	7.1	944,000	8.6
Public utilities	21,904	2.0	86,100	0.8
Transp. and commun.	77,672	7.2	679,100	6.2
Trade, restaurants	128,474	11.9	2,498,900	22.9
Finance, real estate	295,600	27.3	1,680,100	15.4
Pub. admin., defense	40,708	3.8	608,000	5.6
Services	144,407	13.3	2,380,000	21.8
Other	83,779 ⁷	7.7	515,200 ⁸	4.7 ⁸
TOTAL	1,084,156	100.0	10,927,700	100.0

Budget (2007–08). Revenue: \$A 303,713,000,000 (tax revenue 94.2%, of which individual income tax 41.5%, indirect tax 25.6%, company income tax 21.3%; nontax revenue 5.8%). Expenditures: \$A 280,108,000,000 (social security and welfare 34.9%; health 15.8%; economic services 7.4%; general administration 7.2%; education 6.6%; defense 6.3%; interest on public debt 1.3%).

Public debt (December 2008): U.S.\$106,300,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006–07): sugarcane 36,000,000, wheat 10,822,000, cow's milk 10,350,000, barley 4,257,000, beef 2,196,000, grapes 1,530,000, sorghum 1,283,000, potatoes 1,212,000, chicken meat 812,000, oats 748,000, sheep meat 684,000, rapeseed 573,000, wool 502,000, lupins 470,000, oranges 461,000, pork 387,000, tomatoes 296,000, cotton lint 282,000, carrots 271,000, lettuce 271,000, apples 270,000, bananas 213,000; livestock (number of live animals) 85,711,000 sheep, 28,037,000 cattle, 2,605,000 pigs, 75,000,000 chickens; roundwood (2007) 32,264,000 cu m, of which fuelwood 16%; fisheries production (2006) 241,456 (from aquaculture 20%); aquatic plants production 15,504 (from aquaculture, none). Mining and quarrying (metric tons except as noted; 2006): iron ore (metal content) 170,933,000 (world rank: 2), bauxite 62,307,000 (world rank: 1), ilmenite 2,377,000 (world rank: 1), zinc (metal content) 1,362,000 (world rank: 2), copper (metal content) 879,000 (world rank: 5), lead (metal content) 686,000 (world rank: 2), rutile 232,000 (world rank: 1), nickel (metal content) 185,000 (world rank: 3), cobalt (metal content) 7,400 (world rank: 3), opal (value of production) \$A 50,000,000 (world rank: 1), diamonds 21,915,000 carats (world rank by volume: 2), gold 247,000 kilograms (world rank: 4). Manufacturing (gross value added in \$A '000,000; 2006–07): base metals 15,158; food 14,455; machinery and apparatus 10,538; fabricated metal products 9,076; transport equipment 9,003; chemicals and chemical products 6,831; beverages and tobacco products 5,787; bricks, cement, and ceramics 5,019.

Population economically active (July 2007): total 10,952,000; activity rate of total population 52.5% (participation rates: ages 15 and over, 65.0%; female [2006] 45.0%; unemployed [June 2008] 4.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008 ⁹
Consumer price index	92.6	95.2	97.4	100.0	103.5	105.9	111.0
Weekly earnings index	86.4	91.3	94.7	100.0	103.8	108.6	113.5

Household income and expenditure (2006). Average household size 2.6; average annual disposable income per household \$A 55,432 (U.S.\$41,762); sources of income: wages and salaries 59.3%, transfer payments 26.1%, self-employment 6.1%, other 8.5%; expenditure (2007–08): housing 17.2%, recreation and culture 12.1%, transportation 11.7%, food and nonalcoholic beverages 11.0%, hotels and cafés 7.5%, household furnishings and operation 5.6%, health 5.4%, alcohol and cigarettes 3.7%, clothing and footwear 3.7%, education 3.4%.

Financial aggregates		2002	2003	2004	2005	2006	2007	2008
Exchange rate, \$A 1.00 per ¹ :								
U.S. dollar		0.57	0.75	0.78	0.73	0.79	0.88	0.69
£		0.35	0.42	0.40	0.42	0.40	0.44	0.48
SDR		0.42	0.50	0.50	0.51	0.53	0.56	0.45
International reserves (U.S.\$) ¹⁰								
Total (excl. gold; '000,000)		20,689	32,189	35,803	41,941	53,448	24,768	30,691
SDRs ('000,000)		136	170	195	193	200	193	174
Reserve pos. in IMF ('000,000)		1,934	2,053	1,706	776	428	339	649
Foreign exchange ('000,000)		18,618	29,966	33,901	40,972	52,821	24,237	29,867
Gold ('000,000 fine troy oz)		2.56	2.56	2.56	2.57	2.57	2.57	2.57
% world reserves		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Interest and prices								
Govt. bond yield (short-term; %)		5.30	4.90	5.30	5.27	5.71	6.33	...
Industrial share prices (2000 = 100)		100.2	96.1	111.7	135.5	161.5	194.9	116.1
Balance of payments ¹⁰ (U.S.\$'000,000)								
Balance of visible trade		-5,514	-15,339	-18,064	-13,372	-9,596	-17,770	...
Imports, f.o.b.		-70,527	-85,861	-105,230	-120,383	-134,509	-160,205	...
Exports, f.o.b.		65,014	70,522	87,166	107,011	124,913	142,435	...
Balance of invisibles		-10,295	-13,345	-20,790	-27,660	-31,908	-39,912	...
Balance of payments, current account		-15,809	-28,684	-38,854	-41,032	-41,504	-57,682	...

Energy production (consumption): electricity (kW-hr; 2007) 227,496,000,000 ([2005] 251,120,000,000); hard coal (metric tons; 2006) 267,490,000 (36,371,000); lignite (metric tons; 2006) 102,825,000 (105,548,000); crude petroleum (barrels; 2006–07) 171,900,000 ([2006] 206,566,000); petroleum products (metric tons; 2006) 29,979,000 (36,211,000); natural gas (cu m; 2007) 37,211,000,000 ([2006] 29,256,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 22,405; remittances (2008) 4,638; foreign direct investment (FDI) (2005–07 avg.) 4,236. Disbursements for (U.S.\$'000,000): tourism (2007) 14,244; remittances (2008) 2,997; FDI (2005–07 avg.) 4,441.

Land use as % of total land area (2007): in temporary crops 3.0%, in permanent crops 0.05%, in pasture 49.6%, forest area 21.3%.

Foreign trade¹¹

Balance of trade (current prices)		2003	2004	2005	2006	2007	2008
U.S.\$'000,000		-15,339	-18,064	-13,372	-9,596	-17,770	-4,286
% of total		9.8%	9.4%	5.9%	3.7%	5.9%	1.1%

Trade by commodity group (2007)		imports		exports	
SITC Group		U.S.\$'000,000	%	U.S.\$'000,000	%
00 Food and live animals		5,972	3.8	14,454	10.4
01 Beverages and tobacco		1,185	0.8	2,692	1.9
02 Crude materials, excluding fuels		2,040	1.3	33,907	24.4
03 Mineral fuels, lubricants, and related materials		20,175	13.0	31,648	22.7
04 Animal and vegetable oils, fat, and waxes		449	0.3	347	0.2
05 Chemicals and related products, n.e.s.		16,621	10.7	6,496	4.7
06 Basic manufactures		17,606	11.3	15,404	11.1
07 Machinery and transport equipment		65,573	42.1	11,407	8.2
08 Miscellaneous manufactured articles		20,277	13.0	4,185	3.0
09 Goods not classified by kind		5,759	3.7	18,582	13.4
TOTAL		155,657	100.0	139,122	100.0

Direction of trade (2007)		imports		exports	
		U.S.\$'000,000	%	U.S.\$'000,000	%
Africa		1,511	1.0	3,372	2.4
Asia		85,512	54.9	94,090	67.6
East Asia		48,698	31.3	64,420	46.3
China		24,054	15.5	19,456	14.0
Japan		14,941	9.6	26,379	19.0
Southeast Asia		30,667	19.7	15,116	10.9
South Asia		1,479	0.9	8,556	6.1
West Asia		4,034	2.6	5,968	4.3
undefined Asia		634	0.4	30	—
South America and Caribbean		2,478	1.6	1,880	1.4
North America		21,692	13.9	9,784	7.0
United States		20,003	12.9	8,304	6.0
Europe		36,244	23.3	17,928	12.9
United Kingdom		6,717	4.3	5,811	4.2
Oceania		7,616	4.9	10,175	7.3
New Zealand		5,187	3.3	7,849	5.6
other		604	0.4	1,893	1.4
TOTAL		155,657	100.0	139,122	100.0

Imports (2005–06): \$A 167,603,000,000 (machinery and apparatus 29.3%, of which telecommunications equipment 5.8%, office machines and automatic data-processing equipment 5.3%, electrical machinery 4.8%; transportation equipment 15.8%, of which motor vehicles 12.2%; crude and refined petroleum 12.7%; chemicals and related products 6.1%, of which medicines and pharmaceuticals 4.3%; textiles and wearing apparel 3.9%). **Major import sources** (2006–07): China 15.0%; U.S. 13.8%; Japan 9.6%; Singapore 5.6%; Germany 5.1%; U.K. 4.1%; Thailand 4.0%; Malaysia 3.7%; South Korea 3.3%; New Zealand 3.1%; Italy 2.7%.

Exports (2005–06): \$A 151,792,000,000 (mineral fuels 24.9%, of which coal [all forms] 16.0%, petroleum products and natural gas 8.9%; food and beverages 12.0%, of which meat and meat preparations 4.4%, cereals and cereal preparations 3.2%; iron ore 8.2%; aluminum and aluminum ore 6.9%; gold 4.8%; machinery and apparatus 4.1%; transportation equipment 3.5%). **Major export destinations** (2006–07): Japan 19.4%; China 13.6%; South Korea 7.8%; U.S. 5.8%; New Zealand 5.6%; U.K. 3.7%; Taiwan 3.7%; Singapore 2.7%; Indonesia 2.5%; Thailand 2.5%.

Transport and communications

Transport. Railroads (2006): route length 23,954 mi, 38,550 km; passengers carried (2004–05) 616,270,000; passenger-km (2004–05) 11,200,000,000; metric ton-km cargo (2004–05) 182,990,000,000. Roads (2004): total length 503,709 mi, 810,641 km (paved 42%). Vehicles (2008): passenger cars 11,848,326; trucks and buses 2,880,647. Air transport (2006): passenger-km 82,128,000,000; metric ton-km cargo 2,347,000,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	14,371	722	PCs	2006	15,671	757
Telephones				Dailies	2007	3,151 ¹²	150 ¹²
Cellular	2008	22,120 ¹³	1,032 ¹³	Internet users	2008	11,900	555
Landline	2008	9,370	437	Broadband	2008	5,140 ¹³	240 ¹³

Education and health

Literacy (2006): total population literate, virtually 100%¹⁴.

Education (2005–06)		teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–11)		121,215	1,936,118	16.0	96
Secondary/Voc. (age 12–17)		118,424 ¹⁵	1,431,918 ¹⁵	12.1 ¹⁵	87
Tertiary		90,409	957,176	10.6 ¹⁶	73 (age 18–22)

Health: physicians (2006) 55,063 (1 per 375 persons); hospital beds (2005–06) 80,828 (1 per 254 persons); infant mortality rate per 1,000 live births (2007–08): 4.1; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 54,747¹⁷ (army 50.2%, navy 24.1%, air force 25.7%). **Military expenditure as percentage of GDP** (2007): 2.2%; per capita expenditure U.S.\$961¹⁸.

¹Mainland and island areas only; excludes coastal water. ²July 1. ³With permanent civilian population only. ⁴Revised 2006 census results. ⁵Total includes 2006 revised census results for smaller territories. ⁶At constant prices of 2006–07. ⁷Taxes on products less subsidies and less statistical discrepancy. ⁸Includes unemployed. ⁹Average of 2nd and 3rd quarters. ¹⁰At end of year. ¹¹Imports and exports f.o.b. ¹²Circulation. ¹³Subscribers. ¹⁴A national survey conducted in 1996 put the number of persons who had very poor literacy and numeracy skills at about 17% of the total population (age 15 to 64). ¹⁵Excludes vocational. ¹⁶2004–05. ¹⁷Troops deployed abroad (November 2008) 2,858, of which to Afghanistan 1,080 to East Timor 750. ¹⁸Includes military pensions.

Internet resources for further information:

- Australian Bureau of Statistics <http://www.abs.gov.au>
- Reserve Bank of Australia <http://www.rba.gov.au>

Austria

Official name: Republik Österreich
(Republic of Austria).

Form of government: federal state with two legislative houses (Federal Council [62]; National Council [183]).

Chief of state: President.

Head of government: Chancellor.

Capital: Vienna.

Official language: German.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70;

1 £ = €1.13.



Area and population		area		population
States	Capitals	sq mi	sq km	2008 ¹ estimate
Burgenland	Eisenstadt	1,530	3,962	281,190
Kärnten	Klagenfurt	3,683	9,538	561,094
Niederösterreich	Sankt Pölten	7,408	19,186	1,597,240
Oberösterreich	Linz	4,626	11,980	1,408,165
Salzburg	Salzburg	2,763	7,156	530,576
Steiermark	Graz	6,332	16,401	1,205,909
Tirol	Innsbruck	4,880	12,640	703,512
Vorarlberg	Bregenz	1,004	2,601	366,377
Wien (Vienna)	—	160	415	1,677,867
TOTAL		32,386	83,879	8,331,930

Demography

Population (2009): 8,378,000.

Density (2009): persons per sq mi 258.7, persons per sq km 99.9.

Urban-rural (2005): urban 66.5%; rural 33.5%.

Sex distribution (2007): male 48.66%; female 51.34%.

Age breakdown (2007): under 15, 15.5%; 15–29, 18.7%; 30–44, 23.3%; 45–59, 20.3%; 60–74, 14.3%; 75–84, 6.0%; 85 and over, 1.9%.

Population projection: (2020) 8,704,000; (2030) 8,989,000.

Population composition by country of birth (2008¹): Austria 84.8%; former Serbia and Montenegro 2.3%; Germany 2.2%; Turkey 1.9%; Bosnia and Herzegovina 1.6%; Poland 0.7%; Romania 0.7%; other 5.8%.

Religious affiliation (2001): Christian 81.5%, of which Roman Catholic 73.7%, Protestant (mostly Lutheran) 4.7%, Orthodox 2.2%; Muslim 4.2%; nonreligious 12.0%; other 0.3%; unknown 2.0%.

Major cities (2008¹): Vienna 1,677,867 (urban agglomeration [2007] 1,954,964); Graz 250,653; Linz 189,069; Salzburg 149,201; Innsbruck 118,362.

Vital statistics

Birth rate per 1,000 population (2008): 9.3 (world avg. 20.3); within marriage 61.2%; outside of marriage 38.8%.

Death rate per 1,000 population (2008): 9.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 0.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.41.

Marriage/divorce rates per 1,000 population (2007): 4.3/2.5.

Life expectancy at birth (2008): male 77.6 years; female 83.0 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 395.4; malignant neoplasms (cancers) 228.2; diseases of the respiratory system 54.8; accidents and violence 50.7.

National economy

Budget (2007)². Revenue: €113,942,000,000 (tax revenue 66.4%, of which income taxes 30.5%, taxes on products 27.1%; social security contributions 33.6%). Expenditures: €131,126,000,000 (social protection 41.6%; health 15.5%; general administration 14.2%; education 10.7%; economic affairs 9.6%; defense 1.8%).

Public debt (December 2007): U.S.\$220,517,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): sugar beets 2,493,097, corn (maize) 1,471,668, wheat 1,396,300, barley 914,052, potatoes 654,621, apples 509,139, grapes 300,840, triticale 110,060, rye 93,786, currants 19,290; livestock (number of live animals) 3,160,382 pigs, 2,002,143 cattle; roundwood (2007) 21,317,000 cu m, of which fuelwood 22%; fisheries production 2,863 (from aquaculture 87%). Mining and quarrying (2006): iron ore (metal content) 650,000; manganese (metal content) 16,000; tungsten 1,300. Manufacturing (value added in €'000,000; 2006): nonelectrical machinery and apparatus 6,250; fabricated metal products 5,550; food and beverages 3,900; motor vehicles/parts 3,100; chemicals and chemical products 2,900; cement, bricks, and ceramics 2,600; base metals 2,600. Energy production (consumption): electricity (kW-hr; 2008) 66,792,000,000 ([2006] 70,295,000,000); hard coal (metric tons; 2007) none (4,161,000); lignite (metric tons; 2006) none (753,000); crude petroleum (barrels; 2008) 5,660,000 ([2006] 59,642,000); petroleum products (metric tons; 2006) 7,259,000 (12,106,000); natural gas (cu m; 2008) 1,686,000,000 ([2006] 9,584,000,000).

Population economically active (2007)³: total 4,213,500; activity rate of total population 51.4% (participation rates: ages 15–64 [2006] 73.7%; female 45.5%; unemployed [March 2008–February 2009] 6.0%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.5	95.8	97.7	100.0	101.4	103.7	107.0
Annual hourly index ⁴	93.3	95.4	97.2	100.0	103.1	105.9	...

Gross national income (GNI; 2008): U.S.\$386,044,000,000 (U.S.\$46,260 per capita); purchasing power parity GNI (U.S.\$37,680 per capita).

Structure of gross domestic product and labour force

	2007			
	in value €'000,000	% of total value	labour force ⁵	% of labour force
Agriculture, forestry	4,350	1.6	231,300	5.5
Mining	1,110	0.4	8,800	0.2
Manufacturing	49,400	18.2	730,500	17.3
Construction	17,350	6.4	329,100	7.8
Public utilities	7,080	2.6	30,100	0.7
Transp. and commun.	15,520	5.7	243,200	5.8
Trade, restaurants	41,180	15.2	904,200	21.5
Finance, real estate	59,260	21.9	498,400	11.8
Pub. admin., defense	13,740	5.1	275,400	6.5
Services	36,200	13.4	776,900	18.5
Other	25,650 ⁶	9.5 ⁵	185,600 ⁶	4.4 ⁶
TOTAL	270,840	100.0	4,213,500	100.0

Household income and expenditure. Average household size (2006) 2.3; average annual disposable income per household (2006) €27,371 (U.S.\$34,338); sources of income (1995): wages and salaries 54.8%, transfer payments 25.9%; expenditure (2004–05): housing and energy 22.3%, transportation 16.1%, recreation and culture 12.6%, food 11.7%.

Land use as % of total land area (2007): in temporary crops 15.1%, in permanent crops 0.8%, in pasture 22.5%, forest area 47.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 18,754; remittances (2008) 3,237; foreign direct investment (FDI) (2005–07 avg.) 15,882. Disbursements for (U.S.\$'000,000): tourism (2007) 10,566; remittances (2008) 3,356; FDI (2005–07 avg.) 17,414.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000,000	-2.09	-1.25	-1.79	-0.46	+0.39	-2.04
% of total	1.3%	0.7%	0.9%	0.2%	0.2%	0.9%

Imports (2007): €114,010,000,000 (machinery and apparatus 23.6%; chemicals and related products 10.9%; road vehicles/parts 10.6%; petroleum 6.3%; food products 5.3%). **Major import sources:** Germany 41.5%; Italy 6.9%; Switzerland 4.2%; China 4.0%; U.S. 3.3%.

Exports (2007): €114,400,000,000 (machinery and apparatus 28.6%, of which electrical machinery 6.9%, general industrial machinery 6.5%; road vehicles/parts 10.9%; chemicals and chemical products 9.5%; iron and steel 6.1%; fabricated metal products 4.9%). **Major export destinations:** Germany 30.1%; Italy 8.9%; U.S. 5.1%; Switzerland 4.4%; France 3.6%.

Transport and communications

Transport. Railroads⁸: (2007) route length 5,656 km; (2006) passenger-km 8,646,000,000; (2006) metric ton-km cargo 17,871,000,000. Roads (2003): total length 133,718 km (paved 100%). Vehicles (2007): passenger cars 4,245,583; trucks and buses 363,043. Air transport (2007): passenger-km 17,412,000,000; metric ton-km cargo 453,756,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	2,570	315	PCs	2006	5,027	607
Telephones				Dailies	2007	2,988 ⁹	359 ⁹
Cellular	2008	10,816 ¹⁰	1,296 ¹⁰	Internet users	2008	4,950	593
Landline	2008	3,342	400	Broadband	2008	1,792 ¹⁰	215 ¹⁰

Education and health

Educational attainment (2007). Percentage of population age 15 and over having: compulsory education through age 14, 28.3%; apprentice training/intermediate technical 48.2%; academic secondary/higher technical 13.9%; university 9.6%. **Literacy:** virtually 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	29,044	355,293	12.2	97
Secondary/Voc. (age 10–17)	71,548	782,981	10.9	...
Tertiary	40,186	253,139	6.3	50 (age 18–22)

Health: physicians (2008¹) 20,318 (1 per 410 persons); hospital beds (2008^{1,11}) 57,646 (1 per 144 persons); infant mortality rate per 1,000 live births (2008) 3.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 34,900 (army 80.8%; air force 19.2%). **Military expenditure as percentage of GDP** (2008): 0.7%; per capita expenditure U.S.\$330.

¹January 1. ²For general (central and local) government; revenue data are based on tax revenue and social security contributions only. ³Excludes conscripts not employed before their military service. ⁴In manufacturing and mining only. ⁵Taxes less subsidies. ⁶Unemployed. ⁷Imports c.i.f., exports f.o.b. ⁸Federal railways only. ⁹Circulation. ¹⁰Subscribers. ¹¹Excludes hospital beds in nursing homes and sanatoriums.

Internet resource for further information:

• Austrian Central Office of Statistics <http://www.statistik.at>

Azerbaijan

Official name: Azərbaycan Respublikası (Republic of Azerbaijan).

Form of government: unitary multiparty republic with a single legislative body (National Assembly [125¹]).

Head of state and government: President assisted by Prime Minister.

Capital: Baku (Bakı).

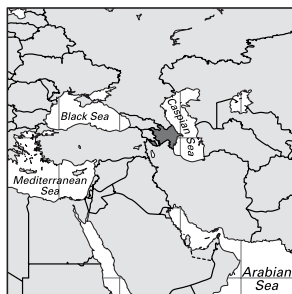
Official language: Azerbaijani.

Official religion: none.

Monetary unit: (new) manat (AZN)²;

(Sept. 1, 2009) 1 U.S.\$ = AZN 0.80;

1 ₼ = AZN 1.31.



Area and population

	area	population		area	population
Economic regions ⁴	sq km	2008 ³ estimate	Economic regions ⁴	sq km	2008 ³ estimate
Abşeron	3,290	417,500	Yuxarı Qarabağ (part)	2,200 ⁵	110,000 ⁵
Aran	21,430	1,769,900	Autonomous republic		
Bakı (Baku)	2,130	1,917,000	Naxçıvan	5,500	384,400
Dağlıq Şirvan	6,060	277,000	Conflicted area⁶	11,450 ⁷	...
Gəncə-Qazax	12,480	1,152,600	REMAINDER	—	751,100 ⁸
Kəlbəcər-Laçın ⁶	0	0	TOTAL	86,530 ⁹	8,629,900
Lənkəran	6,070	810,100			
Quba-Xaçmaz	6,960	482,100			
Şəki-Zaqatala	8,960	558,200			

Demography

Population (2009): 8,832,000¹⁰.

Density (2009): persons per sq mi 264.1, persons per sq km 102.0.

Urban-rural (2008¹¹): urban 51.7%; rural 48.3%.

Sex distribution (2008¹¹): male 49.34%; female 50.66%.

Age breakdown (2006): under 15, 26.3%; 15–29, 27.9%; 30–44, 22.7%; 45–59, 14.1%; 60–74, 6.7%; 75–84, 1.9%; 85 and over, 0.4%.

Population projection: (2020) 9,838,000; (2030) 10,323,000.

Doubling time: 61 years.

Ethnic composition (1999): Azerbaijani 90.6%; Lezgian (Dagestani) 2.2%; Russian 1.8%; Armenian 1.5%; other 3.9%.

Religious affiliation (2005): Muslim 87.0%¹², of which Shi'ī 52.8%¹², Sunni 34.2%¹²; nonreligious/other 13.0%¹².

Major cities (2007): Baku 1,145,000 (urban agglomeration 1,892,000); Gəncə 307,500; Sumqayıt (Sumgait) 268,800; Mingəçevir (Mingechaur) 95,500; Qaraxür 74,700.

Vital statistics

Birth rate per 1,000 population (2007): 17.7 (world avg. 20.3); within marriage 88.2%; outside of marriage 11.8%.

Death rate per 1,000 population (2007): 6.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 11.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.30.

Marriage/divorce rates per 1,000 population (2007): 9.5/1.0.

Life expectancy at birth (2007): male 69.7 years; female 75.1 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 365.3; malignant neoplasms (cancers) 79.8; diseases of the respiratory system 39.4; accidents, poisoning, and violence 35.9.

National economy

Budget (2007). Revenue: AZN 7,949,000,000 (tax revenue 70.9%, of which taxes on enterprise profits 30.9%, VAT 14.8%, individual income taxes 7.4%, social security contributions 6.9%; nontax revenue [all petroleum fund revenues] 29.1%). Expenditures: AZN 7,356,000,000 (current expenditure 62.5%; development expenditure 37.5%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): wheat 1,460,303, potatoes 999,343, barley 399,737, apples 178,350, seed cotton 130,123, persimmons 124,485, grapes 94,142, hazelnuts 24,625, tobacco leaves 4,845; livestock (number of live animals) 7,304,431 sheep, 2,148,108 cattle; roundwood (2007) 6,500 cu m, of which fuelwood 49%; fisheries production 4,093 (from aquaculture 3%). Mining and quarrying (2005): limestone 1,256,000. Manufacturing (value of production in AZN '000,000; 2007): refined petroleum products 1,634; food, beverages, and tobacco products 1,457; base and fabricated metals 398; transport equipment 166. Energy production (consumption): electricity (kW-hr; 2007) 20,337,000,000 ([2006] 25,429,000,000); coal, none (none); crude petroleum (barrels; 2007) 303,000,000 ([2006] 53,972,000); petroleum products (metric tons; 2006) 7,183,000 (3,931,000); natural gas (cu m; 2007) 9,606,000,000 ([2006] 10,662,000,000).

Household income and expenditure (2007). Average household size 4.5; annual income per household AZN 4,736 (U.S.\$5,519); sources of income: wages and salaries 31.9%, self-employment 24.5%, agriculture 16.1%, transfers 14.8%; expenditure: food 48.8%, housing and energy 6.5%; hotels and cafés 5.9%.

Population economically active (2005): total 3,906,500; activity rate of total population 46.3% (participation rates: ages 15–61 [male], 15–56 [female] 71.8%; female 47.7%; unemployed [2007] 6.5%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	82.1	83.9	89.6	100.0	108.3	126.4	152.6

Gross national income (GNI; 2008): U.S.\$33,232,000,000 (U.S.\$3,830 per capita); purchasing power parity GNI (U.S.\$7,770 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value AZN '000,000	% of total value	labour force	% of labour force
Agriculture	1,565	5.8	1,513,800	38.8
Petroleum and natural gas, other mining	14,672	54.7	42,200	1.1
Manufacturing	1,377	5.1	188,700	4.8
Public utilities	204	0.8	39,700	1.0
Construction	1,898	7.1	194,400	5.0
Transp. and commun.	1,525	5.7	191,500	4.9
Trade, hotels	1,484	5.5	653,000	16.7
Finance, real estate	1,652	6.2	113,800	2.9
Services	569	2.1	642,000	16.4
Pub. admin., defense	1,869 ¹³	7.0 ¹³	270,500	6.9
Other	1,869 ¹³	7.0 ¹³	56,900 ¹⁴	1.5 ¹⁴
TOTAL	26,815	100.0	3,906,500	100.0

Public debt (external, outstanding; 2007): U.S.\$1,748,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 178; remittances (2008) 1,554; foreign direct investment (2005–07 avg.) 1,537; official development assistance (2007) 225. Disbursements for (U.S.\$'000,000): tourism (2007) 264; remittances (2008) 593.

Land use as % of total land area (2007): in temporary crops 21.9%, in permanent crops 2.7%, in pasture 32.4%, forest area 11.3%.

Foreign trade¹⁵

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–36	+227	+3,438	+7,745	+15,561	+23,386
% of total	0.7%	3.1%	29.0%	42.4%	57.7%	61.9%

Imports (2007): U.S.\$5,712,000,000 (machinery and apparatus 30.7%, of which civil engineering equipment/parts 6.2%; food 11.5%, of which cereals 5.8%; road vehicles 11.3%; iron and steel products 8.7%; chemicals and chemical products 7.5%). **Major import sources** (2007): Russia 17.6%; Turkey 10.9%; Germany 8.2%; Ukraine 8.2%; U.K. 7.2%.

Exports (2008): U.S.\$47,756,000,000 (crude petroleum 92.5%; refined petroleum 4.3%; aluminum alloys 0.3%; boats or floating structures 0.3%). **Major export destinations** (2007): Turkey 17.4%; Italy 15.5%; Russia 8.7%; Iran 7.2%; Indonesia 6.4%.

Transport and communications

Transport. Railroads (2007): length 2,122 km; passenger-km 1,108,000,000; metric ton-km cargo 10,375,000,000. Roads (2004): total length 59,141 km (paved 49%). Vehicles (2007): passenger cars 616,853; trucks and buses 138,483. Air transport (2007): passenger-km 1,764,000,000; metric ton-km cargo 11,892,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,750	334	PCs	2007	207	24
Telephones				Dailies	2007	130 ¹⁶	16 ¹⁶
Cellular	2008	6,548 ¹⁷	750 ¹⁷	Internet users	2007	1,036	122
Landline	2008	1,318	151	Broadband	2008	60 ¹⁷	6.9 ¹⁷

Education and health

Educational attainment (1999). Percentage of population age 25 and over having: primary education 4.1%; some secondary 9.3%; secondary 50.1%; vocational 4.2%; some higher 0.9%; higher 13.3%. **Literacy** (2007): 99.4%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	44,106	512,976	11.6	86
Secondary/Voc. (age 10–16) ¹⁸	129,140	1,051,591	8.1	78
Tertiary	16,423	135,164	8.2	15 (age 17–21)

Health (2008): physicians 32,400¹¹ (1 per 252 persons); hospital beds 68,100¹¹ (1 per 49 persons); infant mortality rate per 1,000 live births (2007) 11.6; undernourished population (2003–05) 100,000,000 (12% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2008): 66,940 (army 84.9%, navy 3.3%, air force 11.8%). **Military expenditure as percentage of GDP** (2008): 2.5%; per capita expenditure U.S.\$154.

¹Statutory number. ²The (new) manat was introduced on Jan. 1, 2006, at a rate of 4,500 (old) manats (AZM) to 1 (new) manat (AZN). ³January 1; official government figures. ⁴Administratively, Azerbaijan is divided into 66 districts, 13 cities, and 1 autonomous republic (Naxçıvan). ⁵Part not occupied by Armenian forces. ⁶Occupied by Armenian forces since 1992/93. ⁷Area controlled by Armenian forces including all of Nagorno-Karabakh (4,400 sq km), all of Kəlbəcər-Laçın (5,420 sq km), and part of Yuxarı Qarabağ (1,630 sq km). ⁸Refugee population from Nagorno-Karabakh and conflicted areas. ⁹Summed total; reported total is 86,600 sq km. ¹⁰Estimate of United Nations *World Population Prospects: The 2008 Revision*. ¹¹January 1. ¹²The percentage of actual practicing adherents is much lower. ¹³Includes taxes less subsidies. ¹⁴Includes 56,300 unemployed. ¹⁵Imports c.i.f.; exports f.o.b. ¹⁶Circulation. ¹⁷Subscribers. ¹⁸2005–06.

Internet resource for further information:

• The State Statistical Committee of Azerbaijan Republic
<http://www.azstat.org>

Bahamas, The

Official name: The Commonwealth of The Bahamas.

Form of government: constitutional monarchy with two legislative houses (Senate [16]; House of Assembly [41]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Nassau.

Official language: English.

Official religion: none.

Monetary unit: Bahamian dollar (B\$); valuation (Sept. 1, 2009)

1 U.S.\$ = B\$1.00; 1 £ = B\$1.62.



Area and population

Islands and Island Groups ²	area ¹	population	Islands and Island Groups ²	area ¹	population
	sq km	2000 census		sq km	2000 census
Abaco, Great and Little	1,681	13,170	Inagua, Great and Little	1,551	969
Acklins	497	428	Long Island	596	2,992
Andros	5,957	7,686	Mayaguana	285	259
Berry Islands	31	709	New Providence Island	207	210,832
Bimini Islands	23	1,717	Ragged Island	36	72
Cat Island	388	1,647	Rum Cay	78	80
Crooked and Long Cay	241	350	San Salvador	163	970
Eleuthera	484	7,999	Spanish Wells	26	1,527
Exuma, Great, and Exuma Cays	290	3,571	Other uninhabited cays and rocks	23	—
Grand Bahama	1,373	46,994	TOTAL	13,939 ³	303,611
Harbour Island	8	1,639			

Demography

Population (2009): 342,000.

Density (2009)⁴: persons per sq mi 87.9, persons per sq km 34.0.

Urban-rural (2005): urban 83.0%; rural 17.0%.

Sex distribution (2008): male 48.71%; female 51.29%.

Age breakdown (2008): under 15, 26.0%; 15–29, 24.4%; 30–44, 23.9%; 45–59, 16.8%; 60–74, 7.1%; 75–84, 1.5%; 85 and over, 0.3%.

Population projection: (2020) 389,000; (2030) 426,000.

Doubling time: 81 years.

Ethnic composition (2007): local black/mixed race c. 74%; Haitian c. 15%; white/European c. 11%.

Religious affiliation (2000): Baptist 35.4%; Anglican 15.1%; Roman Catholic 13.5%; other Protestant/independent Christian 32.3%; other/nonreligious 3.7%.

Major cities and towns (2006): Nassau 231,500; Freeport (on Grand Bahama) 47,100; West End (on Grand Bahama) 12,900; Cooper's Town (on Great Abaco) 8,600; Marsh Harbour (on Great Abaco) 5,400.

Vital statistics

Birth rate per 1,000 population (2006): 13.9 (world avg. 20.3); (2000) within marriage 43.2%; outside of marriage 56.8%.

Death rate per 1,000 population (2006): 5.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 8.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 2.18.

Marriage/divorce rates per 1,000 population (2006): 16.35/2.1.

Life expectancy at birth (2006): male 62.2 years; female 69.0 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 184.2; malignant neoplasms (cancers) 90.1; accidents and violence 63.8; HIV/AIDS 48.9; diseases of the respiratory system 31.0; diabetes 29.4.

Adult population (ages 15–49) *living with HIV* (2007): 3.0% (world avg. 0.8%).

National economy

Budget (2008–09). Revenue: B\$1,569,300,000 (tax revenue 90.3%, of which taxes on international trade and transactions 48.6% [including import duties 32.8%, excise taxes 14.9%], business and professional licenses 7.1%, property taxes 6.2%; nontax revenue 9.7%). Expenditures: B\$1,672,900,000 (education 19.0%; health 16.6%; general administration 16.6%; public order 11.2%; interest on public debt 9.9%; public works and water supply 7.0%; defense 2.9%).

Public debt (external, outstanding; September 2008): U.S.\$833,800,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): sugarcane 55,500, fruits 33,472; livestock (number of live animals; 2007) 3,000,000 chickens; roundwood (2007) 49,600 cu m, of which fuelwood 66%; fisheries production 10,620 (mainly lobsters, crayfish, and conch; from aquaculture, negligible). Mining and quarrying (2006): salt 1,150,000; aragonite 1,100. Manufacturing (value of export production in B\$'000; 2007): polystyrene 142,200; organic chemicals 84,562; rum 20,282. Energy production (consumption): electricity (kW-hr; 2006–07⁸) 2,149,000,000 ([2006] 2,090,000,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (693,000).

Household income and expenditure. Average household size (2000) 3.5; income per household (2008) B\$43,427 (U.S.\$43,427); sources of income: n.a.; expenditure (1995)⁹: housing 32.8%, transportation and communications 14.8%, food and beverages 13.8%, household furnishings 8.9%.

Land use as % of total land area (2007): in temporary crops 0.8%, in permanent crops 0.4%, in pasture 0.2%, forest area 51.5%.

Gross national income (2007): U.S.\$7,042,000,000 (U.S.\$21,021 per capita).

Structure of gross domestic product and labour force

	2006		2004	
	in value B\$'000	% of total value	labour force	% of labour force
Agriculture	24,400	0.4	7,010	4.0
Fishing	82,400	1.2		
Mining	51,200	0.7		
Public utilities	234,800	3.4	2,575	1.5
Manufacturing	301,200	4.4		
Construction	738,200	10.7		
Transp. and commun.	596,200	8.7	10,335	5.9
Trade, hotels, restaurants	1,497,100	21.8		
Finance, real estate	1,893,900	27.5		
Pub. admin., defense	397,100	5.8	47,160	26.7
Services	897,000	13.0		
Other	162,100 ¹⁰	2.4 ¹⁰		
TOTAL	6,875,600	100.0	176,330	100.0 ³

Population economically active (2007): total 186,105; activity rate of total population 56.2% (participation rates: ages 15–64, 76.2%; female 48.5%; unemployed [February 2009, New Providence only] 12.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.0	96.9	98.1	100.0	101.8	104.3	106.9

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,187; remittances, n.a.; foreign direct investment (2005–07 avg.) 1,067. Disbursements for (U.S.\$'000,000): tourism (2007) 377; remittances (2008) 143.

Foreign trade¹²

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
B\$'000,000	–1,509	–1,575	–2,138	–2,475	–2,433	–2,461
% of total	67.4%	66.2%	70.9%	70.8%	64.5%	62.5%

Imports (2007): B\$3,103,000,000 (refined petroleum 19.2%¹³, machinery and equipment 14.0%, food products 12.9%, chemicals and chemical products 9.0%, road vehicles 6.2%). **Major import sources:** U.S. 88.5%; Netherlands Antilles 2.8%; Venezuela 2.1%; Japan 1.1%.

Exports (2007): B\$670,000,000 (refined petroleum 25.0%¹³, polystyrene 21.2%, organic chemicals 12.7%, crayfish 12.1%, aragonite 5.3%, rum 2.9%, power-generating machinery 2.9%). **Major export destinations:** U.S. 71.6%; Canada 5.7%; Netherlands 5.6%; France 4.9%; Germany 2.4%.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 2,717 km (paved 57%).

Vehicles (2002): passenger cars 112,900; trucks and buses 19,200. Air transport (2006): passenger-km 275,700,000; metric ton-km cargo 600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	77	247	PCs	...	...	...
Telephones				Dailies	2007	401 ⁴	121 ¹⁴
Cellular	2008	358 ¹⁵	1,058 ¹⁵	Internet users	2008	142	420
Landline	2008	133	393	Broadband	2008	34 ¹⁵	101 ¹⁵

Education and health

Educational attainment (2000). Percentage of population age 15 and over having: no formal schooling 1.5%; primary education 8.7%; incomplete secondary 19.9%; complete secondary 53.7%; incomplete higher 8.1%; complete higher 7.1%; not stated 1.0%. **Literacy** (2005): total percentage age 15 and over literate 95.8%; males literate 95.0%; females literate 96.7%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–10)	2,335	35,921	15.4	88
Secondary/Voc. (age 11–16)	2,559	32,709	12.8	84
Tertiary	...	...	...	... (age 17–21)

Health (2003): physicians 523 (1 per 602 persons); hospital beds 1,068 (1 per 295 persons); infant mortality rate per 1,000 live births (2006) 16.3; undernourished population (2002–04) 25,000 (8% of total population based on the consumption of a minimum daily requirement of 1,940 calories).

Military

Total active duty personnel (November 2008): 860 (paramilitary coast guard 100%). **Military expenditure as percentage of GDP** (2007): 0.8%; per capita expenditure U.S.\$175.

¹Includes areas of lakes and ponds, as well as lagoons and sounds almost entirely surrounded by land; area of land only is about 10,070 sq km (3,890 sq mi). ²For local administrative purposes, The Out (Family) Islands of the Bahamas are divided into 31 districts; New Providence Island is administered directly by the national government. ³Detail does not add to total given because of rounding. ⁴Land area only. ⁵Includes non-resident marriages. ⁶Statistically derived midpoint within range. ⁷Includes public corporations. ⁸Ending September 30. ⁹Weights of retail price index components. ¹⁰Import taxes less imputed bank service charges. ¹¹Includes 170 not adequately defined and 17,990 unemployed. ¹²Imports c.i.f.; exports f.o.b. ¹³Much of which is transhipped from the petroleum storage terminal near Freeport. ¹⁴Circulation. ¹⁵Subscribers.

Internet resources for further information:

- The Central Bank of The Bahamas <http://www.bahamascentralbank.com>
- Department of Statistics <http://statistics.bahamas.gov.bs>

Bahrain

Official name: Mamlakat al-Baḥrayn (Kingdom of Bahrain).

Form of government: constitutional monarchy with a parliament comprising two bodies (Shura Council [40]; Council of Representatives [40]).

Chief of state: King.

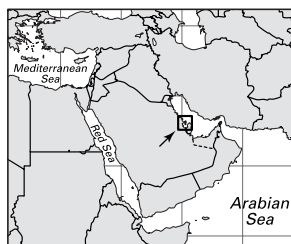
Head of government: Prime Minister.

Capital: Manama.

Official language: Arabic.

Official religion: Islam.

Monetary unit: Bahraini dinar (BD); valuation (Sept. 1, 2009)
1 BD = U.S.\$2.66 = £1.64.



Area and population

Municipalities	Principal cities	area		population
		sq mi	sq km	2001 census
Capital	Manama	13	34	163,696
Central	Ar-Rifā'	35	90	167,691
Muharraḡ ²	Muharraḡ ²	14	36	103,576
Northern	Madinat Ḥamad	50	130	166,824
Southern ³	'Awālī	166	430	44,764
TOTAL		278 ⁴	720 ⁴	650,604 ⁵

Demography

Population (2009): 1,168,000.

Density (2009): persons per sq mi 4,027.6, persons per sq km 1,557.3.

Urban-rural (2005): urban 88.4%; rural 11.6%.

Sex distribution (2007): male 60.82%; female 39.18%.

Age breakdown (2007): under 15, 21.1%; 15–29, 29.1%; 30–44, 31.7%; 45–59, 14.3%; 60–74, 2.8%; 75–84, 0.7%; 85 and over, 0.3%.

Population projection: (2020) 1,435,000; (2030) 1,634,000.

Doubling time: 53 years.

Ethnic composition (2000): Bahraini Arab 63.9%;⁶ Indo-Pakistani 14.8%, of which Urdu 4.5%, Malayali 3.5%; Persian 13.0%; Filipino 4.5%; British 2.1%; other 1.7%.

Religious affiliation (2000): Muslim 82.4%, of which Shī'ī c. 58%, Sunnī c. 24%; Christian 10.5%; Hindu 6.3%; other 0.8%.

Major urban areas (2001): Manama (2007) 157,000; Muharraḡ 91,307; Ar-Rifā' 79,550; Madinat Ḥamad 52,718; Al-'Alī 47,529; Madinat 'Isā 36,833.

Vital statistics

Birth rate per 1,000 population (2007): 15.4 (world avg. 20.3).

Death rate per 1,000 population (2007): 2.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 13.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.00.

Marriage/divorce rates per 1,000 population (2006): 6.4/1.5.

Life expectancy at birth (2005): male 71.7 years; female 76.8 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 86.6; malignant neoplasms (cancers) 39.3; injury and poisoning 26.5; metabolic and immunity diseases 24.4; diseases of the respiratory system 20.7; diseases of the digestive system 13.8.

National economy

Budget (2006). Revenue: BD 1,839,600,000 (petroleum and natural gas revenue 77.0%; other 23.0%). Expenditures: BD 1,558,500,000 (current expenditure 70.7%; development expenditure 29.3%).

Public debt (2008): U.S.\$6,530,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 15,500, cow's milk 10,500, goat meat 5,700, hen's eggs 2,450, tomatoes 2,250, onions 1,300, lettuce 1,150, lemons and limes 1,000; livestock (number of live animals) 41,000 sheep, 26,500 goats, 470,000 chickens; roundwood 6,300 cu m, of which fuelwood 100%; fisheries production (2006) 15,596 (from aquaculture, negligible). Manufacturing (value added in BD 000,000; 2007): petroleum products 436.8; aluminum 263.3; other metal industries 115.2; bricks, cement, tiles 90.8; food products 67.5. Energy production (consumption): electricity (kW-hr; 2008) 11,657,000,000 ([2006] 9,822,000,000); coal, none (none); crude petroleum (barrels; 2008) 66,900,000⁷ ([2006] 94,428,000); petroleum products (metric tons; 2006) 11,110,000 (1,447,000); natural gas (cu m; 2008) 15,241,000,000 ([2006] 7,890,000,000).

Gross national income (2007): U.S.\$14,022,000,000 (U.S.\$12,935 per capita).

Structure of gross domestic product and labour force

	2007		2001	
	value in BD '000,000	% of total value	labour force ⁸	% of labour force ⁸
Agriculture, fishing	25.3	0.4	4,483	1.5
Crude petroleum, nat. gas	1,709.7	24.6	2,780	0.9
Quarrying	30.8	0.4		
Manufacturing	1,062.8	15.3	49,979	16.2
Construction	347.6	5.0	26,416	8.6
Public utilities	85.6	1.2	2,515	0.8
Transp. and commun.	413.9	6.0	13,769	4.5
Trade, restaurants	773.7	11.2	47,570	15.5
Finance, real estate	2,092.5	30.2	24,797	8.1
Pub. admin., defense	811.1	11.7	52,389	17.0
Services	259.2	3.7	61,256	19.9
Other	-676.2 ⁹	-9.7 ⁹	21,560 ¹⁰	7.0 ¹⁰
TOTAL	6,936.0	100.0	307,514	100.0 ¹¹

Population economically active (2005): total 350,000; activity rate of total population 48.3% (participation rates: ages 15 and over c. 67%; female 23.2%; unemployed [Bahrainis only; October 2008] 3.6%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.7	95.2	97.5	100.0	102.0	105.3	109.0
Monthly earnings index ¹²	110.8	107.0	104.7	100.0	96.7	100.0	...

Household income and expenditure (2005–06): Average household size (2001) 5.9; average annual income per household BD 14,227 (U.S.\$37,838); sources of income: wages and salaries 70.2%, real estate 14.5%, transfers 8.4%, self-employment 6.7%; expenditure: food, beverages, and tobacco 20.4%, other 79.6%.

Land use as % of total land area (2007): in temporary crops 2.8%, in permanent crops 5.6%, in pasture 5.6%, forest area 0.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,105; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 1,907. Disbursements for (U.S.\$'000,000): tourism (2007) 479; remittances (2008) 1,483; FDI (2005–07 avg.) 1,261.

Foreign trade¹³

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+798	+974	+932	+899	+2,705	+2,150
% of total	7.4%	7.9%	6.6%	4.6%	13.1%	8.5%

Imports (2007): U.S.\$11,515,000,000 (crude petroleum 50.9%, machinery and apparatus 10.0%, road vehicles 7.9%, aluminum oxide 5.8%, food and live animals 4.0%). **Major import sources** (2006)¹⁴: Japan 11.9%; Saudi Arabia 11.6%; Australia 8.3%; China 8.2%; U.S. 7.1%.

Exports (2007): U.S.\$13,665,000,000 (refined petroleum 79.1%, aluminum [all forms] 9.0%, urea 2.4%, iron ore agglomerates 1.4%, methanol 1.3%). **Major export destinations** (2006)¹⁴: Saudi Arabia 20.9%; U.S. 9.3%; India 6.8%; Singapore 6.5%; Qatar 3.9%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 3,498 km (paved 79%). Vehicles (2007): passenger cars 275,389; trucks and buses 44,075. Air transport (2007)¹⁵: passenger-km 13,999,000,000; metric ton-km cargo 498,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	273	386	PCs	2004	121	147
Telephones				Dailies	2007	155 ¹⁶	149 ¹⁶
Cellular	2008	1,400 ¹⁷	1,247 ¹⁷	Internet users	2007	250	241
Landline	2008	220	196	Broadband	2008	93 ¹⁷	83 ¹⁷

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal education 24.0%; primary education 37.1%; secondary 26.4%; higher 12.5%. **Literacy** (2005): percentage of population age 15 and over literate 90.0%; males literate 92.6%; females literate 86.4%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	4,953 ¹⁸	89,721 ¹⁹	16.4 ¹⁸	98
Secondary/Voc. (age 12–17)	5,198 ¹⁸	73,767 ¹⁹	12.4 ¹⁸	93
Tertiary	756	18,841	24.9	32 (age 18–22)

Health (2007): physicians 2,225 (1 per 467 persons); hospital beds 2,043 (1 per 509 persons); infant mortality rate per 1,000 live births (2007) 8.3; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 8,200 (army 73.2%, navy 8.5%, air force 18.2%)²⁰. **Military expenditure as percentage of GDP** (2008): 2.6%; per capita expenditure U.S.\$509.

¹All seats are appointed by the king. ²Official name is Al-Muḥarraḡ. ³Includes the area of Hawār island and other nearby islets awarded to Bahrain by the International Court of Justice in 2001. ⁴Area per more recent survey is 290 sq mi (750 sq km); an extensive land reclamation scheme was under way in 2009. ⁵Includes 4,053 living abroad. ⁶Bahraini Arabs constituted 50.7% of the population in 2007. ⁷Includes offshore production totaling 54,800,000 barrels. ⁸Excludes small number of unemployed non-Bahrainis. ⁹Import duties less imputed bank service charges. ¹⁰Includes 5,424 inadequately defined and 16,136 unemployed Bahrainis. ¹¹Of which c. 59% non-Bahrainis; non-Bahrainis constituted c. 70% of labour force in 2006. ¹²Private sector. ¹³Imports c.i.f.; exports f.o.b. ¹⁴Excluding petroleum. ¹⁵Gulf Air only. ¹⁶Circulation. ¹⁷Subscribers. ¹⁸2001–02. ¹⁹2005–06. ²⁰U.S. troops in Bahrain (November 2008): 1,324.

Internet resources for further information:

- Central Bank of Bahrain
<http://www.cbb.gov.bh>
- Central Informatics Organization
<http://www.cio.gov.bh/en>

Bangladesh

Official name: Gana Prajatantri Bangladesh (People's Republic of Bangladesh).

Form of government: unitary multiparty republic¹ with one legislative house (Parliament [345²]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Dhaka.

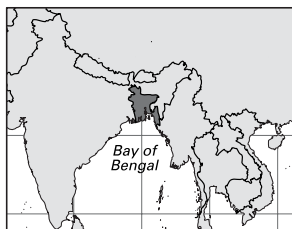
Official language: Bengali (Bangla).

Official religion: Islam.

Monetary unit: Bangladesh taka

(Tk); valuation (Sept. 1, 2009)

1 U.S.\$ = Tk 69.05; 1 £ = Tk 112.05.



Area and population		area		population
Divisions	Administrative centres	sq mi	sq km	2001 census
Barisal	Barisal	5,134	13,297	8,514,000
Chittagong ³	Chittagong	13,039	33,771	25,187,313
Dhaka	Dhaka	12,015	31,119	40,592,431
Khulna	Khulna	8,600	22,274	15,185,026
Rajshahi	Rajshahi	13,326	34,513	31,477,606
Sylhet	Sylhet	4,863	12,596	8,290,857
TOTAL		56,977 ⁴	147,570 ⁴	129,247,233

Demography

Population (2009): 156,051,000.

Density (2009)⁵: persons per sq mi 2,900.7, persons per sq km 1,120.0.

Urban-rural (2006): urban 24.6%; rural 75.4%.

Sex distribution (2006): male 51.21%; female 48.79%.

Age breakdown (2005): under 15, 33.8%; 15–29, 30.5%; 30–44, 19.5%; 45–59, 10.6%; 60–74, 4.6%; 75–84, 0.9%; 85 and over, 0.1%.

Population projection: (2020) 180,753,000; (2030) 204,142,000.

Ethnic composition (1997): Bengali 97.7%; tribal 1.9%, of which Chakma 0.4%, Saontal 0.2%, Marma 0.1%; other 0.4%.

Religious affiliation (2005): Muslim (nearly all Sunnī) 88.3%; Hindu 10.5%; Buddhist 0.6%; Christian (mostly Roman Catholic) 0.3%; other 0.3%.

Major cities/metropolitan areas (2008): Dhaka 7,000,940/12,797,394; Chittagong 2,579,107/3,858,093; Khulna 855,650/1,388,425; Rajshahi 472,775/775,495; Sylhet 463,198; Comilla (2006) 404,200; Tungi (2006) 352,900.

Vital statistics

Birth rate per 1,000 population (2006): 20.6 (world avg. 20.3).

Death rate per 1,000 population (2006): 5.6 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 2.41.

Marriage/divorce rates per 1,000 population (2006): 13.1/n.a.

Life expectancy at birth (2006): male 64.4 years; female 66.0 years.

Major causes of death per 100,000 population (2004)⁶: old age 100.2; infectious and parasitic diseases 98.3; diseases of the respiratory system 90.5; high blood pressure, heart disease, and stroke 61.0; suicide, accidents, and poisoning 35.7; malignant neoplasms (cancers) 26.6; unspecified 80.8.

National economy

Budget (2007–08). Revenue: Tk 605,400,000,000 (tax revenue 79.3%, of which VAT 28.1%, taxes on income and profits 18.8%, import duties 15.4%; nontax revenue 20.7%). Expenditures: Tk 936,100,000,000 (current expenditure 55.8%, of which domestic interest 11.3%, education 9.2%, agriculture 6.5%, defense 4.8%, health 3.0%; development expenditure 24.0%; other 20.2%).

Public debt (external, outstanding; 2007): U.S.\$20,151,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007–08): paddy rice 28,931,000, potatoes 5,762,000, sugarcane 4,983,656, goat's milk 2,016,000, bananas 877,123, wheat 844,000, jute 832,000, rapeseed 227,930, pulses 203,535, allspice (2005) 138,000, tea 58,999, ginger 57,000, tobacco leaves 40,248; livestock (number of live animals; 2007) 52,500,000 goats, 25,300,000 cattle; roundwood (2007) 27,790,000 cu m, of which fuelwood 99%; fisheries production (2006) 2,328,545 (from aquaculture 38%). Mining and quarrying (2007): granite 1,500,000; marine salt 360,000. Manufacturing (value added in Tk '000,000,000; 2004–05)⁷: marine products 28.6; medicine/pharmaceuticals 23.0; petroleum products 22.9; cotton yarn 15.9; cement 12.0.⁸ Energy production (consumption): electricity (kW-hr; 2007) 22,572,000,000 ([2006] 23,703,000,000); hard coal (metric tons; 2007) 1,000,000 (700,000); crude petroleum (barrels; 2007) 2,100,000 ([2006] 9,949,000); petroleum products (metric tons; 2006) 884,000 (3,462,000); natural gas (cu m; 2007) 15,225,000,000 ([2006] 15,488,000,000).

Household income. Average household size (2006) 4.7; average annual income per household (2005) Tk 86,438 (U.S.\$1,344); sources of income (2000): self-employment 56.9%, wages and salaries 28.1%, transfer payments 9.1%, other 5.9%; expenditure (2005): food and beverages 53.8%, housing 12.3%, energy 6.0%, clothing and footwear 5.5%.

Population economically active (2004–05): total 49,461,000; activity rate of total population 36.0% (participation rates: ages 15–64, 59.7%; female 24.5%; unemployed or underemployed [2008] 38%).

Price and earnings indexes (2004–05 = 100)						
	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
Consumer price index	88.8	94.0	100.0	107.2	114.9	126.3
Average wage index	88.9	94.5	100.0	109.8	114.7	128.4

Gross national income (GNI; 2008): U.S.\$82,569,000,000 (U.S.\$520 per capita); purchasing power parity GNI (U.S.\$1,440 per capita).

Structure of gross domestic product and labour force

	2007–08		2004–05	
	in value Tk '000,000,000 ⁹	% of total value	labour force	% of labour force
Agriculture, forestry	504	15.7	21,672,000	43.8
Fishing	144	4.5	1,095,000	2.2
Mining	37	1.1	51,000	0.1
Manufacturing	552	17.2	5,224,000	10.6
Construction	284	8.8	1,524,000	3.1
Public utilities	48	1.5	76,000	0.2
Transp. and commun.	324	10.1	3,976,000	8.0
Trade, hotels	469	14.6	7,820,000	15.8
Finance, real estate	232	7.2	746,000	1.5
Public admin., defense	86	2.7	882,000	1.8
Services	456	14.2	4,290,000	8.7
Other	82	2.5	2,104,000	4.3
TOTAL	3,218	100.0 ¹⁰	49,461,000 ¹⁰	100.0 ¹⁰

Land use as % of total land area (2007): in temporary crops 61.3%, in permanent crops 3.7%, in pasture 4.6%, forest area 6.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 76; remittances (2008) 8,979; foreign direct investment (2005–07 avg.) 768; official development assistance (2007) 1,502. Disbursements for (U.S.\$'000,000): tourism (2007) 156; remittances (2008) 3.

Foreign trade¹¹

Balance of trade (current prices)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
U.S.\$'000,000	–2,159	–2,237	–3,216	–2,879	–3,458	–5,541
% of total	14.2%	13.1%	15.7%	12.1%	12.5%	16.6%

Imports (2006): U.S.\$15,688,000,000 (machinery and apparatus 21.3%, refined petroleum 10.9%, food products 9.6%, textile yarn and fabrics 9.2%, cotton 5.4%). **Major import sources:** China 16.4%; India 12.0%; Kuwait 9.3%; Japan 5.7%; South Korea 4.2%.

Exports (2006): U.S.\$11,697,000,000 (knitted or woven clothing or accessories 71.1%, dyed woven fabrics 5.9%, shrimp 4.1%, leather 2.1%, textile yarn 2.0%, bed linen 1.7%, jute 1.2%). **Major export destinations** (2006): U.S. 26.7%; Germany 15.0%; U.K. 9.0%; China 6.6%; France 6.1%.

Transport and communications

Transport. Railroads (2002): route length 1,720 mi, 2,768 km; passenger-km 3,970,000,000; metric ton-km cargo 908,000,000. Roads (2003): total length 148,648 mi, 239,226 km (paved 10%). Vehicles (2005–06): passenger cars 97,450; trucks and buses 113,329. Air transport (2007)¹²: passenger-km 4,186,000,000; metric ton-km cargo 116,140,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	11,531	85	PCs	2006	3,050	22
Telephones				Dailies	2007	1,400 ¹³	10 ¹³
Cellular	2008	44,640 ¹⁴	290 ¹⁴	Internet users	2007	500	3.5
Landline	2008	1,345	8.7	Broadband	2007	44 ¹⁴	0.3 ¹⁴

Education and health

Educational attainment (2004)¹⁵. Percentage of population age 25 and over having: no formal schooling 48.8%; incomplete primary education 17.9%; complete primary 7.7%; incomplete secondary 15.1%; complete secondary¹⁶ or higher 10.5%. **Literacy** (2006): total population age 15 and over literate 53.7%; males literate 58.5%; females literate 48.8%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	352,683	17,953,300	50.9	89
Secondary/Voc. (age 11–17)	378,276	10,354,760	27.4	41
Tertiary ¹⁷	61,508	1,053,566	17.1	7 (age 18–22)

Health (2006): physicians 44,632 (1 per 3,110 persons); hospital beds 51,044 (1 per 2,719 persons); infant mortality rate per 1,000 live births (2006) 45.0; undernourished population (2002–04) 44,000,000 (30% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (November 2008): 157,053, of which UN peacekeepers 8,028 (army 80.3%, navy 10.8%, air force 8.9%). **Military expenditure as percentage of GDP** (2007): 1.5%; per capita expenditure U.S.\$7.

¹Reinstated Jan. 6, 2009; replaced interim caretaker government from October 2006.

²Includes 45 indirectly elected seats reserved for women. ³The Chittagong Hill Tracts, a semi-autonomous region for non-Bengali tribal people within Chittagong division (area: 5,133 sq mi [13,295 sq km]; 2001 pop. 1,390,631) was created by an accord signed in December 1997. Implementation of the accord was mostly ineffective in 2009. ⁴Based on the total area excluding the river area equals 53,797 sq mi (139,334 sq km). ⁵Based on the total area excluding the river area. ⁶Based on national sample registration system. ⁷Selected products only. ⁸Export processing zone manufactures (particularly ready-made garments) are of the greatest value. ⁹At constant prices of 1995–96. ¹⁰Detail does not add to total given because of rounding. ¹¹Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹²Biman Bangladesh Airlines only. ¹³Circulation. ¹⁴Subscribers. ¹⁵Sample survey based on 21,405 people. ¹⁶Through 5th year of secondary education (out of 7 years). ¹⁷2005–06.

Internet resources for further information:

- Bangladesh Bank <http://www.bangladesh-bank.org>
- Bangladesh Bureau of Statistics <http://www.bbs.gov.bd>

Barbados

Official name: Barbados.

Form of government: constitutional monarchy with two legislative houses (Senate [21]; House of Assembly [30]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Bridgetown.

Official language: English.

Official religion: none.

Monetary unit: Barbados dollar (Bds\$); valuation (Sept. 1, 2009)
1 U.S.\$ = Bds\$2.00; 1 £ = Bds\$3.25.



Area and population

Parishes ¹	area		population
	sq mi	sq km	2000 census
Christ Church	22	57	49,497
St. Andrew	14	36	5,254
St. George	17	44	17,868
St. James	12	31	22,741
St. John	13	34	8,873
St. Joseph	10	26	6,805
St. Lucy	14	36	9,328
St. Michael ²	15	39	83,684
St. Peter	13	34	10,699
St. Philip	23	60	22,864
St. Thomas	13	34	12,397
TOTAL	166	430 ³	250,010 ⁴

Demography

Population (2009): 276,000.

Density (2009): persons per sq mi 1,662.7, persons per sq km 641.9.

Urban-rural (2005): urban 38.4%; rural 61.6%.

Sex distribution (2007): male 48.36%; female 51.64%.

Age breakdown (2007): under 15, 19.8%; 15–29, 22.4%; 30–44, 24.7%; 45–59, 20.2%; 60–74, 8.7%; 75–84, 3.1%; 85 and over, 1.1%.

Population projection: (2020) 285,000; (2030) 288,000.

Ethnic composition (2000): local black 87.1%; mixed race 6.0%; British expatriates 4.3%; U.S. white 1.2%; Indo-Pakistani 1.1%; other 0.3%.

Religious affiliation (2000): Christian 72.5%, of which Anglican 28.3%, Pentecostal 18.7%, Adventist 5.5%, Methodist 5.1%; Rastafarian 1.1%; Muslim 0.7%; Hindu 0.3%; nonreligious 17.3%; other/unknown 8.1%.

Major urban areas (2006): Bridgetown 98,700; Speightstown 3,600; Oistins 2,300; Bathsheba 1,800; Holetown 1,400.

Vital statistics

Birth rate per 1,000 population (2007): 12.8 (world avg. 20.3).

Death rate per 1,000 population (2007): 8.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 4.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.68.

Marriage/divorce rates per 1,000 population: (2000) 13.1/n.a.

Life expectancy at birth (2007): male 71.2 years; female 75.8 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 270.5; malignant neoplasms (cancers) 165.0; communicable diseases 84.1; diabetes mellitus 70.0; accidents, poisonings, and violence 29.3.

National economy

Budget (2006–07). Revenue⁵: Bds\$2,156,000,000 (tax revenue 95.8%, of which VAT 30.1%, corporate taxes 20.6%, personal income taxes 13.8%, import duties 6.8%; nontax revenue 4.2%). Expenditures: Bds\$2,351,000,000 (current expenditure 89.1%, of which education 19.0%, general public service 15.7%, debt payments 14.0%, health 12.2%, roads and transportation 5.1%, defense 2.5%; development expenditure 10.9%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): sugarcane (2007) 354,000, sweet potatoes 2,000, coconuts 1,950, cucumbers and gherkins 1,800, okra 1,550, chilies and green peppers 1,250, yams 1,150; livestock (number of live animals) 19,000 pigs, 10,800 sheep, 3,400,000 chickens; roundwood (2007) 11,100 cu m, of which fuelwood 46%; fisheries production 1,974 (from aquaculture, none). Mining and quarrying (2006): limestone 1,900,000, clay and shale 145,000. Manufacturing (2007): cement 294,184, raw sugar 34,700, rum (2005) 132,000 hectolitres, beer (2005) 87,000 hectolitres; other manufactures include industrial chemicals, electronic components, garments, and wooden furniture. Energy production (consumption): electricity (kW-hr; 2007) 924,000,000 (924,000,000); coal, none (none); crude petroleum (barrels; 2007) 303,000 ([2006] negligible); petroleum products (metric tons; 2006) 1,000 (252,000); natural gas (cu m; 2007) 21,100,000 ([2006] 26,857,000).

Household income and expenditure. Average household size (2004) 2.8; income per household: n.a.; expenditure (2001): food 33.8%, medical and personal care 17.0%, housing 12.3%, household furnishings and operations 10.1%, education and recreation 7.4%, energy 6.3%.

Population economically active (December 2005): total 145,800; activity rate of total population 53.1% (participation rates: ages 15 and over, 69.0%; female 49.5%; unemployed [July–September 2008] 8.4%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.5	93.0	94.2	100.0	107.3	111.6	122.0 ⁶

Gross national income (2007): U.S.\$3,580,000,000 (U.S.\$12,178 per capita).

Structure of gross domestic product and labour force

	2006		2005	
	in value Bds\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	175.1	2.7	3,700	2.5
Mining and quarrying	53.0	0.8	7	7
Manufacturing	357.1	5.5	7,200	4.9
Construction	361.1	5.6	13,900 ⁷	9.5 ⁷
Public utilities	197.3	3.0	1,900	1.3
Transp. and commun.	330.2	5.1	5,900	4.1
Trade, tourism	1,506.7	23.2	32,700	22.4
Finance, real estate ⁸	1,165.5	17.9	10,000	6.9
Pub. admin., defense	854.2	13.1	27,200	18.7
Services	383.5	5.9	30,200	20.7
Other ⁹	1,117.4 ⁹	17.2 ⁹	13,100	9.0
TOTAL	6,501.1	100.0	145,800	100.0

Public debt (external, outstanding; December 2006): U.S.\$799,400,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 967; remittances (2008) 168; foreign direct investment (FDI; 2005–07 avg.) 68; official development assistance (2007) 14. Disbursements for (U.S.\$'000,000): tourism (2006) 105; remittances (2008) 40; FDI (2005–07 avg.) 11.

Land use as % of total land area (2007): in temporary crops 37.2%, in permanent crops 2.3%, in pasture 4.7%, forest area 4.0%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–945	–899	–1,311	–1,187	–985	–1,290
% of total	65.4%	69.7%	64.5%	57.4%	61.0%	58.7%

Imports (2007): U.S.\$1,299,000,000 (machinery and apparatus 24.4%; manufactured goods 18.0%; food 15.6%; chemicals and chemical products 11.3%; road vehicles 7.8%). **Major import sources:** U.S. 43.7%; U.K. 7.8%; Trinidad and Tobago 7.7%; Japan 4.5%; Canada 4.4%.

Exports (2007): U.S.\$314,000,000 (crude petroleum 21.9%; food 15.3%, of which raw sugar 6.0%; rum 10.8%; machinery and apparatus 7.8%; medicines 7.7%; metal manufactures 5.7%). **Major export destinations:** Trinidad and Tobago 27.8%; U.S. 14.2%; U.K. 9.1%; St. Lucia 6.6%; Jamaica 5.3%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 1,025 mi, 1,650 km (paved virtually 100%). Vehicles (2004): passenger cars 92,195; trucks and buses 8,597. Air transport: passenger-km, n.a.; (2003) metric ton-km cargo 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	78	291	PCs	2005	40	148
Telephones				Dailies	2007	48 ¹¹	171 ¹¹
Cellular	2006	237 ¹²	847 ¹²	Internet users	2007	280	997
Landline	2006	140	501	Broadband	2006	55 ¹²	202 ¹²

Education and health

Educational attainment (2003). Percentage of employed labour force¹³ having: no formal schooling 0.5%; primary education 14.9%; secondary 58.7%; technical/vocational 5.4%; university 19.6%; other/unknown 0.9%. **Literacy** (2003): total population age 15 and over literate 99.7%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	1,553	22,584	14.5	97
Secondary/Voc. (age 11–15)	1,430 ¹⁴	20,651	14.6 ¹⁴	90
Tertiary	786	11,405	14.5	34 (age 16–20)

Health: physicians (2003) 369 (1 per 751 persons); hospital beds (2007) 630 (1 per 446 persons); infant mortality rate per 1,000 live births (2007) 13.2; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 610 (army 82.0%, navy 18.0%). **Military expenditure as percentage of GDP** (2008): 0.8%; per capita expenditure U.S.\$106.

¹Parishes and city (urban area) of Bridgetown have no local administrative function.

²Includes most of the city (urban area) of Bridgetown. ³Detail does not add to total given because of rounding. ⁴The adjusted de jure census total including non-enumerated persons (16,172) and institutionalized persons (2,610) is 268,792. ⁵Current revenue only. ⁶May–August average. ⁷Construction includes Mining and quarrying. ⁸Offshore banking and information services are important sources of revenue. ⁹Net indirect taxes. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation. ¹²Subscribers. ¹³Represents about 129,300 people. ¹⁴2005–06.

Internet resources for further information:

- Central Bank of Barbados <http://www.centralbank.org.bb>
- Barbados Statistical Service <http://www.barstats.gov.bb>

Belarus

Official name: Respublika Belarus (Republic of Belarus).

Form of government: republic with two legislative bodies (Council of the Republic [64]; House of Representatives [110]).

Head of state and government:

President assisted by Prime Minister.

Capital: Minsk.

Official languages: Belarusian; Russian.

Official religion: none.²

Monetary unit: Belarusian ruble (Br);

valuation (Sept. 1, 2009)

1 U.S.\$ = Br 2,830;

1 £ = Br 4,592.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2008 ³ estimate
Brest	Brest	12,500	32,300	1,435,100
Homyl (Gomel)	Homyl	15,600	40,400	1,468,600
Hrodna (Grodno)	Hrodna	9,650	25,000	1,106,600
Mahilyow (Mogilev)	Mahilyow	11,200	29,000	1,129,600
Minsk (Mynsk)	Minsk	14,800	38,300	1,461,800
Vitsyebsk (Vitebsk)	Vitsyebsk	15,500	40,100	1,273,300
City				
Minsk (Mynsk)	—	950	2,500	1,814,800
TOTAL		80,200 ⁴	207,600 ⁴	9,689,800

Demography

Population (2009): 9,658,000.

Density (2009): persons per sq mi 120.4, persons per sq km 46.5.

Urban-rural (2008³): urban 73.4%; rural 26.6%.

Sex distribution (2008³): male 46.67%; female 53.33%.

Age breakdown (2005): under 15, 15.7%; 15–29, 23.9%; 30–44, 22.0%; 45–59, 20.3%; 60–74, 12.5%; 75–84, 4.9%; 85 and over, 0.7%.

Population projection: (2020) 9,268,000; (2030) 8,820,000.

Ethnic composition (1999): Belarusian 81.2%; Russian 11.4%; Polish 3.9%; Ukrainian 2.4%; Jewish 0.3%; other 0.8%.

Religious affiliation (2007): nonreligious/atheist c. 50%; Belarusian Orthodox c. 40%; Roman Catholic c. 7%; other Christian c. 1%; Jewish c. 0.6%; other c. 1.4%.

Major cities (2006³): Minsk 1,741,000; Homyl 481,500; Mahilyow 367,700; Vitsyebsk 343,600; Hrodna 318,600; Brest 301,400.

Vital statistics

Birth rate per 1,000 population (2008): 11.1 (world avg. 20.3); within marriage 79.9%; outside marriage 20.1%.

Death rate per 1,000 population (2008): 13.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): –2.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.42.

Marriage/divorce rates per 1,000 population (2008): 8.0/3.8.

Life expectancy at birth (2008): male 64.7 years; female 76.5 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 693.5; malignant neoplasms (cancers) 171.2; accidents, poisoning, and violence 161.6; diseases of the respiratory system 45.0.

National economy

Budget (2007). Revenue: Br 37,167,000,000 (taxes on goods and services 34.2%, social security contributions 30.3%, taxes on trade 16.9%, taxes on corporations 6.1%, other taxes 4.8%; nontax revenue 7.7%). Expenditures: Br 36,748,000,000 (social protection 32.9%; economic affairs 25.0%; general administration 23.8%; defense 3.2%; education 2.9%; health 2.6%).

Public debt (external, outstanding; 2007): U.S.\$2,338,000,000.

Household income and expenditure (2004)⁵. Average household size 2.6; average annual income per household Br 6,520,956 (U.S.\$3,019); sources of income: wages and salaries 50.2%, transfers 23.3%, nonmonetary 9.5%, other 17.0%; expenditure: food and nonalcoholic beverages 46.1%, housing and energy 11.0%, clothing and footwear 10.0%, recreation and culture 7.3%, health 5.2%.

Population economically active (2007): 4,525,200; activity rate of total population 46.6% (participation rate [1999]: ages 15–64, 69.7%; female 52.8%; officially/unofficially unemployed [2008] 1.0%/c. 15–20%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	59.8	76.8	90.7	100.0	106.7	118.7	122.8
Monthly earnings index ⁶	39.6	53.4	77.3	100.0	118.5	141.2	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 8,744,000, cow's milk 5,882,000, sugar beets 3,626,000, barley 1,911,000, wheat 1,397,000, rye 1,305,000, triticale 1,242,000, cabbages 563,000⁷, corn (maize) 541,000, rapeseed 240,000; livestock (number of live animals) 4,007,000 cattle, 3,598,000 pigs; roundwood 8,756,000 cu m, of which fuelwood 15%; fisheries production (2006) 5,050 (from aquaculture 82%). Mining and quarrying (2005): potash 4,844,000; peat 2,408,000. Manufacturing (2007): fertilizers 5,880,000; cement 3,820,000; crude steel (2005) 2,076,000; sausages 273,100; beer 3,560,000 hectolitres; footwear 11,300,000 pairs; refrigerators and freezers 1,072,000 units; tractors 59,600 units. Energy production (consumption): electricity (kW-hr; 2007) 31,800,-

000,000 ([2006] 36,171,000,000); coal (metric tons; 2006) none (132,000); crude petroleum (barrels; 2007) 12,800,000 ([2006] 154,800,000); petroleum products (metric tons; 2006) 17,882,000 (5,622,000); natural gas (cu m; 2006) 219,000,000 (20,779,000,000).

Gross national income (GNI; 2008): U.S.\$52,117,000,000 (U.S.\$5,380 per capita); purchasing power parity GNI (U.S.\$12,150 per capita).

Structure of gross domestic product and labour force				
	2007		2003	
	in value Br '000,000,000	% of total value	labour force ⁸	% of labour force ⁸
Agriculture, forestry	7,110	7.4	493,000	11.1
Mining	25,655	26.7	987,000	22.2
Manufacturing				
Construction	8,167	8.5	231,000	5.2
Transp. and commun.	8,263	8.6	265,000	5.9
Trade, hotels	9,801	10.2	257,000	5.8
Finance	22,196	23.1	57,000	1.3
Public admin., defense			84,000	1.9
Services			1,033,000	23.2
Other	14,893 ⁹	15.5 ⁹	1,039,000 ¹⁰	23.4 ¹⁰
TOTAL	96,087¹¹	100.0	4,446,000	100.0

Land use as % of total land area (2007): in temporary crops 27.3%, in permanent crops 0.6%, in pasture 16.2%, forest area 39.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 324; remittances (2008) 448; foreign direct investment (2005–07 avg.) 810; official development assistance (2007) 83. Disbursements for (U.S.\$'000,000): tourism (2007) 606; remittances (2008) 142.

Foreign trade¹²

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008 ¹³
U.S.\$'000,000	–1,612	–2,593	–721	–2,584	–4,418	–5,422
% of total	7.5%	8.6%	2.2%	6.1%	8.3%	8.0%

Imports (2007): U.S.\$28,693,000,000 (crude petroleum 25.2%, nonelectrical machinery 11.0%, base and fabricated metals 10.6%, chemicals and chemical products 9.0%, natural gas 7.3%). **Major import sources:** Russia 60.0%; Germany 7.6%; Ukraine 5.3%; Poland 2.9%; China 2.8%.

Exports (2007): U.S.\$24,275,000,000 (refined petroleum 31.4%; machinery and apparatus 12.9%; road vehicles 8.0%; food 6.9%, of which dairy products 3.8%; potassium chloride 5.6%; iron and steel 4.9%). **Major export destinations:** Russia 36.6%; Netherlands 17.6%; U.K. 6.3%; Ukraine 6.1%; Poland 5.1%.

Transport and communications

Transport. Railroads (2007): length (2002) 5,533 km; passenger-km 9,366,000,000; metric ton-km cargo 47,933,000,000. Roads (2005): total length 94,797 km (paved 89%). Vehicles: passenger cars (2005) 1,771,398; trucks and buses, n.a. Air transport (2007): passenger-km 975,000,000; metric ton-km cargo 66,000,000.

Communications				units			
Medium	date	number in '000s	per 1,000 persons	Medium	date	number in '000s	per 1,000 persons
Televisions	2003	3,809	386	PCs	2007	78	80
Telephones	2007	6,960 ¹⁵	717 ¹⁵	Dailies	2007	940 ¹⁴	97 ¹⁴
Cellular				Internet users	...	...	...
Landline				Broadband	2006	11 ¹⁵	1.2 ¹⁵

Education and health

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	22,640	361,493	16.0	91
Secondary/Voc. (age 10–16)	103,085 ¹⁶	823,253	8.5 ¹⁶	87
Tertiary	42,121	556,526	13.2	69 (age 17–21)

Literacy (2007): total population age 15 and over literate 99.7%.

Health (2007): physicians 46,900 (1 per 207 persons); hospital beds 108,900 (1 per 89 persons); infant mortality rate per 1,000 live births (2008) 4.5; undernourished population (2002–04) 400,000 (4% of total population based on the consumption of a minimum daily requirement of 1,970 calories).

Military

Total active duty personnel (November 2008): 72,940 (army 40.6%, air force and air defense 24.9%, centrally controlled units 34.5%). **Military expenditure as percentage of GDP** (2008): 1.2%; per capita expenditure U.S.\$70.

¹Statutory number. ²However, a 2003 concordat grants the Belarusian Orthodox Church privileged status. ³January 1. ⁴Rounded area figures; exact area figures are 80,153 sq mi (207,595 sq km). ⁵Based on a sample survey of 4,831 households. ⁶All calculations based on December only. ⁷Including other brassicas. ⁸Based on annual survey. ⁹Net taxes. ¹⁰Includes 136,000 registered unemployed and 799,000 undistributed self-employed and unregistered unemployed. ¹¹Detail does not add to total given because of rounding. ¹²Imports c.i.f.; exports f.o.b. ¹³Excludes December. ¹⁴Circulation. ¹⁵Subscribers. ¹⁶2005–06.

Internet resource for further information:

• Ministry of Statistics and Analysis

<http://www.belstat.gov.by/homep/en/main.html>

Belgium

Official name: Koninkrijk België (Dutch); Royaume de Belgique (French); Königreich Belgien (German) (Kingdom of Belgium).

Form of government: federal constitutional monarchy with two legislative bodies (Senate [71¹]; House of Representatives [150]).

Chief of state: Monarch.

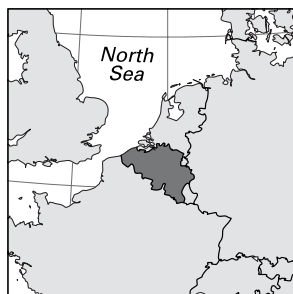
Head of government: Prime Minister.

Capital: Brussels.

Official languages: Dutch; French; German.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1€ = €1.13.



Area and population		area		population
Regions ²				2008 ³
Provinces	Capitals	sq mi	sq km	estimate
Brussels ⁴	Brussels	62	161	1,048,491
Flanders	Brussels ⁵	5,221 ⁶	13,522 ⁶	6,161,600
Antwerp	Antwerp	1,107	2,867	1,715,707
East Flanders	Gent (Ghent)	1,151	2,982	1,408,484
Flemish Brabant	Leuven	813	2,106	1,060,232
Limburg	Hasselt	935	2,422	826,690
West Flanders	Brugge	1,214	3,144	1,150,487
Wallonia ⁷	Namur ⁸ /Brussels ⁹	6,504 ⁶	16,844 ⁶	3,456,775
Hainaut	Mons	1,462	3,786	1,300,097
Liège	Liège	1,491	3,862	1,053,722
Luxembourg	Arion	1,714	4,440	264,084
Namur	Namur	1,415	3,666	465,380
Walloon Brabant	Wavre	421	1,091	373,492
TOTAL		11,787	30,528 ⁶	10,666,866

Demography

Population (2009): 10,779,000.

Density (2009): persons per sq mi 914.5, persons per sq km 353.1.

Urban-rural (2005): urban 97.3%; rural 2.7%.

Sex distribution (2008³): male 48.98%; female 51.02%.

Age breakdown (2005): under 15, 17.1%; 15–29, 18.4%; 30–44, 22.0%; 45–59, 20.5%; 60–74, 14.0%; 75–84, 6.4%; 85 and over, 1.6%.

Population projection: (2020) 11,399,000; (2030) 11,825,000.

National composition (2008³): Belgian 90.9%, of which Flemish-speaking 53.6%, French-speaking 36.4%, German-speaking 0.9%; Italian 1.6%; French 1.2%; Dutch 1.2%; Moroccan 0.7%; other 4.4%.

Religious affiliation (2000): Roman Catholic c. 57%; undefined Christian c. 15%; Muslim c. 4%; nonreligious c. 17%; other c. 7%.

Major cities/urban agglomerations (2008³): Brussels 148,873/1,831,496; Antwerp 472,071/955,338; Liège 190,102/641,591; Gent 237,250/423,320; Charleroi 201,593/405,236.

Vital statistics

Birth rate per 1,000 population (2008): 11.7 (world avg. 20.3); within marriage 58.0%; outside of marriage 42.0%.

Death rate per 1,000 population (2007): 9.5 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.82.

Life expectancy at birth (2008): male 77.5 years; female 83.5 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 359.6, of which ischemic heart disease 145.5, cerebrovascular disease 89.7; malignant neoplasms (cancers) 275.3.

National economy

Budget (2007). Revenue: €160,393,000,000 (social security contributions 28.8%, personal income tax 23.3%, taxes on goods and services 23.1%). Expenditures: €161,154,000,000 (social insurance benefits 46.3%, of which health 12.8%; wages 24.1%; interest on debt 7.8%; capital expenditure 5.9%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 5,746,892, cow's milk 3,000,000, potatoes 2,877,685, wheat 1,480,710, pork 1,000,100, corn (maize) 602,642, barley 365,049, chicory roots 361,305, apples 330,000, pears 218,000; livestock (number of live animals) 6,270,000 pigs, 2,639,700 cattle; roundwood 4,945,000 cu m, of which fuelwood 14%; fisheries production (2006) 24,219 (from aquaculture 5%). Mining and quarrying (2007): marble 340,000. Manufacturing (value added in €'000,000; 2007): chemicals and chemical products 9,228; base and fabricated metals 8,174; food/beverages/tobacco 6,257; transport equipment 3,872; non-electrical machinery and equipment 3,606. Energy production (consumption): electricity (kW-hr; 2007) 88,278,000,000 (93,248,000,000¹⁰); hard coal (metric tons; 2007) none (5,371,000); lignite (metric tons; 2006) 29,000 (313,000); crude petroleum (barrels; 2007) none (235,000,000¹⁰); petroleum products (metric tons; 2006) 28,114,000 (17,514,000); natural gas (cu m; 2007) none ([2006] 21,922,000,000).

Household income and expenditure. Avg. household size (2005) 2.4; average net income per household (2003) €24,455 (U.S.\$27,602); sources of income (2003): wages and transfer payments 69.3%, property income 11.1%; expenditure (2004): housing 21.0%, food, beverages, tobacco 15.8%, transportation 13.4%, recreation and culture 8.6%.

Land use as % of total land area (2007): in temporary crops 24.2%, in permanent crops 0.8%, in pasture 19.4%, forest area 22.0%.

Population economically active (2006): total 4,647,200; activity rate 44.2% (participation rates: ages 15–64, 58.8%; female 44.4%; unemployed [2008] 7.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.9	95.3	97.3	100.0	101.8	103.7	108.3
Annual earnings index	93.7	95.5	97.6	100.0	102.2	103.9	...

Gross national income (GNI; 2008): U.S.\$474,467,000,000 (U.S.\$44,330 per capita); purchasing power parity GNI (U.S.\$34,760 per capita).

Structure of gross domestic product and labour force

	2007		2006	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	2,352	0.7	83,300	1.8
Mining	315	0.1	9,400	0.2
Manufacturing	48,881	14.6	715,200	15.4
Construction	15,728	4.7	292,900	6.3
Public utilities	6,405	1.9	35,100	0.8
Transp. and commun.	24,478	7.3	320,000	6.9
Trade, restaurants	43,854	13.1	699,500	15.1
Finance, real estate	86,526	25.8	560,000	12.1
Pub. admin., defense	21,301	6.4	422,100	9.1
Services	48,059	14.3	1,125,000	24.2
Other	37,017 ¹¹	11.1 ¹¹	384,700 ¹²	8.3 ¹²
TOTAL	334,917 ⁶	100.0	4,647,200	100.0 ⁶

Public debt (September 2008; federal only): U.S.\$398,900,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 10,898; remittances (2008) 9,280; foreign direct investment (FDI; 2005–07 avg.) 46,439. Disbursements for (U.S.\$'000,000): tourism (2007) 17,268; remittances (2008) 3,689; FDI (2005–07 avg.) 46,284.

Foreign trade¹³

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+20,680	+20,893	+13,976	+15,466	+17,451	+6,473
% of total	4.2%	3.4%	2.1%	2.1%	2.1%	0.7%

Imports (2007): U.S.\$413,371,000,000 (machinery and apparatus 13.9%, mineral fuels 11.5%, road vehicles/parts 10.9%, base and fabricated metals 8.5%, medicines 8.0%, organic chemicals 7.3%). **Major import sources:** Germany 17.8%; Netherlands 17.6%; France 11.2%; U.K. 6.3%; U.S. 5.3%.

Exports (2007): U.S.\$430,822,000,000 (machinery and apparatus 12.3%, road vehicles/parts 11.4%, medicines 11.0%, food 6.9%, mineral fuels 6.6%, organic chemicals 6.5%, iron and steel 6.0%, plastics 5.1%, diamonds 4.2%¹⁴). **Major export destinations:** Germany 19.7%; France 16.7%; Netherlands 11.9%; U.K. 7.6%; U.S. 5.6%.

Transport and communications

Transport. Railroads (2006): route length 3,233 km; passenger-km 9,607,000,000; metric ton-km cargo 8,442,000,000. Roads (2004): total length 150,567 km (paved 78%). Vehicles (2006): passenger cars 4,976,286; trucks and buses 638,579. Air transport (2007)¹⁵: passenger-km 7,542,000,000; metric ton-km cargo 80,668,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5,800	557	PCs	2006	3,977	377
Telephones				Dailies	2007	1,665 ¹⁶	157 ¹⁶
Cellular	2008	11,822 ¹⁷	1,104 ¹⁷	Internet users	2007	7,006	659
Landline	2008	4,457	416	Broadband	2008	2,962 ¹⁷	277 ¹⁷

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling through lower-secondary education 39%; upper secondary/higher vocational 33%; university 28%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	64,947	732,808	11.3	97
Secondary/Voc. (age 12–17)	81,873	821,996	10.0	87
Tertiary	26,067	394,427	15.1	56 (age 18–22)

Health: physicians (2008³) 38,402 (1 per 278 persons); hospital beds (2005) 70,795 (1 per 148 persons); infant mortality rate (2008) 3.4; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 38,844 (army 36.7%, navy 4.2%, air force 18.9%, medical service 4.9%, joint service 35.3%)¹⁸. **Military expenditure as percentage of GDP** (2007): 1.1%¹⁹; per capita expenditure U.S.\$471¹⁹.

¹Excludes children of the monarch serving ex officio from age 18. ²Belgium has a complex division of responsibilities between 3 administrative regions and 3 linguistic communities. ³January 1. ⁴Officially, Brussels Capital Region. ⁵Dual capital of Flemish region and community. ⁶Detail does not add to total given because of rounding. ⁷The German community (within Wallonia [Jan. 1, 2008, pop. est. 74,169; capital at Eupen]) lacks expression as an administrative region. ⁸Capital of Walloon Region. ⁹Capital of French Community. ¹⁰2005. ¹¹Taxes less subsidies. ¹²Unemployed. ¹³Imports c.i.f.; exports f.o.b. ¹⁴World's leading exporter. ¹⁵Brussels Airlines only. ¹⁶Circulation. ¹⁷Subscribers. ¹⁸Foreign forces at NATO headquarters (November 2008) U.S. 1,301; U.K. 400. ¹⁹Includes military pensions.

Internet resource for further information:

• **Statistics Belgium** <http://www.statbel.fgov.be>

Belize

Official name: Belize.

Form of government: constitutional monarchy with two legislative houses (Senate [12¹, 2²]; House of Representatives [31²]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Belmopan.

Official language: English.

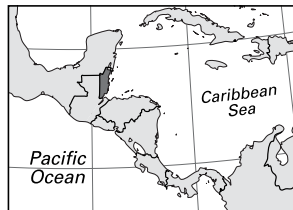
Official religion: none.

Monetary unit: Belize dollar (BZ\$);

valuation (Sept. 1, 2009)

1 U.S.\$ = BZ\$2.00;

1 £ = BZ\$3.24.



Gross national income (GNI; 2008): U.S.\$1,186,000,000 (U.S.\$3,820 per capita); purchasing power parity GNI (U.S.\$6,040 per capita).

Structure of gross domestic product and labour force

	2007			
	in value BZ\$'000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	271,000	10.6	24,837	20.3
Mining	11,300 ⁸	0.4 ⁸	507	0.4
Manufacturing	289,300 ⁹	11.3 ⁹	8,367	6.8
Construction	87,400	3.4	6,769	5.5
Public utilities	85,600	3.4	1,047	0.9
Transp. and commun.	286,100	11.2	3,996	3.3
Trade, restaurants	489,700	19.2	36,143	29.6
Finance, real estate, insurance	376,800	14.8	3,672	3.0
Pub. admin., defense	256,200	10.0	10,562	8.6
Services	166,500	6.5	15,246	12.5
Other	232,700 ¹⁰	9.1 ¹⁰	11,112 ¹¹	9.1 ¹¹
TOTAL	2,552,600	100.0 ⁴	122,258	100.0

Public debt (external, outstanding; December 2008): U.S.\$954,100,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 291; remittances (2008) 78; foreign direct investment (2005–07 avg.) 114; official development assistance (2007) 23. Disbursements for (U.S.\$'000,000): tourism (2007) 43; remittances (2008) 29.

Land use as % of total land area (2007): in temporary crops 3.1%, in permanent crops 1.4%, in pasture 2.2%, forest area 72.5%.

Foreign trade¹²

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-193.2	-167.8	-231.1	-385.9	-417.7	-595.1
% of total	32.3%	28.5%	32.4%	41.3%	43.9%	52.0%

Imports (2007): U.S.\$684,300,000 (refined petroleum 14.3%; manufactured goods 11.9%; machinery and apparatus 11.7%; food products 9.9%; chemicals and chemical products 7.5%; road vehicles 5.8%). *Major import sources:* U.S. 33.9%; Cuba 11.4%; Panama 9.7%; Mexico 9.6%; Guatemala 6.9%.

Exports (2007): U.S.\$266,600,000 (food products 63.2%, of which orange juice 19.6%, raw cane sugar 16.5%, bananas 7.8%, frozen crustaceans 7.6%, papayas and melons 4.9%; crude petroleum 26.9%). *Major export destinations:* U.S. 26.8%; U.K. 18.0%; Panama 14.3%; Costa Rica 11.8%; Netherlands 7.8%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 1,868 mi, 3,007 km (paved 19%). Vehicles (2003): passenger cars 36,952; trucks and buses 7,380. Air transport (2001)¹³: passenger arrivals 256,564, passenger departures 240,900; cargo loaded 186 metric tons, cargo unloaded 1,272 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	52	190	PCs	2002	35	132
Telephones				Dailies	2007	0 ¹⁴	0 ¹⁴
Cellular	2008	160 ¹⁵	497 ¹⁵	Internet users	2007	32	111
Landline	2008	31	97	Broadband	2008	7.7 ¹⁵	24 ¹⁵

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling 36.6%; primary education 40.9%; secondary 11.7%; postsecondary/advanced vocational 6.4%; university 3.8%; other/unknown 0.6%. *Literacy* (2003): total population age 15 and over literate 76.9%; males 77.1%; females 76.7%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	2,268	51,898	22.9	97
Secondary/Voc. (age 11–16)	1,796	30,475	17.0	67
Tertiary ¹⁶	97	722	7.4	2 (age 17–21)

Health: physicians (2006) 263 (1 per 1,140 persons); hospital beds (2005) 436 (1 per 665 persons); infant mortality rate per 1,000 live births (2007) 21.2; undernourished population (2002–04) 10,000 (4% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): 1,050 (army 100%)¹⁷. *Military expenditure as percentage of GDP* (2007): 1.4%; per capita expenditure U.S.\$58.

¹All seats nonelected. ²Excludes speaker, who may be designated from outside either legislative houses. ³Includes offshore cays totaling 266 sq mi (689 sq km). ⁴Detail does not add to total given because of rounding. ⁵Crude petroleum production began in late 2005. ⁶Weights of consumer price index published by central bank in 2008. ⁷Average of 2nd and 3rd quarters. ⁸Excludes crude petroleum extraction. ⁹Includes crude petroleum extraction. ¹⁰Taxes less subsidies on products and less financial services indirectly measured. ¹¹Includes 689 not adequately defined and 10,423 unemployed. ¹²Imports c.i.f.; exports f.o.b. ¹³Belize international airport only. ¹⁴Circulation; the only daily newspaper is online only. ¹⁵Subscribers. ¹⁶2003–04. ¹⁷Foreign forces (2008): British army 30.

Internet resources for further information:

- Central Bank of Belize <http://www.centralbank.org.bz>
- Statistical Institute of Belize <http://statisticsbelize.org.bz>

Area and population

Districts	Capitals	area		population
		sq mi	sq km	2008 estimate
Belize	Belize City	1,663	4,307	96,600
Cayo	San Ignacio/Santa Elena	2,006	5,196	77,000
Corozal	Corozal	718	1,860	36,800
Orange Walk	Orange Walk	1,790	4,636	48,300
Stann Creek	Dangriga	986	2,554	33,300
Toledo	Punta Gorda	1,704	4,413	30,100
TOTAL		8,867 ³	22,965 ^{3,4}	322,100

Demography

Population (2009): 334,000.

Density (2009): persons per sq mi 37.7, persons per sq km 14.5.

Urban-rural (2008): urban 51.4%; rural 48.6%.

Sex distribution (2008): male 49.95%; female 50.05%.

Age breakdown (2007): under 15, 38.9%; 15–29, 29.4%; 30–44, 17.7%; 45–59, 8.9%; 60–74, 3.8%; 75–84, 1.1%; 85 and over, 0.2%.

Population projection: (2020) 417,000; (2030) 484,000.

Doubling time: 31 years.

Ethnic composition (2004): mestizo (Spanish-Indian) 48.4%; Creole (predominantly black) 27.0%; Mayan Indian 10.0%; Garifuna (black-Carib Indian) 5.7%; white 3.9%; of which Mennonite 3.2%; East Indian 3.0%; Chinese 0.9%; other 1.1%.

Religious affiliation (2000): Roman Catholic 49.6%; Protestant 31.8%, of which Pentecostal 7.4%, Anglican 5.3%, Seventh-day Adventist 5.2%, Mennonite 4.1%; other Christian 1.9%; nonreligious 9.4%; other 7.3%.

Major cities (2008): Belize City 65,200; San Ignacio/Santa Elena 19,100; Belmopan 18,100; Orange Walk 16,300; Dangriga 12,000.

Vital statistics

Birth rate per 1,000 population (2007): 28.3 (world avg. 20.3); (1997) within marriage 40.3%; outside of marriage 59.7%.

Death rate per 1,000 population (2007): 5.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 22.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.52.

Marriage/divorce rates per 1,000 population (2003): 6.3/0.6.

Life expectancy at birth (2007): male 66.4 years; female 70.1 years.

Major causes of death per 100,000 population (2001): diseases of the circulatory system 116.7; accidents 64.6, of which transport accidents 34.1; malignant neoplasms (cancers) 61.1; diseases of the respiratory system 47.4; diabetes mellitus 27.8.

National economy

Budget (2007). Revenue: BZ\$765,477,000 (tax revenue 75.2%, of which taxes on goods and services 30.3%, taxes on international trade 22.8%, taxes on income and profits 21.3%; grants 11.4%; nontax revenue 9.7%; other 3.7%). Expenditures: BZ\$794,758,000 (current expenditure 80.0%; capital expenditure 20.0%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane (2008) 1,017,000, oranges 213,100, bananas (2008) 79,200, grapefruit 54,600, plantain 41,000, corn (maize) 37,200, papayas (2008) 28,900, chicken meat 15,000; livestock (number of live animals) 58,500 cattle, 1,600,000 chickens; roundwood 710,800 cu m, of which fuelwood 94%; fisheries production (2006) 11,788 (from aquaculture 65%). Mining and quarrying (2006): limestone 287,000; sand and gravel 219,000 cu m. Manufacturing (value added in U.S.\$'000,000; 2007): food products and beverages (significantly citrus concentrate, flour, sugar, and beer) 77.2; textiles, clothing, and footwear 3.6; other (incl. crude petroleum extraction) 64.3. Energy production (consumption): electricity (kW-hr; 2006) 191,000,000 (220,000,000); coal, none (none); crude petroleum (barrels; 2007) 1,100,000⁵ (n.a.); petroleum products (metric tons; 2006) none (272,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 4.4; average annual household income: n.a.; sources of income: n.a.; expenditure⁶: food, beverages, and tobacco 34.7%, transportation 17.0%, housing and energy 16.8%, clothing and footwear 9.2%.

Population economically active (2005): total 110,786; activity rate of total population 38.2% (participation rates: ages 15–64, 64.2%; female 36.7%; unemployed [2008] 8.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.3	93.6	96.6	100.0	104.2	106.7	115.1 ⁷

Benin

Official name: République du Bénin (Republic of Benin).

Form of government: multiparty republic with one legislative house (National Assembly [83]).

Head of state and government:

President, assisted by Prime Minister¹.

Capital: Porto-Novo.²

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12.



Area and population		area		population
Departments	Capitals	sq mi	sq km	2006 estimate
Alibori	Kandi	9,916	25,683	619,900
Atakora	Natitingou	7,899	20,459	634,600
Atlantique	Ouidah	1,248	3,233	982,300
Borgou	Parakou	9,772	25,310	861,900
Collines	Savalou	5,236	13,561	625,700
Donga	Djougou	4,128	10,691	400,200
Kouffo	Dogbo	928	2,404	621,800
Littoral	Cotonou	31	79	719,900
Mono	Lokossa	539	1,396	403,000
Ouémé	Porto-Novo	1,095	2,835	836,400
Plateau	Sakété	720	1,865	461,700
Zou	Abomey	1,971	5,106	673,500
TOTAL		43,484³	112,622	7,840,900

Demography

Population (2009): 8,792,000⁴.

Density (2009): persons per sq mi 202.2, persons per sq km 78.1.

Urban-rural (2005): urban 40.0%; rural 60.0%.

Sex distribution (2008): male 49.99%; female 50.01%.

Age breakdown (2008): under 15, 45.5%; 15–29, 27.3%; 30–44, 15.7%; 45–59, 7.4%; 60–74, 3.4%; 75–84, 0.6%; 85 and over 0.1%.

Population projection: (2020) 11,956,000; (2030) 15,248,000.

Doubling time: 23 years.

Ethnic composition (2002)⁵: Fon 39.2%; Adjara 15.2%; Yoruba (Nago) 12.3%; Bariba 9.2%; Fulani 7.0%; Somba (Otomary) 6.1%; Yoa-Lokpa 4.0%; other 7.0%.

Religious affiliation (2002): Christian 42.8%, of which Roman Catholic 27.1%, Protestant 5.4%, indigenous Christian 5.3%; Muslim 24.4%; traditional beliefs 23.3%, of which voodoo 17.3%; nonreligious 6.5%; other 3.0%.

Major urban localities (2006): Cotonou 719,912; Porto-Novo 255,878; Godomey 187,836; Parakou 178,304; Abomey-Calavi 75,226; Bohicon 74,070.

Vital statistics

Birth rate per 1,000 population (2008): 39.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 30.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 5.58.

Marriage rate per 1,000 population (2002): n.a.⁶

Life expectancy at birth (2008): male 57.4 years; female 59.8 years.

National economy

Budget (2007). Revenue: CFAF 634,000,000,000 (tax revenue 70.3%; nontax revenue 16.0%; grants 13.7%). Expenditures: CFAF 585,400,000,000 (current expenditures 65.6%; development expenditure 34.4%, of which externally financed 19.3%).

Public debt (external, outstanding; 2007): U.S.\$852,000,000.

Gross national income (GNI; 2008): U.S.\$5,951,000,000 (U.S.\$690 per capita); purchasing power parity GNI (U.S.\$1,460 per capita).

Structure of gross domestic product and labour force				
	2007		2002	
	in value U.S.\$'000,000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture, fishing	1,901	34.1	1,324,000	46.8
Mining			39,400	1.4
Public utilities	77	1.4	2,800	0.1
Manufacturing	418	7.5	253,100	8.9
Construction	231	4.1	70,300	2.5
Transp. and commun.	413	7.4	95,600	3.4
Trade, restaurants	897	16.1	815,400	28.8
Finance			2,800	0.1
Pub. admin., defense	1,087	19.5	205,300	7.2
Services				
Other	555	9.9	22,200	0.8
TOTAL	5,579	100.0	2,830,900	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 2,525,000, yams 2,240,000, corn (maize) 900,000, seed cotton 313,500, oil palm fruit 275,000, sorghum 200,000, peanuts (groundnuts) 130,000, tomatoes 114,000, dry beans 80,500, pineapples 80,100, okra 77,500, cashews 41,500, tobacco 1,100; livestock (number of live animals) 1,900,000 cattle, 1,439,600 goats, 15,050,000 chickens; roundwood 6,568,000 cu m, of which fuelwood 93%; fisheries production (2006) 38,436 (from aquaculture, 1%). Mining (2006): clay 21,000, gold 20 kg. Manufacturing (value added in U.S.\$'000,000; 1999): food products 74; textiles 42; beverages 36; bricks, tiles,

and cement 21. Energy production (consumption): electricity (kW-hr; 2006) 128,000,000 (718,000,000)⁸; coal, none (none); crude petroleum (barrels; 2005) 137,000 (negligible); petroleum products (metric tons; 2006) none (972,000); natural gas, none (none).

Population economically active (2006)⁹: total 3,539,000; activity rate of total population 40.4% (participation rates: ages 15–64, 72.9%; female 40.3%; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008 ¹⁰
Consumer price index	92.7	94.1	94.9	100.0	103.7	105.1	114.3

Household income and expenditure. Average household size (2002) 5.6; income per household: n.a.; sources of income: n.a.; expenditure (1996)¹¹: food and nonalcoholic beverages 38.2%, transportation 10.1%, expenditures in cafés and hotels 9.8%, housing and energy 9.5%, clothing and footwear 6.9%.

Land use as % of total land area (2007): in temporary crops 24.4%, in permanent crops 2.4%, in pasture 5.0%, forest area 20.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 118; remittances (2008) 271; foreign direct investment (2005–07 avg.) 51; official development assistance (2007) 470. Disbursements for (U.S.\$'000,000): tourism (2007) 35; remittances (2008) 67.

Foreign trade^{12, 13}

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–421.2	–620.5	–595.5	–600.5	–780.3	–1,116.5
% of total	40.9%	53.3%	49.9%	50.6%	63.6%	62.5%

Imports (2005): U.S.\$898,700,000 (food products 26.2%, of which rice 11.2%, poultry cuts 4.7%; refined petroleum 13.7%; machinery and apparatus 7.4%; electricity 6.3%; road vehicles 4.7%; cement clinker 4.4%). **Major import sources:** France 18.4%; China 8.8%; Ghana 7.2%; Côte d'Ivoire 6.9%; Thailand 6.7%; U.K. 5.7%.

Exports (2005): U.S.\$288,200,000 (cotton 58.0%; food products 12.0%, of which cashews 6.9%; cigarettes 6.7%). **Major export destinations:** China 36.2%; India 6.9%; Nigeria 5.8%; Niger 5.2%; Indonesia 3.6%.

Transport and communications

Transport. Railroads (2006): length 359 mi, 578 km; passenger-km, none¹⁴; metric ton-km cargo 28,900,000. Roads (2004): total length 11,800 mi, 19,000 km (paved 9.5%). Vehicles (2003): passenger cars 135,700; trucks and buses 19,200. Air transport (2003): passenger-km, n.a.; metric ton-km cargo 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	431	59	PCs	2007	58	7.0
Telephones				Dailies	2007	50 ¹⁵	6.2 ¹⁵
Cellular	2008	3,435 ¹⁶	403 ¹⁶	Internet users	2008	550	64
Landline	2007	110	14	Broadband	2007	2.0 ¹⁶	0.2 ¹⁶

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal schooling 63.5%; primary education 18.7%; secondary 15.9%; postsecondary 1.9%. **Literacy** (2005): total percentage of population age 15 and over literate 43.2%; males literate 58.8%; females literate 28.4%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	31,103	1,356,818	43.6	87
Secondary/Voc. (age 12–18)	14,410 ¹⁷	435,449 ¹⁸	23.9 ¹⁷	17 ¹⁹
Tertiary	955 ¹⁹	42,603	29.4 ¹⁹	5 (age 19–23)

Health (2003): physicians 1,013 (1 per 7,135 persons); hospital beds (2001) 590 (1 per 11,238 persons); infant mortality rate per 1,000 live births (2008) 66.2; undernourished population (2002–04) 800,000 (12% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 4,750, of which UN peacekeepers 1,178 (army 90.5%, navy 4.2%, air force 5.3%). **Military expenditure** as percentage of GDP (2007): 0.9%; per capita expenditure U.S.\$7.

¹Office of Prime Minister vacant from May 1998; the post of prime minister is not required per the constitution. ²Porto-Novo, the official capital established under the constitution, is the seat of the legislature, but the president and most government ministers reside in Cotonou. ³Detail does not add to total given because of rounding. ⁴Estimate of the U.S. Bureau of the Census International Database (June 2008 update).

⁵Data combine principal and related ethnic groups. ⁶In 2002, 27% of all marriages were polygamous. ⁷Age 10 years and over. ⁸Mostly imported from Ghana. ⁹All estimates of ILO. ¹⁰Average of 2nd and 3rd quarters. ¹¹Weights of consumer price index components.

¹²Imports c.i.f., exports f.o.b. ¹³Excludes reexports (notably petroleum and food products particularly from Nigeria and Niger) valued at U.S.\$253,000,000 in 2005. ¹⁴17,000,000 in 2005. ¹⁵Circulation. ¹⁶Subscribers. ¹⁷2003–04. ¹⁸2004–05. ¹⁹2000–01.

Internet resources for further information:

- Institut National de la Statistique et de l'Analyse Economique <http://www.insae-bj.org>
- La Banque de France: La Zone Franc <http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Bermuda

Official name: Bermuda.

Political status: overseas territory (United Kingdom) with two legislative houses (Senate [11¹]; House of Assembly [36]).

Chief of state: British Monarch, represented by Governor.

Head of government: Premier.

Capital: Hamilton.

Official language: English.

Official religion: none.

Monetary unit: Bermuda dollar

(Bd\$); valuation (Sept. 1,

2009) 1 U.S.\$ = Bd\$1.00²;

1 £ = Bd\$1.62.



Gross national income (GNI; 2007): U.S.\$5,430,000,000 (U.S.\$83,654 per capita); purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force

	2007			
	in value Bd\$'000,000	% of total value	labour force ⁹	% of labour force ⁹
Agriculture, fishing	45	0.8	697	1.7
Quarrying	323	5.5	3,544	8.9
Construction	85	1.4	935	2.3
Manufacturing	92	1.6	394	1.0
Public utilities	322	5.5	2,756	6.9
Transp. and commun.	740	12.6	9,564	24.0
Trade, restaurants	2,196	37.5	7,753	19.5
Finance, real estate ¹⁰	1,593	27.2	4,689	11.8
International business ¹⁰	286	4.9	4,113	10.3
Pub. admin., defense	467	8.0	5,406	13.6
Services	-294 ¹¹	-5.0 ¹¹	—	—
Other	5,855	100.0	39,851 ¹²	100.0
TOTAL				

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 569; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 45. Disbursements for (U.S.\$'000,000): tourism (2007) 288; remittances, n.a.; FDI (2005–07 avg.) 312.

Land use as % of total land area (2007): arable land (including land occupied by golf courses) c. 20%, forest area c. 20%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
Bd\$'000,000	-668	-671	-696	-781	-930	-939
% of total	86.5%	87.0%	86.7%	88.2%	93.0%	94.9%

Imports (2007): Bd\$1,133,000,000 (machinery and apparatus 18.1%; food products 11.9%; manufactured goods 11.9%; refined petroleum 8.8%; chemicals and chemical products 7.1%). **Major import sources:** United States 72.2%; Canada 7.3%; Venezuela 7.1%; U.K. 3.2%.

Exports (2005): Bd\$25,000,000 (including sales of fuel to aircraft and ships and reexports of pharmaceuticals; also rum and flowers). **Major export destinations:** mostly EU.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 140 mi, 225 km (paved 100%)¹³. Vehicles (2007): passenger cars 22,617; trucks and buses 4,907. Air transport: visitor arrivals (2007) 305,548; cargo loaded (2001) 909 metric tons, cargo unloaded (2001) 4,862 metric tons. Cruise-ship transport: visitor arrivals (2007) 354,024.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	68	1,077	PCs	2002	34	535
Telephones				Dailies	2007	19 ¹⁴	293 ¹⁴
Cellular	2006	60 ¹⁵	916 ¹⁵	Internet users	2007	59	879
Landline	2006	58	889	Broadband	2006	24 ¹⁵	355 ¹⁵

Education and health

Educational attainment (2000). Percentage of total population age 15 and over having: no formal schooling 0.4%; primary education 7.0%; secondary 39.3%; postsecondary technical 25.7%; higher 26.8%; not stated 0.8%. **Literacy (2005):** total population age 15 and over literate, 98.5%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	567	4,678	8.3	92
Secondary/Voc. (age 11–17)	747	4,518	6.0	...
Tertiary ¹⁶	69	639	9.3	19 (age 18–22)

Health: physicians (2007) 135 (1 per 481 persons); hospital beds (2005–06) 351 (1 per 186 persons); infant mortality rate per 1,000 live births (2005–07 avg.) 3.6; undernourished population, n.a.

Military

Total active duty personnel (2009): 530; part-time defense force assists police and is drawn from Bermudian conscripts.

¹All seats are appointed. ²The Bermuda dollar is at par with the U.S. dollar. ³Excludes the area and population of the city of Hamilton. ⁴Excludes the area and population of the town of St. George. ⁵Includes 0.4 sq mi (1.1 sq km) of uninhabited islands. ⁶Detail does not add to total given because of rounding. ⁷Excludes 8,335 short-term visitors, 901 institutionalized persons, and 39 transients. ⁸The economy of Bermuda is overwhelmingly based on service industries such as tourism, insurance companies, offshore financial centres, e-commerce companies, and ship repair facilities. ⁹Employed only. ¹⁰Bermuda is a major international financial centre, mainly due to its importance as an operating base for the international insurance and reinsurance industry. ¹¹Taxes less imputed bank service charges. ¹²68% Bermudian, 32% non-Bermudian with work permits. ¹³Excludes 138 mi (222 km) of paved private roads. ¹⁴Circulation. ¹⁵Subscribers. ¹⁶2004–05; many students attend universities abroad because Bermuda does not have a degree-conferring university, business school, or law school.

Internet resources for further information:

- Bermuda Government, Department of Statistics
<http://www.statistics.gov.bm>
- Bermuda Online: Economy
<http://bermuda-online.org/economy.htm>

Area and population

	area		population
	sq mi	sq km	2000 census
Municipalities			
Hamilton	0.3	0.8	969
St. George	0.5	1.3	1,752
Parishes			
Devonshire	2.0	5.1	7,307
Hamilton	2.0	5.1	5,270
Paget	2.1	5.3	5,088
Pembroke ³	1.8	4.6	10,337
St. George's ⁴	3.5	8.0	3,699
Sandys	2.1	5.4	7,275
Smith's	1.8	4.7	5,658
Southampton	2.2	5.6	6,117
Warwick	2.0	5.1	8,587
TOTAL	20.5 ⁵ , 6	53.1 ⁵ , 6	62,059 ⁷

Demography

Population (2009): 67,800.

Density (2009): persons per sq mi 3,307, persons per sq km 1,277.

Urban-rural (2005): urban 100.0%; rural, none.

Sex distribution (2008): male 48.36%; female 51.64%.

Age breakdown (2008): under 15, 18.5%; 15–29, 18.0%; 30–44, 20.1%; 45–59, 24.1%; 60–74, 13.3%; 75–84, 4.5%; 85 and over, 1.5%.

Population projection: (2020) 72,000; (2030) 73,000.

Ethnic composition (2000): black 50.4%; British expatriates 29.0%; mixed black/white 10.0%; U.S. white 6.0%; Portuguese 4.5%; other 0.1%.

Religious affiliation (2000): Protestant 64.3%, of which Anglican 22.6%, Methodist 14.9%; Roman Catholic 14.9%; nonreligious 13.8%; other 6.0%; unknown 1.0%.

Major municipalities and settlements (2000): St. George 1,752; Hamilton 969; Tucker's Town, n.a.; Flatts Village, n.a.

Vital statistics

Birth rate per 1,000 population (2007): 13.4 (world avg. 20.3); (2002) within marriage 64.2%; outside of marriage 35.8%.

Death rate per 1,000 population (2007): 7.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 6.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.00.

Marriage/divorce rates per 1,000 population (2007): 13.2/3.3.

Life expectancy at birth (2008): male 77.0 years; female 83.5 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 209; malignant neoplasms (cancers) 185; diabetes mellitus 51; diseases of the respiratory system 41; diseases of the nervous system 33.

National economy

Budget (2006–07). Revenue: Bd\$883,700,000 (payroll taxes 33.6%; customs duties 26.0%; taxes on international companies 5.9%; stamp duties 5.7%; taxes on land 4.9%; other 23.9%). Expenditures: Bd\$962,800,000 (current expenditure 88.7%; development expenditure 11.3%).

Public debt (July 2008): U.S.\$349,000,000.

Production (value in Bd\$'000 except as noted). Agriculture, forestry, fishing (2007): vegetables (including cabbages, carrots, and potatoes) 4,815; milk 2,173; fruits 373; eggs 344; flowers (particularly lilies) 173; honey 146; livestock (number of live animals; 2007) 900 horses, 600 cattle, 45,000 chickens; roundwood, n.a.; fisheries production (2006) 380 (from aquaculture, none). Mining and quarrying: crushed stone for local use. Manufacturing: industries include pharmaceuticals, paints, fish processing, handicrafts, and small boat building.⁸ Energy production (consumption): electricity (kW-hr; 2006) 696,000,000 (696,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (184,000); natural gas, none (none).

Household income and expenditure (2004). Average household size 2.3; average annual income per household Bd\$106,233 (U.S.\$106,233); sources of income: wages and salaries 65.1%, imputed income from owner occupancy 14.4%, self-employment 9.2%, net rental income 4.1%, other 7.2%; expenditure (2006): housing 34%, household furnishings 14%, food and nonalcoholic beverages 14%, transportation 9%, foreign travel 6%, health care 5%.

Population economically active (2000): total 37,879; activity rate of total population 61.0% (participation rates: ages 16–64, 84.8%; female 48.3%; unemployed [Bermudians only, 2006] 3.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	90.8	93.6	97.0	100.0	103.1	107.0	112.1

Bhutan

Official name: Druk-Yul (Kingdom of Bhutan).

Form of government: constitutional monarchy¹ with two legislative houses (National Council [25²]; National Assembly [47]).

Chief of state: Monarch.

Head of government: Prime Minister.

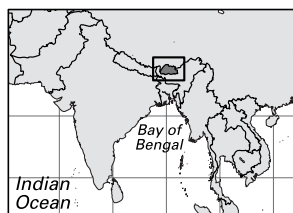
Capital: Thimphu.

Official language: Dzongkha (a Tibetan dialect).

Official religion: ³.

Monetary unit: ngultrum⁴ (Nu); valuation (Sept. 1, 2009)

1 U.S.\$ = Nu 49.04; 1 £ = Nu 79.57.



Area and population

area		population		area		population	
Districts	sq km ⁵	2005 census		Districts	sq km ⁵	2005 census	
Bumthang	2,611	16,116		Sarpang			
Chukha (Chhukha)	1,728	74,387		(Geylegphug)	2,188	41,549	
Dagana	1,344	18,222		Thimphu	1,843	98,676	
Gasa	4,185	3,116		Trashigang	2,188	51,134	
Haa	1,651	11,648		Trashiyangtse	1,382	17,740	
Lhuentse (Lhuntse)	2,764	15,395		Trongsa	1,728	13,419	
Mongar (Monggar)	1,881	37,069		Tsirang (Chirang)	614	18,667	
Paro	1,229	36,433		Wangdue			
Pemagatshel	499	13,864		Phodrang	3,878	31,135	
Punakha	922	17,715		Zhemgang	2,035	18,636	
Samdrup Jongkhar	2,227	39,961		unallocated			
Samtse (Samchi)	1,497	60,100		population		37,443	
				TOTAL	38,394	672,425 ⁶	

Demography

Population (2009): 691,000.

Density (2009): persons per sq mi 46.6, persons per sq km 18.0.

Urban-rural (2007): urban 26.4%; rural 73.6%.

Sex distribution (2008): male 52.50%; female 47.50%.

Age breakdown (2008): under 15, 30.9%; 15–29, 31.9%; 30–44, 18.6%; 45–59, 10.6%; 60–74, 6.3%; 75–84, 1.5%; 85 and over, 0.2%.

Population projection: (2020) 782,000; (2030) 854,000.

Doubling time: 33 years.

Ethnic composition (2005): Bhutia (Ngalops) c. 50%; Nepalese (Gurung) c. 35%; Sharchops c. 15%.

Religious affiliation (2005): Buddhist c. 74%; Hindu c. 25%; Christian c. 1%.

Major towns (2005): Thimphu 79,185; Phuntsholing 20,537; Gelaphu 9,199; Wangdue 6,714; Samdrup Jongkhar 5,952; Samtse 4,981.

Vital statistics

Birth rate per 1,000 population (2008): 20.6 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 13.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.48.

Life expectancy at birth (2008): male 64.8 years; female 66.4 years.

Major causes of death per 100,000 population (2006)⁷: diseases of the digestive system 21.3, of which alcohol-related liver diseases 14.5; diseases of the respiratory system 13.6; diseases of the circulatory system 13.1; neonatal deaths 11.0.

National economy

Budget (2007–08). Revenue: Nu 20,481,000,000 (grants 40.7%; nontax revenue 33.0%, of which dividends and transfers of profits 28.4%; tax revenue 23.7%, of which corporate income taxes 9.2%; other 2.6%). Expenditures: Nu 22,223,000,000 (capital expenditures 52.3%, current expenditures 47.7%).

Public debt (external, outstanding; July 2008): U.S.\$779,900,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 94,500, rice 69,000, potatoes 57,000, oranges 36,500, apples 10,700, ginger 7,350, nutmeg, mace, and cardamom 5,800, mustard seed 4,500; livestock (number of live animals) 385,000 cattle, (2005) 45,538 yaks, 26,000 horses; roundwood 4,796,000 cu m, of which fuelwood 97%; fisheries production (2006) 300 (from aquaculture, negligible). Mining and quarrying (2007): limestone 560,000; dolomite 440,000; gypsum 165,000; ferrosilicon 21,000. Manufacturing (value of sales in Nu '000,000; 2007): ferroalloys 1,886; cement 1,664; chemical products 1,406; wood board products (2006) 382. Energy production (consumption): electricity (kW-hr; 2006) 3,357,000,000 (739,000,000); coal (metric tons; 2006) 98,000 (52,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (51,000); natural gas, none (none).

Household income and expenditure. Average household size (2007) 5.0; income per household: n.a.⁸; sources of income: n.a.; expenditure (2007): food and beverages 31.6%, education 15.6%, housing/energy 14.6%, clothing and footwear 6.5%, transportation and communication 6.3%, food away from home 6.1%.

Population economically active (2005): total 256,895; activity rate of total population 38.2% (participation rates: ages 15–64, 62.7%; female 36.6%; officially unemployed [2007] 3.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	88.9	90.8	95.0	100.0	105.0	110.4	119.7

Gross national income (GNI; 2008): U.S.\$1,302,000,000 (U.S.\$1,900 per capita); purchasing power parity GNI (U.S.\$4,880 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value Nu '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	9,578	18.6	108,617	42.3
Mining	890	1.7	2,839	1.1
Manufacturing	3,283	6.4	4,882	1.9
Construction	6,937	13.5	30,887	12.0
Public utilities	12,079	23.4	4,116	1.6
Trade, restaurants	3,015	5.9	10,764	4.2
Transportation and communications	4,649	9.0	8,057	3.1
Finance and real estate	3,884	7.5	2,287	0.9
Pub. admin., defense	3,875	7.5	17,494	6.8
Services	1,678	3.3	10,353	4.0
Other	1,653 ⁹	3.2 ⁹	56,599 ¹⁰	22.0 ¹⁰
TOTAL	51,521	100.0	256,895	100.0 ¹¹

Land use as % of total land area (2007): in temporary crops 3.3%, in permanent crops 0.7%, in pasture 10.6%, forest area 83.8%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 30; remittances (2007) 1.5; foreign direct investment (2005–07 avg.) 31; official development assistance (2007) 89. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade¹²

Balance of trade (current prices)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
Nu '000,000	–3,681	–3,966	–10,816	–5,103	+2,062	–3,086
% of total	25.4%	21.7%	39.5%	16.0%	4.2%	7.5%

Imports (2007): Nu 24,658,000,000 (machinery and apparatus 17.7%, food and beverages 16.3%, mineral fuels 16.0%, precious stones/precious metals 10.8%, base and fabricated metals 9.2%, palm oil 6.9%). **Major import sources:** India 69.4%; Indonesia 6.0%; Singapore 5.1%; Russia 3.4%; South Korea 3.0%.

Exports (2007): Nu 27,859,000,000 (electricity to India 36.0%, unrecorded media [magnetic discs] 16.0%, copper wire 11.8%, ferroalloys 5.3%, information technology software 4.8%, vegetable fats and oils 4.5%). **Major export destinations:** India 81.6%; Hong Kong 9.9%; Thailand 3.9%; Singapore 2.5%; Bangladesh 1.7%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 2,824 mi, 4,545 km (paved 55%). Vehicles (2003): passenger cars 10,574; trucks and buses 3,852. Air transport (2004): passenger-km 69,000,000; metric ton-km cargo 6,000,000¹³.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	25	33	PCs	2005	13	16
Telephones				Dailies	2008	... ¹⁴	... ¹⁴
Cellular	2008	251 ¹⁵	368 ¹⁵	Internet users	2008	40	59
Landline	2008	27	40	Broadband	2008	2.1 ¹⁵	3.1 ¹⁵

Education and health

Educational attainment (2007). Percentage of head of household population having: no formal schooling 73.2%; incomplete/complete primary education 16.5%; incomplete/complete secondary 5.5%; higher 4.8%. **Literacy** (2007): total population age 6 and over literate 55.5%; males literate 65.7%; females literate 45.9%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	3,503	162,225	29.2	79
Secondary/Voc. (age 13–18)	1,973	45,035	22.8	38
Tertiary	375	4,141	11.0	6 (age 19–23)

Health (2006): physicians 150 (1 per 4,428 persons); hospital beds 1,133 (1 per 586 persons); infant mortality rate per 1,000 live births (2008) 51.9; undernourished population, n.a.

Military

Total active duty personnel (2006): about 6,000 (army 100%). **Military expenditure as percentage of GDP** (2005): c. 1.0%; per capita expenditure U.S.\$11.

¹Bhutan's first constitution was promulgated on July 18, 2008. ²Includes 5 nonelected members. ³Buddhism is the spiritual heritage of Bhutan per article 3.1 of the 2008 constitution. ⁴Indian currency is also accepted legal tender; the ngultrum is at par with the Indian rupee. ⁵Estimated district areas are derived from district area percentages of total national area as published in the *Statistical Yearbook of Bhutan* (2003). ⁶Includes 634,972 residents and 37,453 temporary residents. ⁷Hospital-diagnosed deaths only. ⁸Bhutan reports household consumption expenditure in lieu of income data; in 2007 average annual household consumption expenditure was Nu 165,876 (U.S.\$4,012). ⁹Taxes less subsidies. ¹⁰Includes 48,734 in ill-defined activities and 7,865 unemployed. ¹¹Detail does not add to total given because of rounding. ¹²Imports c.i.f.; exports f.o.b. ¹³Includes weight of passengers and mail. ¹⁴Bhutan's first daily newspaper was launched on Oct. 30, 2008. ¹⁵Subscribers.

Internet resources for further information:

- Royal Monetary Authority of Bhutan <http://www.rma.org.bt>
- National Statistics Bureau <http://www.nsb.gov.bt>

Bolivia

Official name: Estado Plurinacional de Bolivia (Plurinational State of Bolivia).
Form of government: unitary multiparty republic¹ with two legislative houses (Chamber of Departmental Representatives [36]; Chamber of Deputies [130]).

Head of state and government: President.
Capital: Sucre^{2, 3}.

Official languages: Spanish and 36 indigenous languages².

Official religion: none².

Monetary unit: boliviano (Bs); valuation (Sept. 1, 2009)

1 U.S.\$ = Bs 7.02; 1 £ = Bs 11.39.



Structure of gross domestic product and labour force

	2007		2002	
	in value Bs '000,000 ⁹	% of total value	labour force ¹¹	% of labour force ¹¹
Agriculture	3,920	13.7	1,609,700	42.1
Mining	1,223	4.3		
Crude petroleum, nat. gas	1,948	6.8	38,200	1.0
Manufacturing	4,929	17.3	435,900	11.4
Construction	871	3.1	206,500	5.4
Public utilities	560	2.0	7,700	0.2
Transp. and commun.	3,066	10.7	175,900	4.6
Trade, hotels	3,131	11.0	722,600	18.9
Finance, real estate	3,263	11.4	95,600	2.5
Pub. admin., defense	2,559	9.0	68,800	1.8
Services	1,206	4.2	462,600	12.1
Other	1,848 ¹²	6.5 ¹²	—	—
TOTAL	28,524	100.0	3,823,500	100.0

Public debt (external, outstanding; September 2008): U.S.\$2,298,000,000.

Household income and expenditure. Average household size (2004) 4.3; annual income per household (1999) Bs 16,980 (U.S.\$2,920); expenditure (2000): food 28.6%, transportation and communications 23.1%, rent and energy 10.3%, expenditures in cafés and hotels 9.5%, recreation and culture 7.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 259; remittances (2008) 927; foreign direct investment (FDI; 2005–07 avg.) 66; official development assistance (2007) 476. Disbursements for (U.S.\$'000,000): tourism (2007) 249; remittances (2008) 72.

Foreign trade¹³

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008 ¹⁴
U.S.\$'000,000	−33.8	+367.2	+456.1	+1,399.1	+1,290.7	+1,101.4
% of total	1.0%	8.9%	8.9%	19.9%	15.5%	11.8%

Imports (2007): U.S.\$3,522,000,000 (chemical products 17.2%; road vehicles 13.4%; specialized machinery 8.1%; food products 7.9%; refined petroleum 7.6%; iron and steel 7.3%). **Major import sources:** Brazil 20.2%; Argentina 16.9%; U.S. 11.7%; Japan 9.4%; China 7.6%; Peru 6.7%.

Exports (2007): U.S.\$4,812,700,000 (natural gas 41.3%; zinc 14.4%; crude petroleum 5.6%; soybean foodstuffs 4.7%; silver 4.5%; tin 3.7%). **Major export destinations:** Brazil 36.7%; Argentina 8.7%; U.S. 8.6%; Japan 8.5%; Venezuela 5.0%.

Transport and communications

Transport. Railroads (2007): route length 2,177 mi, 3,504 km; (2004) passenger-km 286,000,000; (2004) metric ton-km cargo 1,058,000,000. Roads (2004): total length 38,823 mi, 62,479 km (paved 7%). Vehicles (2004): passenger cars 294,000; trucks and buses 173,864. Air transport (2006)¹⁵: passenger-km 1,056,000,000; metric ton-km cargo 7,668,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,210	134	PCs	2006	224	24
Telephones				Dailies	2007	140 ¹⁶	15 ¹⁶
Cellular	2008	4,830 ¹⁷	503 ¹⁷	Internet users	2007	1,000	106
Landline	2007	678	71	Broadband	2007	34 ¹⁷	3.6 ¹⁷

Education and health

Educational attainment (2007). Percentage of population age 19 and over having: no formal schooling 10.7%; some to complete primary education 37.5%; some to complete secondary 27.2%; some to complete higher 24.4%; not specified 0.2%. **Literacy** (2007): total population age 15 and over literate 90.7%; males literate 96.0%; females literate 86.0%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	64,426	1,508,194	23.9	95
Secondary/Voc. (age 12–17)	44,365 ¹⁸	1,043,127	23.6	71
Tertiary ¹⁹	17,759	346,056	19.5	41 (age 18–22)

Health: physicians (2004) 3,211 (1 per 2,806 persons); hospital beds (2007) 14,928 (1 per 658 persons); infant mortality rate (2008) 45.9; undernourished population (2002–04) 2,000,000 (23% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (November 2008): 46,100 (army 75.5%, navy 10.4%, air force 14.1%). **Military expenditure as percentage of GDP** (2008): 1.4%; per capita expenditure U.S.\$27.

¹New constitution promulgated Feb. 8, 2009; actual implementation of changes per new constitution will take time. ²Per 2009 constitution. ³Executive and legislative branches meet in La Paz, judiciary in Sucre. ⁴Includes the 1,425 sq mi (3,690 sq km) area of the Bolivian part of Lake Titicaca. ⁵Estimate of U.S. Bureau of the Census International Database (December 2008 update). ⁶Within La Paz urban agglomeration. ⁷Bolivia was the third largest producer of coca (104 metric tons) in the world in 2007. ⁸Metal content. ⁹In 1990 prices. ¹⁰Private sector only. ¹¹Population 10 years of age and over. ¹²Import duties and indirect taxes less imputed bank service charges. ¹³Imports c.i.f.; exports f.o.b. ¹⁴Excludes November and December. ¹⁵AeroSur, LAB (closed down in 2007), and Amazonas airlines only. ¹⁶Circulation. ¹⁷Subscribers. ¹⁸2002–03. ¹⁹2005–06.

Internet resources for further information:

- Instituto Nacional de Estadística <http://www.ine.gov.bo>
- Banco Central de Bolivia <http://www.bcb.gov.bo>

Area and population

Departments	Capitals	area		population
		sq mi	sq km	2001 census
Beni	Trinidad	82,458	213,564	362,521
Chuquisaca	Sucre	19,893	51,524	531,522
Cochabamba	Cochabamba	21,479	55,631	1,455,711
La Paz	La Paz	51,732 ⁴	133,985 ⁴	2,350,466
Oruro	Oruro	20,690	53,588	391,870
Pando	Cobija	24,644	63,827	52,525
Potosí	Potosí	45,644	118,218	709,013
Santa Cruz	Santa Cruz	143,098	370,621	2,029,471
Tarjia	Tarjia	14,526	37,623	391,226
TOTAL		424,164	1,098,581	8,274,325

Demography

Population (2009): 9,775,000⁵.

Density (2009): persons per sq mi 23.0, persons per sq km 8.9.

Urban-rural (2005): urban 64.2%; rural 35.8%.

Sex distribution (2008): male 49.50%; female 50.50%.

Age breakdown (2008): under 15, 35.9%; 15–29, 29.2%; 30–44, 17.5%; 45–59, 10.8%; 60–74, 4.9%; 75–84, 1.4%; 85 and over, 0.3%.

Population projection: (2020) 11,640,000; (2030) 13,262,000.

Doubling time: 37 years.

Ethnic composition (2006): Amerindian c. 55%, of which Quechua c. 29%, Aymara c. 24%; mestizo c. 30%; white c. 15%.

Religious affiliation (2001): Roman Catholic c. 78%; Protestant/independent Christian c. 16%; other Christian c. 3%, of which Mormon 1.8%; nonreligious 2.5%; other 0.5%.

Major cities (2001): Santa Cruz 1,116,059 (urban agglomeration [2007] 1,422,000); La Paz 789,585 (urban agglomeration [2007] 1,590,000); El Alto 647,350⁶; Cochabamba 516,683; Oruro 201,230; Sucre 193,873.

Vital statistics

Birth rate per 1,000 population (2008): 26.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.2 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 3.26.

Marriage/divorce rates per 1,000 population (2006): 2.2/n.a.

Life expectancy at birth (2008): male 63.9 years; female 69.4 years.

Major causes of death per 100,000 population (2002): malignant neoplasms (cancers) 145.6; infectious and parasitic diseases 140.6; cardiovascular diseases 129.8; respiratory infections 78.2; accidents 63.9.

National economy

Budget (2008). Revenue: Bs 58,394,500,000 (sales of hydrocarbons 45.1%; tax income [incl. royalties on minerals] 36.6%). Expenditures: Bs 54,478,200,000 (current expenditure 72.0%; capital expenditure 28.0%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 6,200,000, soybeans 1,900,000, potatoes 755,000, corn (maize) 686,000, cassava 373,700, rice 276,000, bananas 188,000, sunflower seeds 170,000, sorghum 150,000, seed cotton 80,000, chestnuts (2006) 35,000, coffee 27,500;⁷ livestock (number of live animals) 8,990,000 sheep, 7,515,000 cattle, 2,490,000 pigs, 1,925,000 goats, (2004) 1,900,000 llamas and alpacas; roundwood 3,099,000 cu m, of which fuelwood 74%; fisheries production (2006) 7,130 (from aquaculture 6%). Mining and quarrying (metal content; 2007): zinc 214,050⁸; tin 15,970⁸; tungsten 1,400⁸; silver 530; gold 8,820 kg. Manufacturing (value added in Bs '000,000; 2007)⁹: food products 1,792; beverages and tobacco products 766; petroleum products 574; textiles, clothing, and leather products 454; bricks, cement, and ceramics 440. Energy production (consumption): electricity (kW-hr; 2007) 5,550,000,000 (4,123,000,000); coal, none (none); crude petroleum (barrels; 2007) 15,000,000 ([2006] 20,435,000); petroleum products (metric tons; 2006) 1,847,000 (2,118,000); natural gas (cu m; 2007) 14,301,000,000 ([2006] 1,446,000,000).

Land use as % of total land area (2007): in temporary crops 2.1%, in permanent crops 0.2%, in pasture 30.5%, forest area 53.7%.

Population economically active (2000): total 3,823,937; activity rate of total population 46.2% (participation rates: ages 15–64, 71.8%; female 44.6%; unemployed [2006] 8% in urban areas; underemployment widespread).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	87.9	90.9	94.9	100.0	104.3	113.4	126.8
Annual earnings index ¹⁰	84.9	89.4	95.8	100.0	102.5	...	...

Gross national income (GNI; 2008): U.S.\$14,106,000,000 (U.S.\$1,460 per capita); purchasing power parity GNI (U.S.\$4,140 per capita).

Bosnia and Herzegovina

Official name: Bosna i Hercegovina (Bosnia and Herzegovina).

Form of government: emerging republic with bicameral legislature (House of Peoples [15¹]; House of Representatives [42]).

Chiefs of state: nominally a tripartite presidency.

International authority: 2.

Head of government: Prime Minister (Chairman of the Council of Ministers).

Capital: Sarajevo.

Official languages: Bosnian; Croatian; Serbian.

Official religion: none.

Monetary unit: convertible marka (KM³, 4); valuation (Sept. 1, 2009)

1 U.S.\$ = KM 1.37; 1 £ = KM 2.22.



Area and population

	area	population		area	population
Autonomous regions	sq km	2007 estimate	Autonomous regions	sq km	2007 estimate
Cantons			Cantons		
Federation of Bosnia and Herzegovina (FBH)	26,110	2,328,359	Western Bosnia	4,934	82,069
Bosnia-Podrinje	505	33,662	Western Herzegovina	1,362	82,095
Central Bosnia	3,189	256,339	Zenica-Doboj	3,343	401,796
Herzegovina-Neretva	4,401	227,473	Republika Srpska (RS)	24,857	1,439,673
Posavina	325	41,187	District		
Sarajevo	1,277	419,030	Brčko	208	74,910
Tuzla-Podrinje	2,649	496,830	REMAINDER	34	—
Una-Sana	4,125	287,878	TOTAL	51,209	3,842,942

Demography

Population (2009): 3,835,000.

Density (2009): persons per sq mi 194.0, persons per sq km 74.9.

Urban-rural (2005): urban 45.7%; rural 54.3%.

Sex distribution (2005): male 48.11%; female 51.89%.

Age breakdown (2005): under 15, 16.6%; 15–29, 22.7%; 30–44, 22.6%; 45–59, 20.4%; 60–74, 13.3%; 75–84, 3.9%; 85 and over, 0.5%.

Population projection: (2020) 3,744,000; (2030) 3,584,000.

Ethnic composition (1999): Bosniac 44.0%; Serb 31.0%; Croat 17.0%; other 8.0%.

Religious affiliation (2002): Sunnī Muslim c. 40%; Serbian Orthodox c. 31%; Roman Catholic c. 15%; Protestant c. 4%; nonreligious/other c. 10%.

Major cities (2005): Sarajevo [2007] 376,000; Banja Luka 165,100; Zenica 84,300; Tuzla 84,100; Mostar 63,500.

Vital statistics

Birth rate per 1,000 population (2007): 8.8 (world avg. 20.3); (2006) within marriage 88.4%; outside of marriage 11.6%.

Death rate per 1,000 population (2007): 9.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): –0.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.17.

Marriage/divorce rates per 1,000 population (2007): 6.1/0.5.

Life expectancy at birth (2007): male 66.9 years; female 72.5 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 481.9; neoplasms (cancers) 174.7; endocrine, metabolic, and nutritional disorders 41.2; diseases of the respiratory system 29.8.

National economy

Budget (2006)⁵. Revenue: KM 9,075,000,000 (tax revenue 80.8%, of which VAT/sales tax 29.9%, social security contributions 26.7%, excise tax 11.4%; nontax revenue 13.7%; grants 5.5%). Expenditures: KM 8,655,000,000 (current expenditures 86.5%; development expenditures 13.5%).

Gross national income (GNI; 2008): U.S.\$17,001,000,000 (U.S.\$4,510 per capita); purchasing power parity GNI (U.S.\$8,620 per capita).

Structure of gross domestic product and labour force

	2007		1999	
	in value KM '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	1,716	7.9	21,000	2.0
Mining	439	2.0		
Manufacturing	2,307	10.7	224,000	21.6
Construction	1,040	4.8		
Public utilities	780	3.6	36,000	3.5
Transp. and commun.	1,546	7.1	45,000	4.3
Trade, restaurants	3,474	16.1	91,000	8.8
Finance, real estate	2,672	12.3	42,000	4.1
Pub. admin., defense	1,808	8.4	73,000	7.0
Services	2,248	10.4	96,000	9.3
Other	3,611 ⁶	16.7 ⁶	409,000 ⁷	39.4 ⁷
TOTAL	21,641	100.0	1,037,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 635,344, potatoes 387,239, wheat 257,112, plums and sloes 138,707, cabbages 82,410, apples 60,962, tobacco 3,265; livestock (number of live animals) 1,000,000 sheep, 712,000 pigs, 515,000 cattle, in addition, 285,000 beehives; roundwood 3,753,000 cu m, of which fuelwood 36%; fisheries production 9,625 (from aquaculture 79%). Mining (2006): iron ore (metal con-

tent) 1,700,000; bauxite 816,768; lime 180,000. Manufacturing (value of production in KM '000,000; 2006): base metals and fabricated metal products 1,578; food, beverages, and tobacco products 1,255; wood and wood products 398; cement, bricks, and ceramics 352. Energy production (consumption): electricity (kW-hr; 2006) 13,346,000,000 (11,238,000,000); hard coal (metric tons; 2006) 3,616,000 (4,242,000); lignite (metric tons; 2006) 9,960,000 (9,871,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (1,099,000); natural gas (cu m; 2006) none (396,000,000).

Public debt (external, outstanding; 2007): U.S.\$2,981,000,000.

Population economically active (2007): total 1,196,000; activity rate of total population 36.1% (participation rates: ages 15–64, 52.2%; female 36.5%; unemployed 29.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Retail price index ⁸	95.7	96.3	96.8	100.0	106.1	107.7	115.7

Household expenditure (2004). Average household size 3.3; average annual household expenditure KM 15,622 (U.S.\$9,919); sources of income: n.a.; expenditure: food and nonalcoholic beverages 31.3%, housing 16.0%, transport 9.9%, energy 7.5%, household furnishings 6.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 729; remittances (2008) 2,735; foreign direct investment (2005–07 avg.) 1,108; official development assistance (2007) 443. Disbursements for (U.S.\$'000,000): tourism (2007) 186; remittances (2008) 70.

Land use as % of total land area (2007): in temporary crops 10.9%, in permanent crops 1.9%, in pasture 20.2%, forest area 42.7%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–3,449	–4,068	–4,665	–4,131	–5,568	–7,169
% of total	55.0%	50.9%	49.4%	37.6%	40.1%	41.6%

Imports (2007): U.S.\$9,720,000,000 (machinery and apparatus 16.8%, food 11.8%, chemicals and chemical products 10.5%, refined petroleum 9.2%, road vehicles 7.1%, iron and steel 5.2%). **Major import sources:** Croatia 17.6%; Germany 12.5%; Serbia 10.2%; Italy 9.0%; Slovenia 6.4%; Turkey 5.8%.

Exports (2007): U.S.\$4,152,000,000 (aluminum 9.7%, metal manufactures 8.2%, iron and steel 7.1%, metal ore/metal scrap 6.8%, footwear 5.8%, sawn wood 5.7%, parts for engines 5.5%). **Major export destinations:** Croatia 18.4%; Serbia 13.7%; Italy 13.1%; Germany 12.8%; Slovenia 10.9%.

Transport and communications

Transport. Railroads (2005): length 1,028 km; passenger-km 51,396,000; metric ton-km cargo 1,159,000,000. Roads (2005): total length 22,419 km (paved [2001] 64%). Vehicles: n.a. Air transport (2003): passenger-km 47,000,000; metric ton-km 6,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	950	248	PCs	2007	246	64
Telephones				Dailies	2007	75 ⁹	19 ⁹
Cellular	2008	3,179 ¹⁰	827 ¹⁰	Internet users	2008	1,308	340
Landline	2008	1,031	268	Broadband	2008	188 ¹⁰	49 ¹⁰

Education and health

Educational attainment (2004). Percentage of population age 18 and over having: no formal schooling 8.7%; incomplete primary education 11.4%; complete primary 21.4%; incomplete/complete secondary 49.8%; technical/university 8.7%. **Literacy** (2002): total population age 15 and over literate 94.6%; males literate 98.4%; females literate 91.1%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	...	191,588	...	...
Secondary/Voc. (age 10–17)	...	344,567	...	...
Tertiary ¹¹	5,446	96,868	17.8	... (age 18–22)

Health: physicians (2005) 5,540 (1 per 694 persons); hospital beds (2004) 11,414 (1 per 337 persons); infant mortality rate per 1,000 live births (2007) 6.8; undernourished population (2002–04) 350,000 (9% of total population based on the consumption of a minimum daily requirement of 2,000 calories).

Military

Total active duty personnel (November 2008): 8,543^{12, 13}. **Military expenditure as percentage of GDP** (2008): 1.5%; per capita expenditure U.S.\$58.

¹All seats are nonselective. ²High Representative of the international community per the 1995 Dayton Peace Agreement/EU Special Representative. ³The KM is pegged to the euro. ⁴The euro also circulates as semiformal legal tender. ⁵Combined total for the separately constructed budgets of the FBH, RS, and Brčko District along with the small central government budget. ⁶Taxes on products and imports less subsidies and imputed bank service charges. ⁷Unemployed. ⁸Retail price index through 2006, consumer price index beginning in 2007. ⁹Circulation. ¹⁰Subscribers. ¹¹Data for 8 universities only. ¹²A formally combined military was established in 2006. ¹³EU-sponsored (EUFOR) peacekeeping troops (March 2009) 2,153.

Internet resources for further information:

- Statistics of Bosnia and Herzegovina <http://www.bhas.ba>
- Central Bank <http://www.cbbh.ba>

Botswana

Official name: Republic of Botswana.

Form of government: multiparty republic with one legislative body¹ (National Assembly [63²]).

Head of state and government: President.

Capital: Gaborone³.

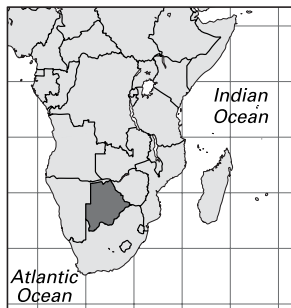
Official language: English⁴.

Official religion: none.

Monetary unit: pula (P);

valuation (Sept. 1, 2009)

1 U.S.\$ = P 6.81; 1 £ = P 11.06.



Area and population					
	area	population		area	population
	sq km	2001 census		sq km	2001 census
Districts			Cities		
Central	147,730	501,381	Francistown	79	83,023
Ghanzi	117,910	33,170	Gaborone	169	186,007
Kgalagadi	106,940	42,049			
Kgatlang	7,960	73,507	Towns/Townships		
Kweneng	35,890	230,335	Jwaneng ⁵	100	15,179
North East	5,120	49,399	Lobatse	42	29,689
North West	129,930	142,970	Orapa ⁶	17	9,151
South East	1,780	60,623	Selebi-Pikwe ⁶	60	49,849
Southern	28,467	171,652	Sowa ⁷	159	2,879
			TOTAL	582,356⁸	1,680,863

Demography

Population (2009): 1,991,000.

Density (2009): persons per sq mi 8.9, persons per sq km 3.4.

Urban-rural (2005): urban 57.4%; rural 42.6%.

Sex distribution (2008): male 49.99%; female 50.01%.

Age breakdown (2008): under 15, 35.3%; 15–29, 32.9%; 30–44, 17.4%; 45–59, 9.0%; 60–74, 3.9%; 75–84, 1.2%; 85 and over, 0.3%.

Population projection: (2020) 2,312,000; (2030) 2,519,000.

Ethnic composition (2000): Tswana 66.8%; Kalanga 14.8%; Ndebele 1.7%; Herero 1.4%; San (Bushman) 1.3%; Afrikaner 1.3%; other 12.7%.

Religious affiliation (2005): independent Christian 41.7%; traditional beliefs 35.0%; Protestant 12.8%; Muslim 0.3%; Hindu 0.2%; other 10.0%.

Major cities (2006): Gaborone 214,400; Francistown 91,800; Molepolole 65,600; Selebi-Pikwe 54,700; Maun 51,600.

Vital statistics

Birth rate per 1,000 population (2008): 23.2 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 14.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.66.

Life expectancy at birth (2008): male 61.5 years; female 62.1 years.

Adult population (ages 15–49) *living with HIV* (2007): 23.9%⁹ (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: P 27,397,700,000 (tax revenue 92.1%, of which mineral royalties 47.9%, customs duties and excise tax 24.1%, non-mineral income tax 11.2%; nontax revenue 6.3%; grants 1.6%). Expenditures: P 19,737,400,000 (general government services including defense 29.2%, education 24.5%, economic services 14.5%, health 11.3%, transfers 10.2%).

Population economically active (2006): total 651,500¹⁰; activity rate of total population 35.8%¹⁰ (participation rates: ages 15–59 [2001] 58.1%¹⁰; female 49.1%¹⁰; unemployed [2007] 7.5%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	78.8	86.1	92.1	100.0	111.6	119.5	134.5
Monthly earnings index ¹¹	72.8	80.3	82.7	100.0	120.8	137.4	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 102,000, roots and tubers 93,000, sorghum 33,000, cattle meat 31,000, pulses 17,500, corn (maize) 12,000, game meat 11,500, sunflower seeds 7,000, goat meat 5,400; livestock (number of live animals) 3,100,000 cattle, 1,960,000 goats, 300,000 sheep; roundwood 774,000 cu m, of which fuelwood 86%; fisheries production 123 (from aquaculture, none). Mining and quarrying (2007): soda ash 279,625; salt 165,710; nickel ore (metal content) 26,532; copper ore (metal content) 22,589; cobalt (metal content) 356; semiprecious gemstones (mostly agate) 48,000 kg; gold 2,656 kg; diamonds 33,639,000 carats^{12, 13}. Manufacturing (value added in U.S.\$'000,000; 2005): beverages 55; textiles 14; tanned and processed leather 1; unspecified 254. Energy production (consumption): electricity (kW-hr; 2005) 912,000,000 (2,602,000,000); hard coal (metric tons; 2007) 828,000 ([2006] 938,000); crude petroleum, none (none); petroleum products (metric tons; 2005) none (n.a.); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 546; remittances (2008) 148; foreign direct investment (FDI; 2005–07 avg.) 422; official development assistance (2007) 104. Disbursements for (U.S.\$'000,000): tourism (2007) 281; remittances (2008) 120; FDI (2005–07 avg.) 53.

Land use as % of total land area (2007): in temporary crops 0.4%, in permanent crops, negligible, in pasture 45.2%, forest area 20.7%.

Gross national income (GNI; 2008): U.S.\$12,328,000,000 (U.S.\$6,470 per capita); purchasing power parity GNI (U.S.\$13,100 per capita).

Structure of gross domestic product and labour force

	2007–08		2003	
	in value P '000,000	% of total value	labour force ¹⁰	% of labour force ¹⁰
Agriculture	1,489	1.8	98,100	16.2
Mining	31,227	39.0	13,800	2.3
Manufacturing	2,917	3.6	44,600	7.3
Construction	3,413	4.3	41,900	6.9
Public utilities	2,132	2.7	4,400	0.7
Transp. and commun.	3,063	3.8	12,600	2.1
Trade, hotels	9,036	11.3	76,400	12.6
Finance, real estate	8,346	10.4	19,200	3.2
Pub. admin., defense	12,323	15.4	67,200	11.1
Services	2,871	3.6	84,100	13.9
Other	3,291 ¹⁴	4.1 ¹⁴	144,500 ¹⁵	23.8 ¹⁵
TOTAL	80,108	100.0	606,900⁸	100.0⁸

Public debt (external, outstanding; 2007): U.S.\$380,000,000.

Household income and expenditure (2002–03). Average household size (2004) 4.3; average annual disposable income per household P 29,095 (U.S.\$5,320), of which cash income P 25,519 (U.S.\$4,670); expenditure (2006)¹⁶: food and nonalcoholic beverages 21.8%, transportation 19.0%, housing and energy 11.5%, alcoholic beverages and tobacco 9.3%, clothing and footwear 7.5%, household furnishings 6.8%.

Foreign trade¹⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007
U.S.\$'000,000	–162	+276	+1,268	+1,453	+1,086
% of total	2.1%	4.1%	16.7%	19.2%	13.5%

Imports (2007): U.S.\$3,987,000,000 (machinery and apparatus 18.9%; refined petroleum 13.7%; road vehicles 10.6%; food products 10.2%; chemical and chemical products 9.2%). **Major import sources:** South Africa 83.5%; China 1.8%; Belgium 1.6%; U.K. 1.4%; Zimbabwe 1.3%.

Exports (2007): U.S.\$5,073,000,000 (diamonds 62.5%; nickel matte 15.5%; apparel and clothing accessories 6.7%; copper ore/copper matte 5.8%; textiles 5.0%; meat 2.2%). **Major export destinations:** U.K. 65.0%; South Africa 10.2%; Norway 8.1%; Zimbabwe 7.3%; China 1.9%.

Transport and communications

Transport. Railroads (2006): route length 552 mi, 888 km; (2003) passenger-km 572,000,000; (2004) metric ton-km cargo 636,700,000. Roads (2007)¹⁸: total length 8,916 km (paved 72%). Vehicles (2007): passenger cars 104,926; trucks and buses 105,754. Air transport (2007)¹⁹: passenger-km 117,700,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	78	44	PCs	2006	84	45
Telephones				Dailies	2007	76 ²⁰	40 ²⁰
Cellular	2008	1,486 ²¹	761 ²¹	Internet users	2008	80	41
Landline	2008	142	73	Broadband	2007	3.5 ²¹	1.8 ²¹

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 27.9%; primary education, n.a.; secondary, n.a.; post-secondary, n.a. **Literacy** (2005): total population over age 15 literate 81.4%; males literate 78.6%; females literate 84.1%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	13,472	326,500	24.2	83
Secondary/Voc. (age 13–17)	12,371	168,720	13.6	56
Tertiary	529	10,950	20.7	5 (age 18–22)

Health (2007): physicians 478 (1 per 3,798 persons); hospital beds 3,704 (1 per 490 persons); infant mortality rate per 1,000 live births (2008) 13.4; undernourished population (2002–04) 600,000 (32% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2008): 9,000 (army 94.4%, navy, none [landlocked], air force 5.6%). **Military expenditure as percentage of GDP** (2007): 2.7%; per capita expenditure U.S.\$175.

¹In addition, the Ntlo ya Dikgosi (known as the House of Chiefs in English), a 35-member body consisting of chiefs, subchiefs, and associated members, serves in an advisory capacity to the government. ²Includes 4 specially elected members and 2 ex officio members (the president and attorney general); the statutory number (63) includes the speaker who may be appointed from outside the National Assembly. ³The high court meets in Lobatse, but its move to Gaborone was pending in mid-2009. ⁴Tswana is the national language. ⁵Associated with diamond mining. ⁶Associated with mining of nickel ore. ⁷Associated with mining of soda ash. ⁸Detail does not add to total given because of rounding. ⁹Statistically derived midpoint within range. ¹⁰Excludes military. ¹¹Citizens only. ¹²About 70% gem and near-gem quality (Botswana is the world's leading producer of diamonds by value). ¹³The world's most advanced diamond-sorting and diamond-valuing centre was opened at Gaborone in 2008. ¹⁴Import duties and indirect taxes less subsidies and less imputed bank service charges. ¹⁵All unemployed. ¹⁶Weights of cost of living index. ¹⁷Imports c.i.f.; exports f.o.b. ¹⁸Roads maintained by central government only. ¹⁹Air Botswana only. ²⁰Circulation. ²¹Subscribers.

Internet resources for further information:

- Central Statistical Office <http://www.cso.gov.bw>
- Bank of Botswana <http://www.bankofbotswana.bw>

Brazil

Official name: República Federativa do Brasil (Federative Republic of Brazil).

Form of government: multiparty federal republic with 2 legislative houses (Federal Senate [81]; Chamber of Deputies [513]).

Chief of state and government: President.

Capital: Brasília.

Official language: Portuguese.

Official religion: none.

Monetary unit: real (R\$; plural reais); valuation (Sept. 1, 2009)
1 U.S.\$ = R\$1.87; 1 £ = R\$3.04.



Area and population		area		population
States	Capitals	sq mi	sq km	2007 population count ¹
Acre	Rio Branco	58,912	152,581	653,620
Alagoas	Maceió	10,721	27,768	3,014,979
Amapá	Macapá	55,141	142,815	585,073
Amazonas	Manaus	606,468	1,570,746	3,167,668
Bahia	Salvador	218,029	564,693	14,079,966
Ceará	Fortaleza	57,462	148,826	8,183,880
Espírito Santo	Vitória	17,791	46,078	3,351,327
Goiás	Goiânia	131,308	340,087	5,644,460
Maranhão	São Luís	128,179	331,983	6,117,996
Mato Grosso	Cuiabá	348,788	903,358	2,854,456
Mato Grosso do Sul	Campo Grande	137,887	357,125	2,265,021
Minas Gerais	Belo Horizonte	226,460	586,528	19,261,816
Pará	Belém	481,736	1,247,690	7,070,867
Paraíba	João Pessoa	21,792	56,440	3,640,538
Paraná	Curitiba	76,956	199,315	10,279,545
Pernambuco	Recife	37,958	98,312	8,487,072
Piauí	Teresina	97,116	251,529	3,029,916
Rio de Janeiro	Rio de Janeiro	16,871	43,696	15,406,488
Rio Grande do Norte	Natal	20,385	52,797	3,014,228
Rio Grande do Sul	Porto Alegre	108,784	281,749	10,582,324
Rondônia	Porto Velho	91,729	237,576	1,454,237
Roraima	Boa Vista	86,602	224,299	394,192
Santa Catarina	Florianópolis	36,813	95,346	5,868,014
São Paulo	São Paulo	95,834	248,209	39,838,127
Sergipe	Araçaju	8,459	21,910	1,938,970
Tocantins	Palmas	107,190	277,621	1,248,158
Federal District				
Distrito Federal	Brasília	2,240	5,802	2,455,903
TOTAL		3,287,612 ^{2,3}	8,514,872 ^{2,3}	183,888,841

Demography

Population (2009): 191,481,000.

Density (2009): persons per sq mi 58.2, persons per sq km 22.5.

Urban-rural (2005): urban 84.2%; rural 15.8%.

Sex distribution (2005): male 49.32%; female 50.68%.

Age breakdown (2005): under 15, 27.6%; 15–29, 27.7%; 30–44, 21.7%; 45–59, 14.1%; 60–74, 6.6%; 75–84, 1.8%; 85 and over, 0.5%.

Population projection: (2020) 207,143,243; (2030) 216,410,030.

Doubling time: 70 years.

Racial composition (2000): white 53.7%; mulatto and mestizo 39.1%; black and black/Amerindian 6.2%; Asian 0.5%; Amerindian 0.4%.

Religious affiliation (2005)⁴: Roman Catholic 65.1%; Protestant 12.7%, of which Assemblies of God 9.2%; independent Christian 10.7%, of which Universal Church of the Kingdom of God 2.2%; Spiritist (Kardecist) 1.3%; Jehovah's Witness 0.7%; African and syncretic religions 0.4%; Muslim 0.4%; nonreligious/other 8.7%.

Major cities⁵ and metropolitan areas (2007): São Paulo 10,238,500 (19,226,426); Rio de Janeiro 6,093,500 (11,563,302); Belo Horizonte 2,412,900 (5,450,084); Porto Alegre 1,379,100 (3,896,515); Recife 1,533,600 (3,654,534); Salvador 2,891,400 (3,598,454); Brasília 2,348,600 (3,507,662); Fortaleza 2,431,400 (3,436,515); Curitiba 1,797,400 (3,124,596); Campinas 1,022,000 (2,635,261); Belém 1,399,800 (2,043,543); Goiânia 1,236,400 (1,973,892); Manaus 1,602,100 (1,612,475); Vitória 314,000 (1,609,532).

Other principal cities ⁵ /metropolitan areas (2007)			
	population		population
Santos	416,100/1,606,143	Nova Iguaçu	830,700 ⁶
São Luís	922,200/1,210,027	Teresina	737,100/778,341
Guarulhos	1,209,600 ⁷	São Bernardo do Campo	767,800 ⁷
Natal	774,200/1,174,886	Campo Grande	716,200/724,638
Maceió	871,900/1,089,295	Londrina	482,600/711,611
Joinville	470,400/1,041,494	Osasco	701,000 ⁷
João Pessoa	675,000/1,004,580	Santo André	667,900 ⁷
São Gonçalo	960,800 ⁷	Jaboatão	650,400 ⁸
Florianópolis	385,000/940,518	Blumenau	270,700/617,462
Duque de Caxias	839,300 ⁶		

Families. Average family size (2005) 3.2; (1996) 1–2 persons 25.2%, 3 persons 20.3%, 4 persons 22.2%, 5–6 persons 23.3%, 7 or more persons 9.0%.

Emigration (2000): Brazilian emigrants living abroad 1,887,895; in the U.S. 42.3%, in Paraguay 23.4%, in Japan 12.0%.

Immigration (2000): foreign-born immigrants living in Brazil 683,830; from Europe 56.3%, of which Portugal 31.2%; South/Central America 21.0%; Asia 17.8%, of which Japan 10.4%.

Vital statistics

Birth rate per 1,000 population (2008): 16.4 (world avg. 20.3).

Death rate per 1,000 population (2008): 6.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 10.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.90.

Life expectancy at birth (2008): male 68.7 years; female 76.0 years.

Marriage/divorce rates per 1,000 population (2005): 6.3/1.3.

Major causes of death per 100,000 population (2004)⁹: diseases of the circulatory system 178.5, of which cerebrovascular disease 56.9, ischemic heart disease 54.3; malignant neoplasms (cancers) 88.0; external causes 79.7, of which accidents 35.9, violence 35.2 (excl. suicide 5.0); diseases of the respiratory system 63.9; diseases of the digestive system 30.4; infectious and parasitic diseases 28.8; diabetes mellitus 24.5; causes unknown 79.3.

Adult population (ages 15–49) living with HIV (2007): 0.6% (world avg. 0.8%).

Social indicators

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling or less than one year of primary education 15.0%; 1 to 3 years of primary education 13.7%; complete primary/incomplete secondary 40.2%; complete secondary 18.8%; 1 to 3 years of higher education 3.8%; 4 years or more of higher education 8.0%; unknown 0.5%.

Distribution of income (2006)					
percentage of national income by quintile					
1	2	3	4	5 (highest)	
3.0	6.8	11.3	18.3	60.6	

Quality of working life. Proportion of employed population receiving minimum wage (2002): 53.5%. Number and percentage of children (age 5–17) working: 5,400,000 (12.6% of age group).

Access to services. Proportion of urban households having access to (2006): safe public (piped) water supply 93.2%; public (piped) sewage system 66.8%; garbage collection 90.3%. Rural households have far less access to services.

Social participation. Voter turnout at last (October 2006) national legislative election: 83.3%. Trade union membership in total workforce (2001): 19,500,000. Practicing Roman Catholic population in total affiliated Roman Catholic population (2000): large cities 10–15%; towns and rural areas 60–70%.

Social deviance. Annual murder rate per 100,000 population (2005): Brazil 29.6; Rio de Janeiro only (2002) 56; São Paulo only (2002) 54.

Leisure. Favourite leisure activities include: playing soccer, dancing, practicing capoeira, rehearsing all year in neighbourhood samba groups for celebrations of Carnival, and competing in water sports, volleyball, and basketball.

Material well-being. Urban households possessing (2006): electricity 99.7%, colour television receiver 94.8%, refrigerator 93.3%, washing machine 42.2%, computer 25.5%, Internet access 19.6%, freezer 16.1%.

National economy

Gross national income (GNI; 2008): U.S.\$1,411,224,000,000 (U.S.\$7,350 per capita); purchasing power parity GNI (U.S.\$10,070 per capita).

Structure of gross domestic product and labour force				
	2007		2006 ¹⁰	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry	72,300	5.5	17,264,000	17.7
Mining	64,900	4.9	343,000	0.4
Public utilities			396,000	0.4
Manufacturing	206,000	15.7	12,497,000	12.8
Construction	59,300	4.5	5,837,000	6.0
Transportation and communications	96,700	7.4	4,064,000	4.2
Trade, hotels	203,100	15.4	19,143,000	19.6
Finance, real estate			6,502,000	6.7
Pub. admin., defense	434,800	33.1	4,452,000	4.6
Services			18,604,000	19.1
Other	177,100	13.5	8,428,000 ¹¹	8.6 ¹¹
TOTAL	1,314,200	100.0	97,528,000³	100.0³

Budget (2006). Revenue: R\$543,253,000,000 (tax revenue 72.3%, of which income tax 25.3%, social security contributions 17.0%, value-added tax on industrial products 5.2%; social welfare contributions 22.7%; other 5.0%). Expenditures: R\$493,450,000,000 (social security and welfare 30.5%; personnel 19.3%; transfers to state and local governments 17.1%; other 33.1%).

Public debt (external, outstanding; 2007): U.S.\$79,957,000,000.

Production ('000 metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 514,080, soybeans 58,197, corn (maize) 51,590, cassava 27,313, cow's milk 25,327, oranges 18,279, rice 11,080, cattle meat 7,900, bananas 6,972, wheat 3,998, seed cotton 3,854, potatoes 3,394, tomatoes 3,364, dry beans 3,330, coconuts 2,771, pineapples 2,666, coffee 2,178, watermelons 1,947, papayas 1,898, cashew apples¹² (2006) 1,660, mangoes and guavas 1,546, sorghum 1,386, grapes 1,342, dry onions 1,302, tangerines 1,271¹³, apples 1,094, lemons and limes 1,060, tobacco 919, oil palm fruit 590, maté 435, peanuts (groundnuts) 225, cacao beans 221, cashews 176, natural rubber 106, garlic 93, pepper 77, Brazil nuts (2006) 30; livestock (number of live animals) 207,170,000 cattle, 34,080,000 pigs, 15,600,000 sheep, 5,800,000 horses; roundwood 244,962,000 cu m, of which fuelwood 57%; fisheries production 1,072,825 (from aquaculture 27%). Mining and quarrying (metric tons; 2007): iron ore (metal content) 235,504,000 (world rank: 1); columbium (niobium); 81,922 of pyrochlore in concentrates¹⁴ (world rank: 1); tantalum 180 (world rank: 2); bauxite 24,800,000 (world rank: 3); graphite 76,200 (world rank: 3); asbestos fibre 230,000 (world rank: 4); tin (mine output, metal content) 10,000 (world rank: 5); manganese (metal content in concentrate) 933,000 (world rank: 5); kaolin (marketable product) 2,500,000; copper (metal content) 205,728; nickel (metal content in ore) 58,317; gold 49,613 kg; diamonds 182,000 carats¹⁴.

Land use as % of total land area (2007): in temporary crops 7.0%, in permanent crops 0.8%, in pasture 23.3%, forest area 55.7%.

Manufacturing enterprises (2004)

	number of employees	wages of employers as a % of avg. of all mfg. wages	value added (in U.S.\$'000,000)
Food products	1,124,100	68.1	21,279
Petroleum products	27,000	539.6	15,533
Motor vehicles and parts	350,500	179.0	12,598
Iron and steel	115,100	205.1	11,444
Paints, soaps, pharmaceuticals, and related products	240,000	188.5	10,006
Nonelectrical machinery and apparatus	409,400	128.3	9,395
Industrial chemicals	92,700	232.4	8,223
Electrical machinery and apparatus ¹⁹	240,700	139.3	6,728
Paper and paper products	152,200	137.4	6,280
Fabricated metal products	360,300	88.0	5,307
Bricks, tiles, cement, and related products	275,900	72.6	4,424
Beverages	161,600	98.2	4,352
Plastics	239,500	87.9	3,683
Textiles	305,700	69.0	3,547
Publishing	126,000	143.7	3,424
Footwear, leather processing	449,600	49.6	3,261
Nonferrous base metals	44,000	192.8	3,071
Wood and wood products (excl. furniture)	257,400	52.0	2,674
Clothing	483,900	40.3	2,148
Rubber products	84,900	125.7	2,077

Population economically active (2006)¹⁰; total 97,528,000; activity rate of total population 52.1% (participation rates: ages 15–64, 73.7%; female 43.7%; unemployed [December 2007–November 2008] 7.9%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	76.5	87.8	93.6	100.0	104.2	108.0	114.1

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,953; remittances (2008) 5,089; foreign direct investment (FDI; 2005–07 avg.) 22,824; official development assistance (2007) 297. Disbursements for (U.S.\$'000,000): tourism (2007) 8,211; remittances (2008) 1,191; FDI (2005–07 avg.) 12,595.

Direction of trade (2007)

	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
Africa	11,332	9.4	8,571	5.3
Asia-Pacific	35,245	29.2	33,303	20.7
China	12,618	10.5	10,749	6.7
Japan	4,610	3.8	4,321	2.7
South Korea	3,391	2.8	2,047	1.3
Europe	31,957	26.5	46,430	28.9
Germany	8,675	7.2	7,211	4.5
Portugal	...	16	1,805	1.1
Russia	1,709	1.4	3,741	2.3
United Kingdom	1,955	1.6	3,301	2.1
North America	23,282	19.3	36,110	22.5
Canada	1,708	1.4	2,362	1.5
Mexico	1,979	1.6	4,260	2.6
United States	18,890	15.7	25,336	15.8
South America	18,805	15.6	33,387	20.8
Argentina	10,410	8.6	14,417	9.0
Chile	3,483	2.9	4,265	2.7
NOT SPECIFIED	—	—	2,848	1.8
TOTAL	120,621	100.0	160,649	100.0

Household income and expenditure (2002–03). Average household size 3.6; average annual income per household R\$21,804 (U.S.\$7,272), of which monetary income 85.7%, nonmonetary income 14.3%; sources of income, n.a.; expenditure: housing, energy, and household furnishings 35.5%, food and beverages 20.8%, transportation and communications 18.4%, health care 6.4%, education 4.1%.

Financial aggregates¹⁷

	2003	2004	2005	2006	2007	2008
Exchange rate, R\$ per:						
U.S. dollar	2.89	2.65	2.34	2.14	1.77	2.34
£	5.15	5.13	4.03	4.19	3.55	3.41
SDR	4.29	4.12	3.34	3.21	2.80	3.60
International reserves (U.S.\$)						
Total (excl. gold; '000,000)	48,847	52,462	53,245	85,156	179,433	192,844
SDRs ('000,000)	2	4	29	8	2	1
Reserve pos. in IMF ('000,000)	—	—	—	—	—	—
Foreign exchange ('000,000)	48,844	52,458	53,216	85,148	179,431	192,843
Gold ('000,000 fine troy oz)	1.08	1.08	1.08	1.08	1.08	1.08
% world reserves	0.1	0.1	0.1	0.1	0.1	0.1
Interest and prices						
Central bank discount (%)	23.92	24.55	25.34	19.98	17.85	20.48
Govt. bond yield (%)	...	...	...	...	...	...
Industrial share prices	...	...	...	...	...	...
Balance of payments (U.S.\$'000,000)						
Balance of visible trade	+24,794	+33,666	+44,703	+46,458	+40,031	+24,746
Imports, f.o.b.	-48,290	-62,809	-73,606	-91,350	-120,618	-173,197
Exports, f.o.b.	73,084	96,475	118,308	137,807	160,649	197,942
Balance of invisibles	-20,617	-21,928	-30,719	-32,838	-38,481	-53,046
Balance of payments, current account	+4,177	+11,738	+13,984	+13,620	+1,550	-28,300

Energy production (consumption): electricity (kW-hr; 2006) 412,159,000,000 (460,500,000,000); hard coal (metric tons; 2006) 6,380,000 (21,600,000); crude petroleum (barrels; 2007) 645,800,000 ([2006] 621,888,000); petroleum products (metric tons; 2006) 80,179,000 (74,098,000); natural gas (cu m; 2007)

18,151,000,000 ([2006] 18,609,000,000); ethanol (litres; 2007) 19,000,000,000 (16,700,000,000).

Foreign trade

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+24,780	+33,662	+44,703	+46,458	+40,031	+24,746
% of total	20.4%	21.1%	23.3%	20.3%	14.2%	6.7%

Imports (2007): U.S.\$120,618,000,000 (chemicals and chemical products 19.0%, of which organic chemicals 5.0%, fertilizers 3.7%, medicines and pharmaceuticals 3.3%; mineral fuels 18.5%, of which crude petroleum 9.9%, refined petroleum 5.0%; road vehicles/parts 6.8%; general industrial machinery 5.4%; food 3.9%; telecommunications equipment 3.7%; power-generating machinery 3.7%). **Major import sources:** United States 15.7%; China 10.5%; Argentina 8.6%; Germany 7.2%; Nigeria 4.4%; Japan 3.8%; France 2.9%; Chile 2.9%; South Korea 2.8%; Italy 2.8%.

Exports (2007): U.S.\$160,649,000,000 (food 19.4%, of which meat 6.9%, coffee 2.1%, animal foodstuffs 2.1%, raw sugar 1.9%; road vehicles/parts 7.9%; chemicals and chemical products 6.6%, of which organic chemicals 2.6%; iron ore and concentrates 6.6%; iron and steel 6.3%; crude petroleum 5.5%; soybeans 4.2%; aircraft/spacecraft 3.2%; nonferrous metals 2.9%; power-generating machinery 2.7%; refined petroleum 2.7%; specialized industrial machinery 2.6%; general industrial machinery 2.4%; wood pulp and waste paper 1.9%). **Major export destinations:** United States 15.8%; Argentina 9.0%; China 6.7%; Netherlands 5.5%; Germany 4.5%; Venezuela 2.9%; Italy 2.8%; Chile 2.7%; Mexico 2.7%; Japan 2.7%.

Transport and communications

Transport. Railroads (2006): route length 18,396 mi, 29,605 km; (2005) passenger-km 5,852,000,000¹⁸; (2005) metric ton-km cargo 154,870,000,000¹⁸. Roads (2004): total length 1,088,558 mi, 1,751,868 km (paved [2000] 6%). Vehicles (2004): passenger cars 24,936,541; trucks and buses 6,294,502. Air transport (2007): passenger-km 52,044,000,000; metric ton-km cargo 1,477,824,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	65,949	369	PCs	2006	29,340	161
Telephones				Dailies	2007	8,523 ¹⁹	46 ¹⁹
Cellular	2008	150,641 ²⁰	794 ²⁰	Internet users	2007	67,510	360
Landline	2008	41,141	217	Broadband	2008	10,098 ²⁰	53 ²⁰

Education and health

Literacy (2005/2006): total population age 15 and over literate/functionally literate 89.0%/77.8%; males literate/functionally literate 88.7%/77.3%; females literate/functionally literate 89.2%/78.4%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	886,781	18,661,105	21.0	94
Secondary/Voc. (age 11–17)	1,611,582	24,863,112	15.4	79
Tertiary	292,504	4,572,297	15.6	25 (age 18–22)

Health: physicians (2005) 505,841 (1 per 356 persons); hospital beds (2005) 432,190 (1 per 416 persons); infant mortality rate per 1,000 live births (2008) 23.5; undernourished population (2002–04) 13,100,000 (7% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (November 2008): 326,435 (army 58.2%, navy 20.5%, air force 21.3%). **Military expenditure as percentage of GDP** (2007): 1.6%; per capita expenditure U.S.\$111.

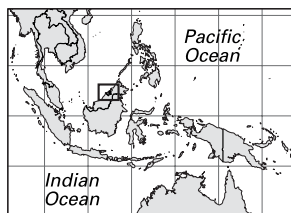
¹Includes both local censuses and estimates. ²Total area including inland water per survey of 2002. ³Detail does not add to total given because of rounding. ⁴Christian data include nominal Christians. ⁵Urban populations of *municípios*. ⁶Within Rio de Janeiro metropolitan area. ⁷Within São Paulo metropolitan area. ⁸Within Recife metropolitan area. ⁹Projected rates based on c. 87% of total deaths. ¹⁰As of September. ¹¹Includes 218,000 not adequately defined and 8,210,000 unemployed. ¹²Edible stalks to which cashew nuts are attached. ¹³Includes mandarins and clementines. ¹⁴Also found in alloys and oxides. ¹⁵Includes televisions, radios, and telecommunications equipment. ¹⁶Less than 1%. ¹⁷End-of-period figures. ¹⁸Includes suburban services. ¹⁹Circulation. ²⁰Subscribers.

Internet resources for further information:

- IBGE: Instituto Brasileiro de Geografia e Estatística
<http://www.ibge.gov.br/english/default.php>
- Central Bank of Brazil: Economic Data
<http://www.bcb.gov.br/?english>

Brunei

Official name: Negara Brunei Darussalam (State of Brunei).
Form of government: monarchy (sultanate) with one advisory body (Legislative Council [29]).
Head of state and government: Sultan.
Capital: Bandar Seri Begawan.
Official language: Malay².
Official religion: Islam.
Monetary unit: Brunei dollar (B\$)³; valuation (Sept. 1, 2009)
 1 U.S.\$ = B\$1.44; 1 £ = B\$2.34.



Area and population		area		population
Districts	Capitals	sq mi	sq km	2008 estimate
Belaït	Kuala Belaït	1,052	2,724	66,000
Brunei and Muara	Bandar Seri Begawan	220	571	276,600
Temburong	Bangar	504	1,304	10,100
Tutong	Tutong	450	1,166	45,300
TOTAL		2,226	5,765	398,000

Demography

Population (2009): 400,000.
Density (2009): persons per sq mi 179.7, persons per sq km 69.4.
Urban-rural (2005): urban 73.5%; rural 26.5%.
Sex distribution (2008): male 53.02%; female 46.98%.
Age breakdown (2008): under 15, 27.2%; 15–29, 27.7%; 30–44, 25.1%; 45–59, 14.8%; 60–74, 4.1%; 75–84, 0.9%; 85 and over, 0.2%.
Population projection: (2020) 478,000; (2030) 547,000.
Doubling time: 53 years.
Ethnic composition (2003): Malay 66.6%; Chinese 10.9%; other indigenous 3.6%; other 18.9%.
Religious affiliation (2006): Muslim 80.4%; Buddhist 7.9%; Christian 3.2%; traditional beliefs/other 8.5%.
Major cities (2006): Bandar Seri Begawan 67,100; Kuala Belaït 32,000; Seria 30,700; Tutong 19,600.

Vital statistics

Birth rate per 1,000 population (2007): 16.2 (world avg. 20.3).
Death rate per 1,000 population (2007): 3.0 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 13.2 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2007): 1.70.
Marriage/divorce rates per 1,000 population (2007): 5.5/1.65.
Life expectancy at birth (2007): male 75.2 years; female 77.8 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 91.9; malignant neoplasms (cancers) 57.4; diabetes mellitus 30.3; diseases of the respiratory system 29.5; accidents and violence 21.4.

National economy

Budget (2007–08). Revenue: B\$9,646,000,000 (tax revenue 65.8%, of which taxes on petroleum and natural gas companies 62.5%, import duties 1.6%; nontax revenue 34.2%, of which dividends paid by petroleum companies 18.9%, petroleum and natural gas royalties 10.3%). Expenditures: B\$5,601,000,000 (current expenditure 80.0%; capital expenditure 20.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): chicken meat 18,200, vegetables 9,426, hen's eggs 7,350, cassava 1,800, rice 1,200, pineapples 990, buffalo meat 410; livestock (number of live animals) 4,580 buffalo, 15,500,000 chickens; roundwood 123,800 cu m, of which fuelwood 9%; fisheries production 2,863 (from aquaculture 22%). Mining and quarrying: other than petroleum and natural gas, none except sand and gravel for construction. Manufacturing (value added in B\$'000,000; 2006–07): liquefied natural gas 1,692; textiles and apparel 122; other manufactures 78. Energy production (consumption): electricity (kW-hr; 2006) 2,948,000,000 (2,656,000,000); coal, none (none); crude petroleum (barrels; 2007) 70,800,000 ([2006] 697,000); petroleum products (metric tons; 2006) 1,207,000 (1,200,000); natural gas (cu m; 2007) 13,219,000,000 ([2006] 1,457,000,000).
Gross national income (at current market prices; 2007): U.S.\$12,400,000,000 (U.S.\$31,523 per capita).

Structure of gross domestic product and labour force				
	2006–07		2001	
	in value B\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	125	0.7	1,994	1.3
Petroleum, natural gas	9,841	56.5	3,954	2.5
Mining	...	...
Manufacturing ⁶	1,892	10.9	12,455	7.9
Construction	485	2.8	12,301	7.8
Public utilities	110	0.6	2,639	1.7
Transportation and communications	506	2.9	4,803	3.0
Trade, hotels	580	3.3	20,038	12.7
Finance, real estate	1,548	8.9	8,190	5.2
Pub. admin., defense	2,130	12.2	79,880	50.7
Services	212	1.2		
Other	—	—	11,340 ⁷	7.2 ⁷
TOTAL	17,428 ⁸	100.0	157,594	100.0

Population economically active (2008): total 188,800⁹; activity rate of total population 47.4% (participation rates: ages 15–64 [2001] 65.9%; female 39.4%; unemployed 3.7%).

Price index (2004 = 100)

	2004	2005	2006	2007	2008 ¹⁰
Consumer price index	100.0	101.0	101.2	101.5	104.2

Public debt (external, outstanding; 2009): n.a.

Household income and expenditure. Average household size (2002) 5.6; income per household: n.a.; sources of income: n.a.; expenditure (2002)¹¹: food and nonalcoholic beverages 28.8%, transportation 22.5%, housing and energy 8.8%, household furnishings 8.6%, recreation and entertainment 8.1%, clothing and footwear 5.6%, communications 5.5%.

Land use as % of total land area (2007): in temporary crops 0.6%, in permanent crops 0.9%, in pasture 0.6%, forest area 52.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 224; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 302. Disbursements for (U.S.\$'000,000): tourism (2006) 408; remittances (2008) 405; FDI (2005–07 avg.) 34.

Foreign trade¹²

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+2,146	+3,094	+3,635	+4,758	+5,953	+5,567
% of total	40.8%	53.8%	56.1%	61.5%	64.0%	57.0%

Imports (2007): U.S.\$2,101,000,000 (machinery and transport equipment 41.4%; manufactured goods 21.8%; food products 12.8%). **Major import sources (2006):** Malaysia 21.6%; Singapore 17.4%; Japan 12.8%; United States 9.0%; China 7.9%.

Exports (2007): U.S.\$7,668,000,000 (crude petroleum 66.0%, liquefied natural gas 30.1%, garments 1.5%). **Major export destinations (2007):**¹³ Japan 34.2%; Indonesia 24.7%; Australia 14.0%; South Korea 12.4%; United States 5.0%.

Transport and communications

Transport. Railroads (2004)¹⁴: length 12 mi, 19 km. Roads (2007): total length 2,345 mi, 3,774 km (paved 76%). Vehicles (2003): passenger cars 212,000; trucks and buses (2002) 20,000. Air transport (2007): passenger-km 3,720,000,000; metric ton-km cargo 115,536,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	215	648	PCs	2004	31	87
Telephones				Dailies	2007	45 ¹⁵	114 ¹⁵
Cellular	2007	397 ¹⁶	997 ¹⁶	Internet users	2007	188	488
Landline	2006	80	210	Broadband	2007	12 ¹⁶	29 ¹⁶

Education and health

Educational attainment (1991). Percentage of population age 25 and over having: no formal schooling 17.0%; primary education 43.3%; secondary 26.3%; postsecondary and higher 12.9%; not stated 0.5%. **Literacy** (2004): percentage of total population age 15 and over literate 92.7%; males literate 95.2%; females literate 90.2%.

Education (2006–07)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	3,628	45,972	12.7	93
Secondary/Voc. (age 12–18)	4,274	46,173	10.8	89
Tertiary	649	5,284	8.1	15 (age 19–23)

Health (2007): physicians 393 (1 per 1,013 persons); hospital beds 1,068 (1 per 373 persons); infant mortality rate per 1,000 live births (2007) 7.6; undernourished population (2002–04) 15,000 (4% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2008): 7,000 (army 70.0%, navy 14.3%, air force 15.7%). British troops 550; Singaporean troops 500. **Military expenditure as percentage of GDP** (2007): 2.8%; per capita expenditure U.S.\$880.

¹Legislative Council (suspended from 1984) reinstated September 2004 and enlarged September 2005; all seats are nonelected. ²All official documents that must be published by law in Malay are also required to be issued in an official English version. ³Pegged to the Singapore dollar at a ratio of 1:1. ⁴Based on governmental statistics for 185,430 citizens and 32,765 permanent residents. Religion data for c. 162,000 temporary residents (nearly all foreign workers) are unavailable. ⁵Muslim divorces only. ⁶Includes manufacture of liquefied natural gas (B\$1,692,000,000; 9.7% of total value). ⁷Unemployed. ⁸Detail does not add to total given because of rounding. ⁹Foreign workers accounted for 70% of the 160,500 economically active in 2004. ¹⁰Average of 2nd and 3rd quarters. ¹¹Weights of consumer price index components. ¹²Imports c.i.f.; exports f.o.b. ¹³For crude petroleum, liquefied natural gas, and garments only. ¹⁴Privately owned light railway. ¹⁵Circulation. ¹⁶Subscribers.

Internet resource for further information:

- The Government of Brunei Darussalam
<http://www.brunei.gov.bn/index.htm>

A map of Turkey and its surrounding regions. Turkey is shaded in dark grey. To its north is the Black Sea, and to its south is the Mediterranean Sea. The map shows the coastlines of Turkey, the Black Sea, and the Mediterranean Sea, along with parts of neighboring countries like Iraq, Syria, and Greece.

Demography

Vital statistics

National economy

Structure of gross domestic product and labour force				
	2007		2006	
	in value '000,000 leva	% of total value	labour force	% of labour force
Agriculture, forestry	2,028	5.1	252,200	7.4
Mining	2,111	5.3	38,200	1.1
Public utilities			58,900	1.7
Manufacturing	5,724	14.5	745,100	21.8
Construction	2,651	6.7	230,000	6.7
Transp. and commun.	4,337	11.0	220,300	6.5
Trade, restaurants	3,578	9.1	650,400	19.0
Finance			186,200	5.5
Pub. admin., defense	12,041	30.4	225,000	6.6
Services			503,800	14.7
Other	7,081 ⁷	17.9 ⁷	305,700 ⁸	9.0 ⁸
TOTAL	39,551	100.0	3,415,800	100.0

nonelectrical machinery and apparatus 485; chemical products 371; iron and steel 360. Energy production (consumption): electricity (kW-hr; 2008) 44,423,000,000 (34,684,000,000); hard coal (metric tons; 2006) 27,000 (4,259,000); lignite (metric tons; 2007) 28,308,000 ([2006] 25,775,000); crude petroleum (barrels; 2006) 205,000 (52,123,000); petroleum products (metric tons; 2006) 6,088,000 (3,944,000); natural gas (cu m; 2008) 213,000,000 (3,806,000,000).

Household income and expenditure (2009²). Average household size 2.5; income per household 8,159 leva (U.S.\$5,881); sources of income: wages and salaries 56.2%, transfers 30.8%, self-employment 5.8%; expenditure: food and nonalcoholic beverages 43.1%, housing and energy 16.5%, health 7.0%, transportation 6.7%, communications 5.9%.

Population economically active (2008): total 3,504,700; activity rate of total population 46.0% (participation rates: ages 15–64 c. 67%; female 47.0%; unemployed 5.7%).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 3,131; remittances (2008) 2,634; foreign direct investment (FDI: 2005–07 avg.) 6,620. Disbursements for (U.S.\$'000,000): tourism (2007) 1,823; remittances (2008) 74; FDI (2005–07 avg.) 249.

Land use as % of total land area (2007): in temporary crops 22.6%, in permanent crops 1.8%, in pasture 17.5%, forest area 34.3%.

Imports (2007): U.S.\$30,086,000,000 (manufactured goods 20.3%; machinery and apparatus 19.6%; chemicals and chemical products 8.7%; road vehicles 8.4%; metal ore and scrap 5.8%). *Major import sources (2008):* Russia 14.5%; Germany 11.8%; Italy 7.9%; Ukraine 7.2%; Romania 5.6%; Turkey 5.5%.

Exports (2007): U.S.\$18,576,000,000 (base and fabricated metals 22.3%, of which refined/unrefined copper 9.4%, iron and steel 6.8%; machinery and apparatus 13.0%; refined petroleum 12.7%; clothing 10.3%; food 5.5%). *Major export destinations* (2008): Greece 9.9%; Germany 9.2%; Turkey 8.8%; Italy 8.5%; Romania 7.3%; Belgium 5.8%.

Transport. Railroads (2004): track length 6,238 km; (2008–09¹¹) passenger-km 2,299,000,000; (2008–09¹¹) metric ton-km cargo 4,508,000,000. Roads (2004): length 44,033 km (paved 99%). Vehicles (2005): cars 2,538,000; trucks and buses 371,000. Air transport (2007)¹²: passenger-km 2,001,000,000; metric ton-km cargo 3,400,000.

Education and health

Educational attainment (2004). Percentage of population age 25–64 having: no formal schooling to complete primary education 28%; secondary 50%; higher 22%. *Literacy* (2006): total population age 15 and over literate 98.3%; males 98.7%; females 97.9%.

Health (2008²): physicians 27,756 (1 per 274 persons); hospital beds 48,930 (1 per 155 persons); infant mortality rate per 1,000 live births 8.6; undernourished population (2002–04) 600,000 (8% of total population based on the consumption of a minimum daily requirement of 1,990 calories).

Military

Total active duty personnel (November 2008): 40,747 (army 46.1%, navy 10.1%, air force 22.9%, central staff 20.9%). *Military expenditure as percentage of GDP* (2007): 2.2%; *per capita expenditure* U.S.\$115.

¹Bulgaria has no official religion; the constitution, however, refers to Eastern Orthodoxy as the "traditional" religion. ²January 1. ³District nearly encircles Sofia-Grad district to the north, east, and south. ⁴Sofia-Grad includes Sofia city and immediately adjacent urban and rural areas. ⁵Officially up to 40% of the population is estimated to be atheist or agnostic. ⁶Includes short-term public guaranteed external debt. ⁷Taxes less subsidies and imputed bank charges. ⁸Unemployed. ⁹Metal content of mine output. ¹⁰Imports f.o.b. in balance of trade and c.i.f. for commodities and trading partners. ¹¹March–February. ¹²Hemus Air and Bulgaria Air only including significant charter services; these two airlines operated in the name Bulgaria Air from February 2009. ¹³Circulation. ¹⁴Subscribers.

Internet resources for further information:

- National Statistical Institute <http://www.nsi.bg>
- Bulgarian National Bank <http://www.bnb.bg>

Burkina Faso

Official name: Burkina Faso (Burkina Faso).

Form of government: multiparty republic with one legislative body (National Assembly [111]).

Chief of state: President.

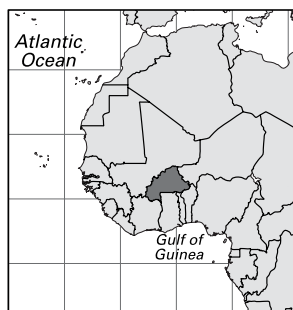
Head of government: Prime Minister.

Capital: Ouagadougou.

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFAF 458.60; 1 £ = CFAF 744.12.



Area and population

Regions	Capitals	area		population
		sq mi	sq km	2006 census ¹
Boulie du Mouhoun	Dédougou	13,186	34,153	1,442,749
Cascades	Banfora	7,107	18,406	531,808
Centre	Ouagadougou	1,083	2,805	1,727,390
Centre-Est	Tenkodogo	4,560	11,811	1,132,016
Centre-Nord	Kaya	7,656	19,829	1,202,025
Centre-Ouest	Koudougou	8,387	21,722	1,186,566
Centre-Sud	Manga	4,371	11,321	641,443
Est	Fada N'gourma	17,859	46,256	1,212,284
Hauts-Bassins	Bobo-Dioulasso	9,785	25,344	1,469,604
Nord	Ouahigouya	6,258	16,207	1,185,796
Plateau Central	Ziniaré	3,299	8,544	696,372
Sahel	Dori	13,649	35,350	968,442
Sud-Ouest	Gaoua	6,256	16,202	620,767
TOTAL		103,456	267,950	14,017,262

Demography

Population (2009): 15,757,000.

Density (2009): persons per sq mi 152.3; persons per sq km 58.8.

Urban-rural (2006): urban 22.7%; rural 77.3%.

Sex distribution (2006): male 48.29%; female 51.71%.

Age breakdown (2006): under 15, 46.4%; 15–29, 26.2%; 30–44, 14.3%; 45–59, 7.6%; 60–74, 3.8%; 75–84, 0.9%; 85 and over, 0.3%; unknown 0.5%.

Population projection: (2020) 21,871,000; (2030) 27,940,000.

Doubling time: 23 years.

Ethnic composition (1995): Mossi 47.9%; Fulani 10.3%; Lobi 6.9%; Bobo 6.9%; Mande 6.7%; Senufo 5.3%; Grosi 5.0%; Gurma 4.8%; Tuareg 3.1%.

Religious affiliation (2006): Muslim 60.5%; Roman Catholic 19.0%; traditional beliefs 15.3%; Protestant/independent Christian 4.2%; nonreligious 0.4%; other 0.6%.

Major urban localities (2006): Ouagadougou 1,475,223; Bobo-Dioulasso 489,967; Koudougou 88,184; Banfora 75,917; Ouahigouya 73,153.

Vital statistics

Birth rate per 1,000 population (2007): 45.0 (world avg. 20.3).

Death rate per 1,000 population (2007): 13.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 31.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 6.41.

Marriage/divorce rates per 1,000 population: n.a.

Life expectancy at birth (2007): male 50.3 years; female 54.0 years.

Major causes of death per 100,000 population (2002): lower respiratory infections c. 414; HIV/AIDS c. 256; malaria c. 207; diarrheal diseases c. 174; perinatal conditions c. 108.

Adult population (ages 15–49) living with HIV (2007): 1.6%³ (world avg. 0.8%).

National economy

Budget (2007). Revenue: CFAF 618,508,000,000 (tax revenue 65.4%, of which taxes on goods and services 35.2%, taxes on international transactions 12.6%; grants 29.0%; nontax revenue 5.6%). Expenditures: CFAF 839,362,000,000 (current expenditure 54.0%; development expenditure 45.8%; other 0.2%).

Household income and expenditure. Average household size (2006) 5.9; average annual income per household: n.a.; sources of income: n.a.; expenditure (2003): food, beverages, and tobacco 48.8%, housing and energy 17.8%, transportation 7.0%, clothing 6.8%, health 4.4%, recreation and culture 4.1%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sorghum 1,507,000, millet 966,000, corn (maize) 534,000, seed cotton 690,000, sugarcane 455,000, dry cowpeas 455,000, peanuts (groundnuts) 225,000, rice 123,000, cattle meat 115,690, shea nuts (2005) 70,000, bambara beans 40,500, sesame 25,600; livestock (number of live animals) 11,295,000 goats, 7,914,000 cattle, 7,544,000 sheep; roundwood 13,411,000 cu m, of which fuelwood 91%; fisheries production 10,498 (from aquaculture, 3%). Mining and quarrying (2007): gold 2,250 kg⁴; granite 300,000 cu m. Manufacturing (value added in CFAF '000,000; 1999): food products, beverages, and tobacco 126,125; textiles 46,217; chemicals and chemical products 9,335; cement, bricks, and ceramics 3,484; paper and paper products 2,150. Energy production (consumption): electricity (kW-hr; 2006) 548,000,000 (687,000,000); crude petroleum (2006) none (none); petroleum products (metric tons; 2006) none (440,000); natural gas (2006) none (none).

Population economically active (2006): total 5,412,102; activity rate 38.6% (participation rates: over age 14, 72.7%; female 45.3%; officially unemployed 2.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.5	94.3	94.0	100.0	102.3	102.1	113.0

Gross national income (GNI; 2008): U.S.\$7,278,000,000 (U.S.\$480 per capita); purchasing power parity GNI (U.S.\$1,160 per capita).

Structure of gross domestic product and labour force

	2006		1996	
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture	1,012,100	32.2	4,513,868	88.9
Mining	20,700	0.7	3,979	0.1
Manufacturing	402,200	12.8	71,565	1.4
Public utilities	39,100	1.2	2,813	0.1
Construction	197,900	6.3	21,076	0.4
Transp. and commun.	131,700	4.2	20,580	0.4
Trade	325,600	10.3	224,581	4.4
Finance, real estate	247,800	7.9	13,131	0.3
Pub. admin., defense	415,100	13.2	103,926	2.0
Services	110,100	3.5		
Other	242,700 ⁵	7.7 ⁵	100,096 ⁶	2.0 ⁶
TOTAL	3,145,000	100.0	5,075,615	100.0

Public debt (external; 2007): U.S.\$1,268,000,000.

Land use as % of total land area (2007): in temporary crops 19.0%, in permanent crops 0.2%, in pasture 21.9%, forest area 24.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 53; remittances (2008) 50; foreign direct investment (2005–07 avg.) 223; official development assistance (2007) 930. Disbursements for (U.S.\$'000,000): tourism (2006) 55; remittances (2008) 44.

Foreign trade⁷

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	-210.9	-212.0	-244.7	-293.4	-254.5	-289.0
% of total	38.2%	36.3%	32.6%	37.3%	29.3%	32.8%

Imports (2007): CFAF 585,100,000,000 (machinery and apparatus 29.3%, petroleum products 24.5%, food 10.3%). **Major import sources** (2005): France 18.7%; Côte d'Ivoire 18.0%; Togo 11.4%; Benin 6.8%; Ghana 5.9%.

Exports (2007): CFAF 296,100,000,000 (raw cotton 55.4%, gold 5.4%⁴, shea nuts 4.6%). **Major export destinations** (2005): Togo 41.1%; Ghana 16.7%; Côte d'Ivoire 10.5%; France 9.8%; Switzerland 9.4%.

Transport and communications

Transport. Railroads: (2007) route length 386 mi, 622 km; (2003) passenger-km 9,980,000; (2005) metric ton-km cargo 674,900,000. Roads (2006): total length 9,490 mi, 15,272 km (paved 17%). Vehicles (2005): passenger cars 84,161; trucks and buses 38,261. Air transport (2005)⁸: passenger arrivals 134,247, passenger departures 137,373; cargo unloaded 2,837 metric tons, cargo loaded 1,347 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	156	12	PCs	2007	88	6.0
Telephones				Dailies	2007	329	2.39
Cellular	2008	2,553 ¹⁰	168 ¹⁰	Internet users	2008	140	9.2
Landline	2007	122	8.3	Broadband	2006	1.7 ¹⁰	0.1 ¹⁰

Education and health

Educational attainment (2003)¹¹. Percentage of population age 25 and over having: no formal schooling or unknown 85.4%; incomplete to complete primary education 7.9%; incomplete to complete secondary 5.5%; higher 1.2%. **Literacy** (2006): percentage of total population age 15 and over literate 21.1%; males literate 27.9%; females literate 15.4%.

Education (2006–07)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–12)	32,760	1,561,258	47.7	52 ¹²
Secondary/Voc. (age 13–19)	12,498	352,376	28.2	12
Tertiary	1,886	33,459	17.7	3 (age 20–24)

Health: physicians (2007) 441 (1 per 31,634 persons); hospital beds (2006) 12,200 (1 per 1,111 persons); infant mortality rate per 1,000 live births (2007) 87.6; undernourished population (2002–04) 2,000,000 (15% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 10,800 (army 59.3%, air force 1.8%, gendarmerie 38.9%). **Military expenditure as percentage of GDP** (2007): 1.3%; per capita expenditure U.S.\$7.

¹Final. ²Adherence to beliefs often nominal. ³Statistically derived midpoint within range. ⁴Commercial gold production resumed in October 2007 after an 8-year hiatus; 5 to 6 new gold mines were operational or near operational by April 2009. ⁵Taxes less subsidies and imputed bank service charges. ⁶Includes 71,280 unemployed. ⁷Imports f.o.b. in balance of trade and commodities and c.i.f. in trading partners. ⁸Combined data for Ouagadougou and Bobo-Dioulasso airports. ⁹Circulation. ¹⁰Subscribers. ¹¹Based on the 2003 Burkina Faso Demographic and Health Survey, comprising 57,737 people in 9,097 households, about 80% of which are located in rural areas. ¹²2005–06.

Internet resources for further information:

- Institut National de la Statistique et de la Démographie
<http://www.insd.bf>
- La Banque de France: La Zone Franc
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Burundi

Official name: Republika y'u Burundi (Rundi); République du Burundi (French) (Republic of Burundi).

Form of government: republic with two legislative bodies (Senate [49¹]; National Assembly [100²]).

Head of state and government: President assisted by Vice Presidents.

Capital: Bujumbura³.

Official languages: Rundi; French.

Official religion: none.

Monetary unit: Burundi franc (FBu);

valuation (Sept. 1, 2009)

1 U.S.\$ = FBu 1,231; 1 £ = FBu 1,997.



Area and population

	area	population		area	population
Provinces	sq km	2004 estimate	Provinces	sq km	2004 estimate
Bubanza	1,089	337,437	Muyinga	1,836	567,157
Bujumbura	1,232	487,783	Mwaro	840	247,086
Bururi	2,465	482,315	Ngozi	1,474	690,824
Cankuzo	1,965	195,393	Rutana	1,959	281,723
Cibitoke	1,636	460,562	Ruyigi	2,339	353,314
Gitega	1,979	685,346			
Karuzi	1,457	407,772			
Kayanza	1,233	514,022	Urban Province		
Kirundo	1,703	577,823	Bujumbura	87	374,152
Makamba	1,960	448,929	TOTAL LAND AREA	25,950	
Muramvya	696	272,790	INLAND WATER	1,867	
			TOTAL	27,816 ⁴	7,384,423 ⁵

Demography

Population (2009): 8,303,000.

Density (2009)⁶: persons per sq mi 828.7, persons per sq km 320.0.

Urban-rural (2007): urban 9.9%; rural 90.1%.

Sex distribution (2005): male 48.82%; female 51.18%.

Age breakdown (2005): under 15, 41.4%; 15–29, 30.8%; 30–44, 14.7%; 45–59, 8.7%; 60–74, 3.5%; 75–84, 0.8%; 85 and over, 0.1%.

Population projection: (2020) 10,318,000; (2030) 11,936,000.

Doubling time: 34 years.

Ethnic composition (2000): Hutu 80.9%; Tutsi 15.6%; Lingala 1.6%; Twa 1.0%; Pygmy 0.9%.

Religious affiliation (2004): Christian c. 67%, of which Roman Catholic c. 62%, Protestant c. 5%; traditional beliefs c. 23%; Muslim (mostly Sunni) c. 10%.

Major city and towns (2004): Bujumbura 374,152; Gitega 25,500; Ngozi 21,500; Bururi 20,500.

Vital statistics

Birth rate per 1,000 population (2005): 35.4 (world avg. 20.3).

Death rate per 1,000 population (2005): 14.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2005): 20.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 5.04.

Life expectancy at birth (2005): male 47.8 years; female 50.5 years.

Adult population (ages 15–49) *living with HIV* (2007): 2.0%⁷ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 370; lower respiratory infections c. 185; diarrheal diseases c. 128; war-related c. 114; perinatal conditions c. 100; malaria c. 57.

National economy

Budget (2007). Revenue: FBu 419,600,000,000 (grants 52.9%; tax revenue 43.5%, of which taxes on goods and services 22.0%, income tax 12.7%, taxes on international trade 8.1%; nontax revenue 3.6%). Expenditures: FBu 407,900,000,000 (current expenditure 63.9%; capital expenditure 33.0%; other 3.1%).

Public debt (external, outstanding; February 2008): U.S.\$1,330,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 1,600,000, sweet potatoes 835,000, cassava 710,000, dry beans 220,000, corn (maize) 115,000, sorghum 75,000, rice 69,500, taros 62,000, peas 33,500, coffee 15,595, palm oil 12,773, tea 6,858, seed cotton 2,870; livestock (number of live animals) 750,000 goats, 400,000 cattle, 250,000 sheep; roundwood 9,155,000 cu m, of which fuelwood 96%; fisheries production 14,200 (from aquaculture 1%). Mining and quarrying (2007): columbite-tantalite ore 51,550 kg; gold 2,423 kg. Manufacturing (2007): beer 1,289,400 hectolitres; carbonated beverages 294,200 hectolitres; cottonseed oil 51,200 litres; sugar 20,200 tons; cigarettes 472,455,000 units; blankets (2005) 43,253 units; fabrics (2005) 4,811,000,000 sq m. Energy production (consumption): electricity (kW-hr; 2007) 117,500,000 (192,600,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (58,000); natural gas, none (none); peat (metric tons; 2007) 9,800 ([2000] 12,000).

Household income and expenditure (2004)⁸. Average household size 5.6; average annual income per household c. FBu 168,000 (c. U.S.\$153); sources of income: agriculture/livestock c. 91%, other c. 9%; expenditure: food c. 46%, housing, n.a., debt service c. 14%, alcoholic beverages and tobacco c. 8%, transportation c. 6%, health c. 5%, clothing c. 4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1.3; remittances (2004) 4.1; foreign direct investment (2005–07 avg.) negligible; official development assistance (2007) 466. Disbursements for (U.S.\$'000,000): tourism (2007) 104; remittances (2008) negligible.

Gross national income (GNI; 2008): U.S.\$1,092,000,000 (U.S.\$140 per capita); purchasing power parity GNI (U.S.\$380 per capita).

Structure of gross domestic product and labour force

	2007		1990	
	in value U.S.\$'000	% of total value	labour force	% of labour force
Agriculture	342,000	34.1	2,574,443	93.1
Mining			1,419	—
Public utilities	10,400	1.0	1,672	0.1
Manufacturing	119,600	11.9	33,867	1.2
Construction	45,900	4.6	19,737	0.7
Transp. and communications	52,200	5.2	8,504	0.3
Trade	49,700	4.9	25,822	0.9
Finance			2,005	0.1
Pub. admin., defense	284,300	28.3	85,191	3.1
Services				
Other	100,300 ⁹	10.0 ⁹	13,270	0.5
TOTAL	1,004,400	100.0	2,765,945 ⁴	100.0

Population economically active (2006)¹⁰: total 4,060,000; activity rate of total population 49.7% (participation rates: ages 15–64, 90.5%; female 51.9%; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008 ¹¹
Consumer price index	73.7	79.6	88.1	100.0	102.8	111.4	139.3

Land use as % of total land area (2007): in temporary crops 38.7%, in permanent crops 13.6%, in pasture 37.0%, forest area 5.2%.

Foreign trade¹²

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−78.8	−90.0	−139.9	−205.1	−266.8	−173.4
% of total	37.4%	35.2%	37.4%	31.0%	46.1%	37.9%

Imports (2007): U.S.\$423,000,000 (refined petroleum 27.5%; road vehicles 19.8%; food 11.0%, of which cereals 7.7%; machinery and apparatus 8.7%; iron and steel 6.4%). **Major import sources:** Saudi Arabia 27.5%; Belgium 11.3%; Uganda 10.7%; Kenya 7.9%; Japan 7.0%.

Exports (2007): U.S.\$156,200,000 (gold 34.0%¹³; coffee 24.6%; road vehicles 9.2%; black tea 4.2%; raw cane sugar 4.0%; prefabricated buildings 3.0%; hides and skins 2.4%). **Major export destinations:** U.A.E. 34.2%; Switzerland 10.9%; Dem. Rep. of the Congo 9.4%; Kenya 7.2%; Rwanda 6.7%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 7,657 mi, 12,322 km (paved 7%). Vehicles: passenger cars (2003) 7,000; trucks and buses (2002) 14,400. Air transport (2007–08)¹⁴: passenger arrivals 96,175, passenger departures 62,845; cargo unloaded 2,116 metric tons, cargo loaded 317 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	280	37	PCs	2006	57	7.0
Telephones				Dailies	2007	20 ¹⁵	2.4 ¹⁵
Cellular	2008	481 ¹⁶	60 ¹⁶	Internet users	2008	65	8.1
Landline	2008	30	3.8	Broadband	2008	0.2 ¹⁶	0.02 ¹⁶

Education and health

Educational attainment: n.a. **Literacy** (2007): percentage of total population age 15 and over literate 56.1%; males literate 61.4%; females literate 51.1%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	24,452	1,324,937	54.2	76
Secondary/Voc. (age 13–19)	8,047 ¹⁷	192,296	18.9 ¹⁷	...
Tertiary	719 ¹⁸	17,061	23.5 ¹⁸	2 (age 20–24)

Health (2004): physicians 200 (1 per 37,581 persons); hospital beds (2006) 5,663 (1 per 1,429 persons); infant mortality rate per 1,000 live births (2005) 102.0; undernourished population (2002–04) 4,500,000 (66% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 20,000 (army 100%)¹⁹. **Military expenditure as percentage of GDP** (2007): 7.8%; per capita expenditure U.S.\$9.

¹³⁴ seats are indirectly elected; additional seats (as of April 2009) are designated for the Twa ethnic group (3), former presidents (4), and women (8; to assure 30% quota for women).

²Excludes 18 additional seats appointed (as of the 2005 elections) to assure specific ethnic and gender composition of National Assembly. ³Future move of capital to Gitega announced by president in March 2007. ⁴Detail does not add to total given because of rounding. ⁵Reported total; summed total equals 7,384,428. ⁶Based on land area. ⁷Statistically derived midpoint within range. ⁸Based on a survey of 4,300 households in rural Burundi. ⁹Nearly all indirect taxes less subsidies. ¹⁰ILO estimates. ¹¹Average of 2nd and 3rd quarters. ¹²Imports c.i.f.; exports f.o.b. ¹³Nearly all gold smuggled from neighbouring countries. ¹⁴Figures for Bujumbura airport only. ¹⁵Circulation. ¹⁶Subscribers. ¹⁷2003–04. ¹⁸2004–05. ¹⁹Burundian troops in Somalia as part of African Union (AU) peacekeeping mission (December 2008) 1,700. South African troops in Burundi representing AU peacekeeping mission (February 2009) 973.

Internet resource for further information:
• Banque Centrale du Burundi <http://www.brb-bi.net>

Cambodia

Official name: Preahreacheanachakr Kampuchea (Kingdom of Cambodia).
Form of government: constitutional monarchy with two legislative houses (Senate [61¹]; National Assembly [123]).

Chief of state: King.

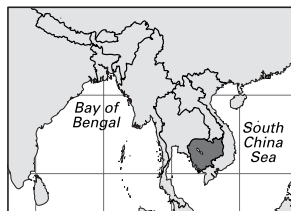
Head of government: Prime Minister.

Capital: Phnom Penh.

Official language: Khmer.

Official religion: Buddhism.

Monetary unit: riel (KHR); valuation (Sept. 1, 2009) 1 U.S.\$ = KHR 4,127; 1 £ = KHR 6,696.



Area and population

area		population	area		population
Provinces	sq km	2008 census ²	Provinces	sq km	2008 census ²
Banteay Mean chey	6,679	678,033	Ratanak Kiri	10,782	149,997
Battambang	11,702	1,024,663	Siemreap	10,299	896,309
Kampong Cham	9,799	1,680,694	Stung Treng	11,092	111,734
Kampong Chanang	5,521	471,616	Svay Rieng	2,966	482,785
Kampong Speu	7,017	716,517	Takeo	3,563	843,931
Kampong Thom	13,814	630,803	Municipalities		
Kampot	4,873	585,110	Kep	336	35,753
Kandal	3,568	1,265,085	Pailin	803	70,482
Koh Kong	11,160	139,722	Phnom Penh	290	1,325,681
Kratie	11,094	318,523	Sihanoukville	868	199,902
Mondul Kiri	14,288	60,811	TOTAL LAND AREA	178,035	
Oddar Mean chey	6,158	185,443	INLAND WATER	3,000	
Preah Vihear	13,788	170,852	TOTAL	181,035	13,388,910
Prey Veng	4,883	947,357			
Pursat	12,692	397,107			

Demography

Population (2009): 14,494,000³.

Density (2009)⁴: persons per sq mi 210.9, persons per sq km 81.4.

Urban-rural (2008): urban 19.5%; rural 80.5%.

Sex distribution (2008): male 48.51%; female 51.49%.

Age breakdown (2005): under 15, 36.6%; 15–29, 30.5%; 30–44, 18.4%; 45–59, 9.4%; 60–74, 4.1%; 75–84, 0.9%; 85 and over, 0.1%.

Doubling time: 41 years.

Population projection: (2020) 17,601,000³; (2030) 20,183,000³.

Ethnic composition (2000): Khmer 85.2%; Chinese 6.4%; Vietnamese 3.0%; Cham 2.5%; Lao 0.6%; other 2.3%.

Religious affiliation (2000): Buddhist 84.7%; Chinese folk religionist 4.7%; traditional beliefs 4.3%; Muslim 2.3%; Christian 1.1%; other 2.9%.

Major urban areas (1998): Phnom Penh (2005) 1,364,000; Battambang 124,290; Sisophon 85,382; Siemreap 83,715; Sihanoukville 66,723.

Vital statistics

Birth rate per 1,000 population (2008): 25.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 17.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.08.

Life expectancy at birth (2008): male 59.7 years; female 63.8 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases c. 158; HIV/AIDS-related c. 114; tuberculosis c. 90; diarrheal diseases c. 86; perinatal conditions c. 84.

National economy

Budget (2007). Revenue: KHR 3,280,300,000,000 (tax revenue 58.3%; nontax revenue 17.2%; grants 20.0%; other 4.5%). Expenditures: KHR 3,294,700,000,000 (current expenditure 59.7%, development expenditure 40.3%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 5,995,000, cassava 2,000,000, corn (maize) 380,000, sugarcane 170,000, bananas 130,000, soybeans 83,000, coconuts 71,000, oranges 63,000, rubber 22,000, tobacco leaves 14,300; livestock (number of live animals) 3,500,000 cattle, 2,790,000 pigs, 775,000 buffalo, (2005) 120,000 crocodiles; roundwood 9,004,000 cu m, of which fuelwood 99%; fisheries production 514,200 (from aquaculture 7%); aquatic plants production 16,000 (from aquaculture 100%). Mining and quarrying (2007): gold, n.a.; gemstones, n.a.; crude stones 702,000; salt 76,700. Manufacturing (value added in KHR '000,000,000; 2002): wearing apparel 1,808; food products 392; base and fabricated metals 120; wood and paper products and publishing 101; textiles 96. Energy production (consumption): electricity (kWh; 2006) 1,235,000,000 (1,345,000,000); petroleum products (metric tons; 2006) none (1,327,000); crude petroleum (barrels; 2006) none (none); natural gas (cu m; 2006) none (none).

Household income and expenditure. Average household size (2008) 4.7; average annual extrapolated monetary and nonmonetary income (1993–94) KHR 2,031,000 (U.S.\$787); sources of income (1993–94): monetary 67.4% (of which nonagricultural [mostly self-employment] 36.8%, agricultural 18.1%, wages and salaries 9.1%), non-monetary 32.6% (of which agricultural 11.4%); household expenditure (2002): food, beverages, and tobacco 62.6%, housing and energy 19.7%, health 6.0%, transportation and communications 3.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,284; remittances (2008) 325; foreign direct investment (2005–07 avg.) 577; official development assistance (2007) 672. Disbursements for (U.S.\$'000,000): tourism (2007) 194; remittances (2008) 164.

Gross national income (GNI; 2008): U.S.\$8,859,000,000 (U.S.\$600 per capita); purchasing power parity GNI (U.S.\$1,820 per capita).

Structure of gross domestic product and labour force

	2007			
	in value KHR '000,000,000	% of total value	labour force	% of labour force
Agriculture	10,406	29.7	4,670,000	55.9
Mining	133	0.4	22,000	0.3
Manufacturing	6,073	17.3	944,000	11.3
Construction	2,338	6.7	299,000	3.6
Public utilities	195	0.5	21,000	0.3
Transp. and commun.	2,423	6.9	228,000	2.7
Trade, hotels	4,645	13.2	1,282,000	15.3
Finance, real estate	2,689	7.7	52,000	0.6
Public admin., defense	668	1.9	185,000	2.2
Services	3,069	8.8	308,000	3.7
Other	2,402 ⁵	6.9 ⁵	343,000	4.1
TOTAL	35,041	100.0	8,354,000	100.0

Public debt (external, outstanding; 2007): U.S.\$3,537,000,000.

Population economically active (2004): total 7,557,600; activity rate of total population c. 55% (participation rates: ages 15–64, 82.6%; female 49.4%; unemployed⁶ 7.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	89.4	90.5	94.0	100.0	106.1	114.3	142.9

Land use as % of total land area (2007): in temporary crops 21.5%, in permanent crops 0.9%, in pasture 8.5%, forest area 56.7%.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-581	-681	-1,018	-1,078	-1,382	-1,826
% of total	12.2%	11.6%	14.9%	12.7%	14.5%	16.2%

Imports (2005): U.S.\$4,254,000,000 (retained imports 97.3%; imports for reexport 2.7%). **Major import sources** (2004): Thailand 23.9%; Hong Kong 15.0%; China 13.5%; Singapore 11.5%; Vietnam 7.6%.

Exports (2005): U.S.\$2,910,000,000 (domestic exports 95.3%, of which garments 77.7%, rice 6.1%⁸, rubber 4.1%⁸, fish 2.6%⁸, sawn timber and logs 0.5%⁸; reexports 4.7%). **Major export destinations** (2004): U.S. 56.2%; Germany 11.5%; U.K. 7.0%; Canada 4.3%; Vietnam 3.7%.

Transport and communications

Transport. Railroads (2004): length 374 mi, 602 km; (2000) passenger-km 45,000,000; (1999) metric ton-km 76,171,000. Roads (2004): total length 23,770 mi, 38,257 km (paved 6%). Vehicles (2004): passenger cars 235,298; trucks and buses 35,448. Air transport (2005–06): passenger-km 198,000,000; metric ton-km cargo 1,214,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	103	8.0	PCs	2007	56	4.0
Telephones				Dailies	2007	55 ⁹	3.9 ⁹
Cellular	2008	4,237 ¹⁰	288 ¹⁰	Internet users	2007	70	4.8
Landline	2008	45	3.1	Broadband	2007	8.4 ¹⁰	0.6 ¹⁰

Education and health

Educational attainment (2004). Percentage of literate population age 25 and over having: no formal schooling 4.4%; incomplete primary education 54.0%; complete primary 23.7%; incomplete secondary 11.3%; secondary/vocational 5.3%; higher 1.1%; unknown 0.2%. **Literacy** (2004): percentage of total population age 15 and over literate 74.4%; males literate 82.1%; females literate 67.4%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	48,736	2,479,644	50.9	89
Secondary/Voc. (age 12–17)	34,051	911,317	26.8	31 ¹¹
Tertiary	5,930	92,340	15.6	5 (age 18–22)

Health: physicians (2004) 2,122 (1 per 6,169 persons); hospital beds (2002) 9,800 (1 per 1,405 persons); infant mortality rate per 1,000 live births (2008) 56.6; undernourished population (2002–04) 4,600,000 (33% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 124,300 (army 60.3%, navy 2.3%, air force 1.2%, provincial forces 36.2%). **Military expenditure as percentage of GDP** (2007): 1.6%; per capita expenditure U.S.\$10.

¹Includes 59 indirectly elected seats and 2 nonelected seats. ²Preliminary. ³Per U.S. Bureau of the Census International Database (July 2007 update). ⁴Based on land area. ⁵Indirect taxes less subsidies and less imputed bank service charges. ⁶Registered; for population age 7 and over. ⁷Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ⁸Includes estimates for illegal exports. ⁹Circulation. ¹⁰Subscribers. ¹¹2005–06.

Internet resource for further information:

• National Institute of Statistics <http://www.nis.gov.kh>

Cameroon

Official name: République du Cameroun (French); Republic of Cameroon (English).

Form of government: unitary multiparty republic with one legislative house (National Assembly [180]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Yaoundé.

Official languages: French; English.

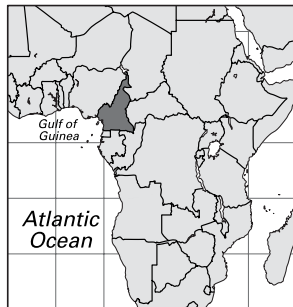
Official religion: none.

Monetary unit: CFA franc (CFAF);

valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2004 estimate
Adamoua	Ngaoundéré	24,595	63,701	782,000
Centre	Yaoundé	26,623	68,953	2,703,000
Est	Bertoua	42,086	109,002	816,000
Extrême-Nord	Maroua	13,229	34,263	2,941,000
Littoral	Douala	7,818	20,248	2,380,000
Nord	Garoua	25,517	66,090	1,326,000
Nord-Ouest	Bamenda	6,680	17,300	1,989,000
Ouest	Bafoussam	5,364	13,892	2,142,000
Sud	Ebolowa	18,221	47,191	578,000
Sud-Ouest	Buea	10,081 ¹	26,110 ¹	1,343,000
LAND AREA		180,213 ²	466,750	
INLAND WATER		3,707	9,600	
TOTAL		183,920 ^{1, 2}	476,350 ¹	17,000,000

Demography

Population (2009): 19,522,000.

Density (2009)³: persons per sq mi 108.3, persons per sq km 41.8.

Urban-rural (2007): urban 56.0%; rural 44.0%.

Sex distribution (2006): male 50.15%; female 49.85%.

Age breakdown (2006): under 15, 41.5%; 15–29, 29.0%; 30–44, 15.7%; 45–59, 8.8%; 60–74, 4.1%; 75–84, 0.8%; 85 and over, 0.1%.

Population projection: (2020) 24,349,000; (2030) 28,602,000.

Doubling time: 31 years.

Ethnic composition (2006): “western highlanders” c. 38.0%, including Bamileke c. 11.5%; “coastal tropical forest peoples” c. 12.0%, including Bassa c. 2.5%; “southern tropical forest peoples” c. 18.0%, including Ewondo (Yaunde) c. 8.0%; “mostly Islamic central highlanders” c. 14.0%, including Fulani c. 8.5%; “mostly traditional believers of central highlands and far north” or “Kirdi” c. 18.0%, including Mofa c. 2.5%.

Religious affiliation (2005): Roman Catholic 27.4%; traditional beliefs 22.2%; Protestant 20.2%; Sunni Muslim 20.0%; nonreligious/other 10.2%.

Major urban areas (2006): Douala 1,371,400; Yaoundé 1,344,600; Kousséri 476,600; Garoua 461,300; Bamenda 419,400; Maroua 335,800.

Vital statistics

Birth rate per 1,000 population (2006): 35.6 (world avg. 20.3).

Death rate per 1,000 population (2006): 13.0 (world avg. 8.6).

Natural increase rate per 1,000 population (2006): 22.6 (world avg. 11.7).

Total fertility rate (avg. births per childbearing woman; 2006): 4.58.

Life expectancy at birth (2006): male 51.7 years; female 53.0 years.

Adult population (ages 15–49) living with HIV (2007): 5.1%⁴ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 308; lower respiratory infections c. 201; malaria c. 119; diarrheal diseases c. 88; perinatal conditions c. 69.

National economy

Budget (2006). Revenue: CFAF 4,472,000,000,000 (grants 59.6%; non-oil revenue 26.0%, of which VAT 10.0%, direct taxes 5.9%, customs duties 4.6%, nontax revenue 2.2%; oil revenue 14.4%). Expenditures: CFAF 1,364,000,000,000 (current expenditure 80.4%; capital expenditure 19.6%).

Public debt (external, outstanding; 2007): U.S.\$2,204,000,000.

Gross national income (GNI; 2008): U.S.\$21,781,000,000 (U.S.\$1,150 per capita); purchasing power parity GNI (U.S.\$2,180 per capita).

Structure of gross domestic product and labour force				
2005				
	in value CFAF '000,000,000	% of total value	labour force ⁵	% of labour force
Agriculture, fishing, forestry	1,668	19.0	3,695,000	53.6
Mining	728	8.3		
Manufacturing	1,532	17.4		
Construction	273	3.1		
Public utilities	78	0.9		
Transp. and commun.	479	5.5		
Trade	1,876	21.4		
Finance, real estate	662	7.5		
Public admin., defense	350	4.0		
Services	531	6.0		
Other	604 ⁶	6.9 ⁶	3,205,000	46.4
TOTAL	8,781	100.0	6,900,000	100.0

Household income and expenditure (2004). Average household size 4.8; expenditure: food and nonalcoholic beverages 44.1%, clothing and footwear 13.1%, cafés and hotels 8.6%, transportation 7.4%, housing and energy 7.0%.

Land use as % of total land area (2007): in temporary crops 12.6%, in permanent crops 2.5%, in pasture 4.2%, forest area 44.0%.

Population economically active (2006): total 6,857,000⁷; activity rate of total population 37.7%⁷ (participation rates: ages 15–64, 64.7%⁷; female 41.2%⁷; unemployed 9.3%⁸, underemployed 68.8%⁸).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.2	97.8	98.0	100.0	105.1	106.1	111.7

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 2,076,000, plantains 1,317,000, oil palm fruit 1,300,000, taro 1,133,000, corn (maize) 923,000, bananas 790,000, sorghum 540,000, tomatoes 407,000, yams 287,000, seed cotton 225,000, dry beans 198,000, cacao 179,239, peanuts (groundnuts) 160,000, cattle meat 92,000, game meat 50,000, coffee 48,240, natural rubber 47,000; livestock (number of live animals) 6,000,000 cattle, 3,800,000 sheep; roundwood 11,448,000 cu m, of which fuelwood 84%; fisheries production 138,952 (from aquaculture, negligible). Mining and quarrying (2007): pozzolana 600,000; limestone 100,000; gold 20,000 kg. Manufacturing (value added in U.S.\$'000,000; 2002): food products 97; refined petroleum 88; beverages 78; paints, soaps, and varnishes 51; wood products (excl. furniture) 48; rubber products 38. Energy production (consumption): electricity (kW-hr; 2006) 3,900,000,000 (3,320,000,000); coal, none (none); crude petroleum (barrels; 2008) 29,700,000 ([2007] 9,500,000); petroleum products (metric tons; 2005) 1,784,000 (932,000); natural gas (cu m; 2006) 20,000,000 (20,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 177; remittances (2008) 167; foreign direct investment (2005–07 avg.) 273; official development assistance (2007) 1,933. Disbursements for (U.S.\$'000,000): tourism (2007) 318; remittances (2008) 103.

Foreign trade⁹

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	−58.7	+119.2	+70.5	−294.6	+425.9	−10.8
% of total	1.6%	2.7%	1.4%	5.7%	6.3%	0.1%

Imports (2006): U.S.\$3,150,500,000 (crude petroleum 29.4%, chemicals and chemical products 11.1%, machinery and apparatus 10.9%, cereals 9.0%, road vehicles 5.8%). **Major import sources:** Nigeria 23.3%; France 17.2%; China 6.3%; Belgium 4.1%; Equatorial Guinea 3.5%.

Exports (2006): U.S.\$3,576,400,000 (crude petroleum 49.8%, refined petroleum 11.8%, sawn wood 9.7%, cocoa [all forms] 7.3%, aluminum 4.5%, raw cotton 2.9%, natural rubber 1.8%, coffee 1.8%). **Major export destinations:** Spain 25.9%; Italy 23.1%; France 10.7%; U.S. 6.4%; Neth. 6.3%.

Transport and communications

Transport. Railroads (2006): route length 613 mi, 987 km; (2005) passenger-km 323,000,000; (2005) metric ton-km cargo 1,119,000,000. Roads (2004): total length 31,068 mi, 50,000 km (paved 10%). Vehicles (2005): passenger cars 175,981; trucks and buses 59,399. Air transport: passenger-km (2005) 646,000,000; metric ton-km cargo (2001) 23,255,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	720	43	PCs	2006	194	11
Telephones				Dailies	2007	73 ¹⁰	4.0 ¹⁰
Cellular	2008	6,161 ¹¹	323 ¹¹	Internet users	2007	548	29
Landline	2008	198	10	Broadband	2007	0.4 ¹¹	0.02 ¹¹

Education and health

Educational attainment (2004)¹²: Percentage of population 25 and over having: no formal schooling 32.9%; primary education 35.3%; secondary 26.2%; higher 4.2%; other/unknown 1.4%. **Literacy** (2007): percentage of total population age 15 and over literate 78.8%; males 84.6%; females 73.2%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	70,230	3,120,357	44.4	...
Secondary/Voc. (age 12–18)	43,193 ¹³	750,777	16.2 ¹³	...
Tertiary	3,173 ¹⁴	120,298 ¹³	31.5 ¹⁴	71 ¹³ (age 19–23)

Health (2004): physicians 2,966 (1 per 5,609 persons); hospital beds 26,487 (1 per 667 persons); infant mortality rate per 1,000 live births (2006) 67.2; undernourished population (2002–04) 4,200,000 (26% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2008): 14,100 (army 88.7%, navy 9.2%, air force 2.1%). **Military expenditure as percentage of GDP** (2007): 1.6%; per capita expenditure U.S.\$16.

¹Includes the 270 sq mi (700 sq km) area of Bakassi peninsula, which was formally ceded by Nigeria to Cameroon on Aug. 14, 2008; the 2008 pop. est. for Bakassi is roughly 250,000. ²Detail does not add to total given because of rounding. ³Based on land area excluding the Bakassi peninsula. ⁴Statistically derived midpoint within range. ⁵FAO estimate. ⁶Indirect taxes less subsidies and less imputed bank service charges. ⁷ILO estimate. ⁸Per government survey. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation. ¹¹Subscribers. ¹²Based on 2004 survey of 17,506 persons. ¹³2005–06. ¹⁴2004–05.

Internet resource for further information:

• National Institute of Statistics <http://www.statistics-cameroon.org>

Canada

Official name: Canada.

Form of government: federal multiparty parliamentary state with two legislative houses (Senate [105¹, 2]; House of Commons [308]).

Chief of state: Queen of Canada (British Monarch).

Representative of chief of state: Governor-General.

Head of government: Prime Minister.

Capital: Ottawa.

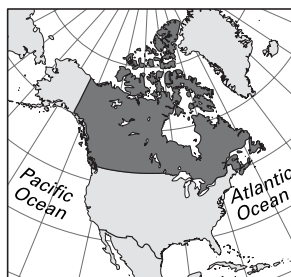
Official languages: English; French.

Official religion: none.

Monetary unit: Canadian dollar

(Can\$); valuation (Sept. 1, 2009)

1 U.S.\$ = Can\$1.10; 1 £ = Can\$1.78.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2009 ³ estimate
Alberta	Edmonton	255,541	661,848	3,632,483
British Columbia	Victoria	364,764	944,735	4,419,974
Manitoba	Winnipeg	250,116	647,797	1,213,815
New Brunswick	Fredericton	28,150	72,908	748,319
Newfoundland and Labrador	St. John's	156,453	405,212	508,990
Nova Scotia	Halifax	21,345	55,284	939,531
Ontario	Toronto	415,599	1,076,395	12,986,857
Prince Edward Island	Charlottetown	2,185	5,660	140,402
Quebec	Quebec	595,391	1,542,056	7,782,561
Saskatchewan	Regina	251,367	651,036	1,023,810
Territories				
Northwest Territories	Yellowknife	519,735	1,346,106	42,940
Nunavut	Iqaluit	808,185	2,093,190	31,556
Yukon	Whitehorse	186,272	482,443	33,442
TOTAL		3,855,103⁴	9,984,670⁴	33,504,680

Demography

Population (2009): 33,687,000.

Density (2009)⁵: persons per sq mi 9.6, persons per sq km 3.7.

Urban-rural (2006): urban 80.2%; rural 19.8%.

Sex distribution (2007): male 49.53%; female 50.47%.

Age breakdown (2007): under 15, 17.0%; 15–29, 20.5%; 30–44, 21.9%; 45–59, 22.0%; 60–74, 12.2%; 75–84, 4.7%; 85 and over, 1.7%.

Population projection: (2020) 37,284,000; (2030) 40,294,000.

Population by mother tongue (2006): English 57.8%; French 22.1%; other 20.1%, of which Chinese languages 3.3%, Italian 1.5%, German 1.5%, Punjabi 1.2%, Spanish 1.2%, Arabic 0.9%, Tagalog 0.9%, Portuguese 0.7%, Polish 0.7%, Urdu 0.5%, Ukrainian 0.5%.

Aboriginal population (2006): North American Indian 1,172,790 (2.2% of total population); Métis 698,025 (1.3%); Inuit (Eskimo) 50,485 (0.2%); other/multiple 34,500 (0.1%).

Religious affiliation (2001): Christian 77.1%, of which Roman Catholic 43.2%, Protestant 28.3%, unspecified Christian 2.6%, Orthodox 1.7%, other Christian 1.3%; Muslim 2.0%; Jewish 1.1%; Hindu 1.0%; Buddhist 1.0%; Sikh 0.9%; nonreligious 16.5%; other 0.4%.

Major metropolitan areas (2006): Toronto 5,113,149; Montreal 3,635,571; Vancouver 2,116,581; Ottawa-Gatineau 1,130,761; Calgary 1,079,310; Edmonton 1,034,945; Quebec 715,515; Winnipeg 694,668; Hamilton 692,911; London 457,720; Kitchener 451,235; St. Catharines–Niagara 390,317.

Other metropolitan areas (2006)

	population		population		population
Abbotsford	159,020	Oshawa	330,594	Sherbrooke	186,952
Barrie	177,061	Regina	194,971	Sudbury	158,258
Halifax	372,858	Saguenay	151,643	Trois-Rivières	141,529
Kelowna	162,276	St. John's	181,113	Victoria	330,088
Kingston	152,358	Saskatoon	233,923	Windsor	323,342

Place of birth (2006): 80.2% native-born; 19.8% foreign-born, of which Asian 8.1%, European 7.3%, Latin American 1.2%, African 1.2%.

Mobility (2006). Population living in the same residence as in 2001: 59.1%; different residence, same municipality 22.0%; same province, different municipality 12.1%; different province 2.9%; different country 3.9%.

Households. Total number of households (2006) 12,437,470. Average household size 2.5; 1 person 26.8%, 2 persons 33.6%, 3 persons 15.9%, 4 persons 15.0%, 5 or more persons 8.7%.

Immigration (2007): permanent immigrants admitted 236,758; from Asia/Pacific 47.6%, of which China 11.4%, India 11.0%, Philippines 8.1%; Africa/Middle East 20.5%; Europe 16.5%; Latin America 10.9%; U.S. 4.4%; refugee population (end of 2007) 175,741.

Vital statistics

Birth rate per 1,000 population (2007–08): 11.0 (world avg. 20.3); (c. 2002) within marriage c. 62%; outside of marriage c. 38%.

Death rate per 1,000 population (2007–08): 7.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2007–08): 3.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 1.59.

Marriage/divorce rates per 1,000 population: (2006) 4.6/(2004) 2.2.

Life expectancy at birth (2006): male 76.9 years; female 83.7 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 226.4; malignant neoplasms (cancers) 208.3; diseases of the res-

piratory system 61.0; diseases of the nervous system 31.9; accidents 27.6; diseases of the digestive system 26.9; diabetes mellitus 24.3.

Social indicators

Educational attainment (2006). Percentage of population age 25–64 having: less than complete secondary education 15.5%; complete secondary 23.9%; higher vocational 12.4%; some college/university 25.3%; bachelor's degree 14.6%; beyond bachelor's/master's 7.5%; doctorate 0.8%.

Distribution of income (2006)

percentage of family after-tax income by quintile				
1	2	3	4	5 (highest)
2.3%	7.6%	14.8%	24.3%	51.0%

Quality of working life. Average workweek (2007): 35.6 hours. Annual rate per 100,000 workers for (2006): injury, accident, or industrial illness 1,998; death 5.9. Average days lost to labour stoppages per 1,000 employee-workdays (2001): 0.7. Average round-trip commuting time (2005): 63 minutes; mode of transportation (2006): auto driver 72.3%, auto passenger 7.7%, public transportation 11.0%, walking 6.4%, bicycling 1.3%, other/unknown 1.3%. Labour force covered by a pension plan (2006): 38.1%.

Social participation. Eligible voters participating in last national election (October 2008): 58.8%. Population over 18 years of age participating in voluntary work (2000): 26.7%. Trade union membership as percentage of civilian labour force (2007) 29.4%. Attendance at religious services on a weekly basis (2006): 17%.

Social deviance (2007). Offense rate per 100,000 population for: violent crime 929.6, of which battery/aggravated battery/dangerous operation of vehicle 718.5, robbery 89.8, sexual assault 65.0, homicide 1.8; property crime 3,319.7, of which breaking and entering 700.3, auto theft 443.2, fraud 267.7.

Leisure (1998). Favourite leisure activities (hours weekly): television (2004) 21.4; radio (2005) 19.1; social time 13.3; reading 2.8; sports and entertainment 1.4.

Material well-being (2006). Households possessing: owned automobile 59.7%; owned truck/van 36.9%; landline telephone only (December 2007) 24.0%; cellular phone (December 2007) 72.4%; air conditioner 48.1%; cable television 65.2%; home computer 75.4%; Internet use from home 68.1%; dishwasher 57.7%.

National economy

Gross national income (GNI; 2008): U.S.\$1,390,040,000,000 (U.S.\$41,730 per capita); purchasing power parity GNI (U.S.\$36,220 per capita).

Structure of gross domestic product and labour force

	2008		2006 ³	
	in value Can\$'000,000 ⁶	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	25,965	2.1	341,100 ⁷	2.0 ⁷
Mining ⁸	55,311 ⁸	4.5 ⁸	321,000 ⁹	1.8 ⁹
Manufacturing	175,617	14.3	2,131,200	12.2
Construction	74,570	6.1	1,057,100	6.1
Public utilities	31,143	2.5	121,200	0.7
Transportation	56,755	4.6	801,400	4.6
Trade, hotels	172,669	14.1	3,624,600	20.7
Finance, real estate ¹⁰	305,532 ¹⁰	24.9 ¹⁰	2,767,400	15.8
Pub. admin., defense	69,438	5.7	850,000	4.9
Services	260,259	21.2	4,306,200	24.6
Other	—	—	1,152,500	6.6
TOTAL	1,227,259¹¹	100.0	17,473,500¹²	100.0

Budget (2007–08)¹³. Revenue: Can\$256,575,000,000 (personal income tax 46.2%, corporate income tax 16.3%, general sales tax 13.8%, contributions to social security 8.5%, other 15.2%). Expenditures: Can\$242,814,000,000 (social services 37.0%, defense/police 11.8%, transfers to government sub-sectors 11.3%, health 10.6%, debt charges 8.4%, resource conservation and industrial development 4.5%, foreign affairs/international assistance 2.4%, education 2.3%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 20,641,100, barley 11,822,100, corn (maize) 10,554,500, rapeseed 8,864,200, cow's milk 8,000,000, oats 5,009,100, potatoes 4,970,938, dry peas 3,023,600, soybeans 2,785,400, pork 1,894,380, cattle meat 1,278,580, lentils 669,700, linseed 633,500, tomatoes 607,852, apples 405,089, rye 249,900, canary seed 169,200, mustard seed 112,000, mushrooms 81,500, blueberries (2005) 69,410, cranberries (2005) 67,870; livestock (number of live animals) 13,810,000 pigs, 14,155,000 cattle, 165,000,000 chickens, 5,600,000 turkeys; roundwood 195,907,000 cu m, of which fuelwood 1%; fisheries production 1,174,735 (from aquaculture 14%); aquatic plants production (2006) 11,313 (from aquaculture, none). Mining and quarrying (value of production in Can\$'000,000; 2007)¹⁴: nickel 9,902 (2); copper 4,533; potash 3,142 (1); uranium 2,523 (1); iron ore 2,512; gold 2,377; zinc 2,087 (5); diamonds 1,445; stone 1,333; sand and gravel 1,316; platinum group 543 (3); salt 427 (5); cobalt 223 (2); gypsum 112 (4); ilmenite 816,000¹⁵ (3); molybdenum (metal content) 6,841¹⁵ (5). Manufacturing (value added in Can\$'000,000,000; 2008)¹⁶: transportation equipment 30.8; food 19.3; base chemicals, medicines, and soaps 15.6; machinery 13.7; fabricated metal products 13.4; base metals 11.8; wood products (excl. furniture) 9.6; paper products 9.5; rubber and plastic products 9.0; information and communication technologies 8.5.

Population economically active (2007)³: total 17,825,800; activity rate of total population 55.6% (participation rates: ages 15 and over, 67.5%; female 46.7%; unemployed [January–December 2008] 6.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.5	96.1	97.8	100.0	102.0	104.2	106.7
Hourly earnings index ¹⁶	90.5	94.3	97.3	100.0	99.7	105.1	106.9

Public debt (March 2008): U.S.\$477,101,000,000.

Household income and expenditure. Average household size (2006) 2.5; average annual income per family (2006) Can\$65,500 (U.S.\$57,740); sources of income (2001): wages, salaries, and self-employment 71.8%, transfer payments 14.0%, other 14.2%; expenditure (2005): housing and energy 23.0%, transportation 14.4%, recreation and culture 10.3%, food and nonalcoholic beverages 9.6%, restaurants and hotels 7.0%, household furnishings and operations 6.6%, clothing 4.8%, health 4.2%, alcoholic beverages and tobacco 4.0%, communications 2.3%, education 1.4%.

Financial aggregates ¹⁷						
	2003	2004	2005	2006	2007	2008
Exchange rate, Can\$ per:						
U.S. dollar	1.29	1.20	1.16	1.17	0.99	1.22
£	2.29	2.38	2.20	2.30	1.98	1.79
SDR	1.92	1.87	1.66	1.75	1.56	1.89
International reserves (U.S.\$)						
Total (excl. gold: '000,000)	36,222	34,429	32,962	34,994	40,991	43,778
SDRs ('000,000)	838	924	897	963	1,016	991
Reserve pos. in IMF ('000,000)	3,847	3,338	1,401	833	661	1,249
Foreign exchange ('000,000)	31,537	30,167	30,664	33,198	39,314	41,537
Gold ('000,000 fine troy oz)	0.11	0.11	0.11	0.11	0.11	0.11
% world reserves	0.01	0.01	0.01	0.01	0.01	0.01
Interest and prices						
Central bank discount (%)	3.00	2.75	3.50	4.50	4.50	1.75
Govt. bond yield (long-term: %) ¹⁸	5.28	5.08	4.39	4.30	4.34	4.04
Industrial share prices (2000 = 100) ¹⁸	74.5	90.0	105.8	125.7	142.6	130.4
Balance of payments (U.S.\$'000,000)						
Balance of visible trade, of which:						
Imports, f.o.b.	+40,282	+50,503	+51,718	+43,542	+44,363	...
Exports, f.o.b.	-244,904	-279,508	-320,181	-356,514	-387,665	...
Balance of invisibles	285,186	330,011	371,899	400,056	432,028	...
Balance of payments, current account	-29,586	-27,557	-29,539	-25,683	-31,724	...
	+10,696	+22,946	+22,179	+17,859	+12,639	...

Energy production (consumption): electricity (kW-hr; 2007) 603,180,000,000 ([2005] 604,343,000,000); hard coal (metric tons; 2007) 32,800,000 ([2005] 15,100,000); lignite (metric tons; 2007) 36,600,000 ([2005] 45,400,000); crude petroleum (barrels; 2008) 946,000,000¹⁹ ([2006] 641,598,000); petroleum products (metric tons; 2006) 85,832,000 (78,534,000); natural gas (cu m; 2007) 187,000,000,000 (92,900,000,000).

Land use as % of total land area (2007): in temporary crops 5.0%, in permanent crops 0.8%, in pasture 1.7%, forest area 34.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 15,614; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 66,129. Disbursements for (U.S.\$'000,000): tourism (2007) 24,882; remittances, n.a.; FDI (2005–07 avg.) 40,851.

Foreign trade

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
Can\$'000,000,000	+47.3	+41.0	+43.2	+46.2	+42.6	+46.7
% of total	6.6%	5.5%	5.2%	5.5%	5.0%	5.1%

Imports (2007): Can\$408,436,000,000 (machinery and apparatus 25.3%, of which nonelectrical machinery 12.2%; road vehicles 16.6%, of which cars 6.7%, parts for road vehicles 5.5%; chemicals and chemical products 10.3%; crude petroleum 5.9%; food products 4.9%). **Major import sources:** U.S. 54.2%; China 9.4%; Mexico 4.2%; Japan 3.8%; Germany 2.8%; U.K. 2.8%; South Korea 1.3%; Norway 1.3%; France 1.3%; Algeria 1.2%.

Exports (2007): Can\$451,043,000,000 (mineral fuels 20.8%, of which crude petroleum 9.3%, natural gas in gaseous state 6.3%; road vehicles 15.0%, of which cars 8.9%; machinery and apparatus 12.6%; chemicals and chemical products 8.3%; sawn wood, wood pulp, and paper products 6.4%; food products 6.2%; base nonferrous metals 5.4%). **Major export destinations:** U.S. 79.0%; U.K. 2.8%; China 2.1%; Japan 2.0%; Mexico 1.1%; Germany 0.9%; Norway 0.8%; France 0.7%.

Trade by commodities (2006)				
SITC Group	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
00 Food and live animals	16,403	4.7	22,627	5.8
01 Beverages and tobacco	2,826	0.8	2,227 ²⁰	0.6 ²⁰
02 Crude materials, excluding fuels	9,852	2.8	29,354	7.6
03 Mineral fuels, lubricants, and related materials	31,903	9.1	77,534	20.0
04 Animal and vegetable oils, fats, and waxes	567	0.1	...	...
05 Chemicals and related products, n.e.s.	35,912	10.3	29,441	7.6
06 Basic manufactures	46,215	13.2	59,438	15.3
07 Machinery and transport equipment	156,759	44.8	123,224	31.8
08 Miscellaneous manufactured articles	40,779	11.7	22,510	5.8
09 Goods not classified by kind	8,673	2.4	21,665	5.6
TOTAL	349,889	100.0 ²¹	388,020	100.0 ²¹

Direction of trade (2006)

	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
Africa	7,429	2.1	2,251	0.6
Asia-Oceania	70,188	20.1	30,737	7.9 ²¹
China	30,424	8.7	6,755	1.7
Japan	13,521	3.9	8,302	2.1
South Korea	5,084	1.5	2,880	0.7
Other	21,159	6.0	12,800	3.3
Americas	220,619	63.1 ²¹	325,643	83.9
Mexico	14,123	4.0	3,867	1.0
United States	191,996	54.9	316,665	81.6
Other Americas	14,500	4.1	5,111	1.3
Europe	51,642	14.8 ²¹	29,376	7.6
United Kingdom	9,569	2.7	8,935	2.3
Germany	9,817	2.8	3,418	0.9
Other Europe	32,256	9.2	17,023	4.4
TOTAL	349,889 ²¹	100.0 ²¹	388,020 ²¹	100.0

Transport and communications

Transport. Railroads (2007): length 72,212 km; passenger-km 1,444,656,000; metric ton-km cargo 357,444,000,000. Roads (2004): total length 1,408,900 km (paved c. 35%). Vehicles (2005): passenger cars 18,123,885; trucks and buses 785,649. Air transport (2007)²²: passenger-km 74,400,000,000; metric ton-km cargo 1,184,921,000.

Communications							
		units				units	
Medium	date	number in '000s	per 1,000 persons	Medium	date	number in '000s	per 1,000 persons
Televisions	2003	22,384	707	PCs	2007	31,051	943
Telephones				Dailies	2007	6,249 ²³	190 ²³
Cellular	2008	21,455 ²⁴	644 ²⁴	Internet users	2007	28,000 ²⁵	852 ²⁵
Landline	2006	21,000	645	Broadband	2008	9,633 ²⁴	289 ²⁴

Education and health

Literacy (2005): total population age 15 and over literate virtually 100%.

Education (2003–04)				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	2,320,738 ²⁶	17.4 ²⁷	99 ²⁷
Secondary/Voc. (age 12–17)	...	2,999,244	17.7 ²⁷	...
Tertiary	132,230 ²⁸	1,326,711	9.5 ²⁸	53 (age 18–22)

Health: physicians (2006) 62,307 (1 per 524 persons); hospital beds (2005) 110,113 (1 per 294 persons); infant mortality rate per 1,000 live births (2005) 5.4; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 64,371 (army 52.4%, navy 17.0%, air force 30.6%)²⁹. **Military expenditure as percentage of GDP** (2007): 1.3%; per capita expenditure U.S.\$559.

¹Statutory number. ²All seats are nonelected. ³January 1. ⁴Total area equals 3,855,103 sq mi (9,984,670 sq km), of which land area equals 3,511,023 sq mi (9,093,507 sq km), inland water area equals 310,296 sq mi (803,663 sq km), and Great Lakes water area equals 33,784 sq mi (87,500 sq km). ⁵Based on land area. ⁶At prices of 2002. ⁷Excludes fishing, forestry. ⁸Includes extraction of petroleum and natural gas (39,989; 3.3%). ⁹Includes fishing, forestry. ¹⁰Includes professional, scientific, and technical services (58,515; 4.8%). ¹¹Summed total; reported total equals Can\$1,225,687,000,000. ¹²Detail does not add to total given because of discrepancies in estimates. ¹³Federal government revenue and expenditure only. ¹⁴World ranking by production volume is in parentheses. ¹⁵In metric tons; value of production data are confidential. ¹⁶Manufacturing only. ¹⁷End of period unless otherwise footnoted. ¹⁸Period average. ¹⁹From (in 2007): the Alberta oil sands c. 50%, conventional on land sources c. 38%, offshore Newfoundland in the Atlantic Ocean c. 12%. ²⁰Includes 04 SITC group. ²¹Detail does not add to total given because of rounding. ²²Air Canada only. ²³Circulation. ²⁴Subscribers. ²⁵Estimated figure. ²⁶2004–05. ²⁷1999–2000. ²⁸2001–02. ²⁹Canadian troops in Afghanistan as part of the NATO International Security Assistance Force (April 2009): 2,830.

Internet resource for further information:
• Statistics Canada <http://www.statcan.gc.ca>

Cape Verde

Official name: República de Cabo Verde (Republic of Cape Verde).

Form of government: multiparty republic with one legislative house (National Assembly [72]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Praia.

Official language: Portuguese.¹

Official religion: none.

Monetary unit: escudo (C.V.Esc.); valuation (Sept. 1, 2005):

1 U.S.\$ = C.V.Esc. 79.05;

1 £ = C.V.Esc. 128.27.



Area and population		area		population
Island Groups	Principal towns	sq mi	sq km	2009
Islands/Countries				projection ²
Leeward Islands		693 ³	1,796	341,164
Brava ⁴	Nova Sintra	25	64	6,141
Fogo ⁵	São Filipe	182	472	37,804
Maio ⁶	Vila do Maio	104	269	8,132
Santiago ⁷	Praia	383	991	289,087
Windward Islands		864 ³	2,237	167,478
Boa Vista ⁶	Sal Rei	239	620	6,007
Sal ⁶	Santa Maria	83	216	20,041
Santa Luzia, Branco, and Raso ⁸	—	19	49	0
Santo Antão ⁵	Porto Novo	300	779	48,939
São Nicolau ⁹	Ribeira Brava	134	346	12,810
São Vicente ¹⁰	Mindelo	88	227	79,681
TOTAL		1,557	4,033	508,642 ^{11, 12}

Demography

Population (2009): 509,000.

Density (2009): persons per sq mi 326.9, persons per sq km 126.2.

Urban-rural (2007): urban 59.8%; rural 40.2%.

Sex distribution (2008): male 47.70%; female 52.30%.

Age breakdown (2005): under 15, 39.2%; 15–29, 30.2%; 30–44, 16.9%; 45–59, 7.9%; 60–74, 4.4%; 75–84, 1.2%; 85 and over, 0.2%.

Population projection: (2020) 622,000; (2030) 687,000.

Doubling time: 35 years.

Ethnic composition (2000): Cape Verdean *mestizo* (black-white admixture) 69.6%; Fulani 12.2%; Balanta 10.0%; Mandyako 4.6%; Portuguese white 2.0%; other 1.6%.

Religious affiliation (2000): Christian 95.1%, of which Roman Catholic 88.1%, Protestant 3.3%, independent Christian 2.7%; Muslim 2.8%; other 2.1%.

Major urban localities (2009): Praia (on Santiago) 125,148; Mindelo (on São Vicente) 76,650; Santa Maria (on Sal) 18,780; Assomada (on Santiago) 13,562; Pedra Badejo (on Santiago) 11,348.

Vital statistics

Birth rate per 1,000 population (2007): 25.1 (world avg. 20.3).

Death rate per 1,000 population (2007): 5.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 19.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.89.

Life expectancy at birth (2007): male 68.3 years; female 73.6 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 136.3; malignant neoplasms (cancers) 54.5; diseases of the respiratory system 46.8; accidents and violence 42.5; infectious and parasitic diseases 35.0.

National economy

Budget (2008). Revenue: C.V.Esc. 40,129,000,000 (tax revenue 73.7%, of which VAT 29.2%, taxes on income and profits 21.2%, taxes on international transactions 14.7%; grants 16.0%; nontax revenue 6.5%; other 3.8%). Expenditures: C.V.Esc. 41,304,000,000 (current expenditure 60.6%; capital expenditure 39.4%).

Public debt (external, outstanding; December 2006): U.S.\$601,000,000.

Gross national income (GNI; 2008): U.S.\$1,561,000,000 (U.S.\$3,130 per capita); purchasing power parity GNI (U.S.\$3,450 per capita).

Structure of gross domestic product and labour force				
	2005		1990	
	in value C.V.Esc. '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	8,904	9.1	29,876	24.7
Manufacturing			5,520	4.6
Public utilities	7,530	7.7	883	0.7
Mining			410	0.3
Construction	9,112	9.3	22,722	18.9
Transp. and commun.	18,621	19.0	6,138	5.1
Trade, hotels	20,288	20.7	12,747	10.6
Finance, real estate	8,775	8.9	821	0.7
Pub. admin., defense	11,813	12.0		
Services	2,078	2.1	17,358	14.4
Other	11,017 ¹³	11.2 ¹³	24,090	20.0
TOTAL	98,139 ⁴	100.0	120,565	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 15,400, corn (maize) 12,000, pig meat 7,700, bananas 6,800, cow's milk 6,060, mangoes 6,000, goat's milk 5,770, pulses 5,300, tomatoes 5,000, sweet potatoes 4,700; livestock (number of live animals) 217,000 pigs, 115,400 goats, 24,150 cattle; roundwood 1,542 cu m, of which fuelwood 100%; fish-

eries production 18,328 (from aquaculture, none). Mining and quarrying (2007): salt 1,600; pozzolana, n.a. Manufacturing (2003): cement 160,000; frozen fish 900; canned fish 200; other manufactured goods include clothing, footwear, and rum. Energy production (consumption): electricity (kW-hr; 2006) 252,000,000 (252,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (100,000); natural gas, none (none).

Population economically active (2006): total 189,000¹⁴; activity rate of total population c. 36.4%¹⁴ (participation rates: ages 15–64 c. 63%¹⁴; female c. 40%¹⁴; unemployed 18.3%, underemployed c. 26%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	100.3	101.5	99.6	100.0	105.4	110.0	117.5

Household income and expenditure. Average household size (2006) 4.9; expenditure (2004): food 36.9%, transportation 14.1%, alcoholic beverages 10.1%, housing 7.9%, household furnishings and operation 6.4%, energy 5.2%.

Land use as % of total land area (2007): in temporary crops 12.4%, in permanent crops 0.7%, in pasture 6.2%, forest area 21.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 346; remittances (2008) 138; foreign direct investment (2005–07 avg.) 130; official development assistance (2007) 163. Disbursements for (U.S.\$'000,000): tourism (2007) 107; remittances (2008) 6.0.

Foreign trade¹⁵

Balance of trade (current prices)					
	2003	2004	2005	2006	2007
U.S.\$'000,000	–342.3	–414.0	–348.8	–427.9	–622.2
% of total	93.2%	93.2%	66.1%	66.0%	73.0%

Imports (2007): U.S.\$737,000,000 (food and agricultural products 20.5%, machinery and apparatus 15.2%, refined petroleum 9.3%, road vehicles 8.0%, aircraft/parts 7.2%, chemicals and chemical products 5.7%). **Major import sources:** Portugal 40.0%; Netherlands 11.5%; France 9.6%; Brazil 6.2%; Spain 4.6%.

Exports (2007): U.S.\$114,800,000 (refined petroleum [significantly for refueling services for ships and aircraft] 49.8%, transport containers 15.8%, fresh fish 8.3%, clothing 5.7%, footwear 4.0%). **Major export destinations:** Côte d'Ivoire 30.7%; Portugal 21.6%; Netherlands 15.2%; Spain 9.1%; France 4.1%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 1,398 mi, 2,250 km (paved [mostly with cobblestones] 78%). Vehicles (2004¹⁶): passenger cars 23,811; trucks and buses 5,032. Air transport (2004): passenger-km 725,000,000; metric ton-km cargo, n.a.

Communications		number	units			number	units
Medium	date	in '000s	per 1,000 persons	Medium	date	in '000s	per 1,000 persons
Televisions	2003	48	105	PCs	2004	48	102
Telephones				Dailies	2007	17	17
Cellular	2008	278 ¹⁸	556 ¹⁸	Internet users	2008	103	206
Landline	2008	72	144	Broadband	2008	7.4 ¹⁸	15 ¹⁸

Education and health

Educational attainment (1990). Percentage of population age 25 and over having: no formal schooling 47.9%; primary 40.9%; incomplete secondary 3.9%; complete secondary 1.4%; higher 1.5%; unknown 4.4%. **Literacy** (2007): total population age 15 and over literate 79.4%; males 87.5%; females 72.6%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	3,170	78,801	24.9	85
Secondary/Voc. (age 12–17)	3,195	60,783	19.0	61
Tertiary	590	5,289	9.0	9 (age 18–22)

Health (2007): physicians 230 (1 per 2,137 persons); hospital beds 1,016¹⁹ (1 per 484 persons); infant mortality rate per 1,000 live births (2007) 21.7; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 1,200 (army 83.3%, air force 8.3%, coast guard 8.4%). **Military expenditure as percentage of GDP** (2007): 0.6%; per capita expenditure U.S.\$16.

¹Cape Verdean Creole (Crioulo) is the national language. ²Based on the 2000 census.

³Detail does not add to total given because of rounding. ⁴Island/county areas are coterminous (including the nearby islets of Rei and Rombo). ⁵Administratively split into 3 counties. ⁶Island/county areas are coterminous. ⁷Administratively split into 9 counties.

⁸Islands administered from São Nicolau. ⁹Administratively split into 2 counties.

¹⁰Island/county areas are coterminous excluding uninhabited Santa Luzia, Branco, and Raso islands administered from São Vicente. ¹¹Summed total; reported total is 508,633.

¹²Excludes at least 700,000 Cape Verdeans living abroad. ¹³Taxes and duties on imports less imputed bank service charges. ¹⁴ILO estimate. ¹⁵Imports c.i.f.; exports f.o.b.

¹⁶January 1. ¹⁷No daily newspapers in 2007; Cape Verde has 7 weeklies, however.

¹⁸Subscribers. ¹⁹Includes 259 beds in health centres.

Internet resources for further information:

- Instituto Nacional de Estatística de Cabo Verde <http://www.ine.cv>
- Banco de Cabo Verde <http://www.bcv.cv>

Cayman Islands

Official name: Cayman Islands.
Political status: overseas territory (United Kingdom) with one legislative house (Legislative Assembly [18¹]).
Chief of state: British Monarch, represented by Governor.
Head of government: Premier³.
Capital: George Town.
Official language: none.
Official religion: none.
Monetary unit: 1 Cayman Islands dollar (CIS); valuation (Sept. 1, 2009) C\$1.00 = U.S.\$1.20 = £0.74.



Area and population

Islands	area		population
	sq mi	sq km	2007 estimate
Grand Cayman ³	76	197	50,808
Cayman Brac ⁴	15	39	2,484 ⁵
Little Cayman ⁴	11	28	
TOTAL	102 ⁶	264 ⁶	53,292

Demography

Population (2009): 55,000.
Density (2009)⁷: persons per sq mi 591.4, persons per sq km 228.2.
Urban-rural (2005): urban 100%; rural 0%.
Sex distribution (2007): male 49.68%; female 50.32%.
Age breakdown (2007): under 15, 17.2%; 15–29, 20.3%; 30–44, 32.9%; 45–59, 18.7%; 60 and over, 10.9%.
Population projection: (2020) 64,000; (2030) 73,000.
Doubling time: 63 years.
Ethnic composition (2000): mulatto 51.5%; West Indian black 25.8%; British 19.3%; Jewish 1.9%; Indo-Pakistani 0.3%; other 1.2%.⁸
Religious affiliation (2000): Protestant (significantly Presbyterian) c. 55%; Spiritist (Rastafarian) c. 15%; independent Christian c. 10%; unaffiliated Christian c. 10%; nonreligious c. 4%; Jewish c. 2%; other c. 4%.
Major urban areas (2007): George Town 28,836; West Bay 10,855; Bodden Town 8,300; Cayman Brac has 4 small settlements.

Vital statistics

Birth rate per 1,000 population (2007): 14.0 (world avg. 20.3).
Death rate per 1,000 population (2007): 3.0 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 11.0 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2007): 1.89.
Marriage/divorce rates per 1,000 population (2007): 9.1⁹/3.0.
Life expectancy at birth (2007): male 77.6 years; female 82.9 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 86.8, of which ischemic heart disease 25.9; malignant neoplasms (cancers) 72.1; pneumonia 27.7; accidents 22.2; diabetes mellitus 18.5.

National economy

Budget (2007). Revenue: C\$513,000,000 (taxes on goods and services 43.5%, of which financial services licenses 21.2%; taxes on international trade 34.8%; nontax revenue 12.7%; property taxes 7.3%). Expenditures: C\$552,000,000 (current expenditure 78.9%; development expenditures/net lending 19.2%; other 1.9%).
Public debt (December 2008): U.S.\$425,900,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 210, pumpkins, squash, and gourds 75, guavas and mangoes 35, plantains 35, yams 32, tomatoes 25; livestock (number of live animals) 1,300 cattle, 400 pigs, 270 goats; roundwood, n.a.; fisheries production 125 (from aquaculture, none). Mining and quarrying: crushed stone for local use. Manufacturing: industries include fish and turtle processing, handicrafts, and small-boat building. Energy production (consumption): electricity (kW-hr; 2007) 584,000,000¹⁰ (534,000,000¹⁰); coal (metric tons; 2006) none (none); crude petroleum (barrels; 2006) none (none); petroleum products (metric tons; 2006) none (167,000); natural gas (cu m; 2006) none (none).
Gross national income (at current market prices; 2007): U.S.\$2,450,000,000 (U.S.\$45,266 per capita).

Structure of gross domestic product and labour force

	2007			
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	10.5	0.4	639	1.8
Mining and quarrying			46	0.1
Public utilities	94.5	3.5	504	1.4
Manufacturing	45.1	1.7	658	1.8
Construction	258.3	9.5	5,646	15.5
Trade, hotels, restaurants	625.7	23.2	7,118	19.5
Transportation and communications	292.1	10.8	2,004	5.5
Finance, real estate, insurance ¹¹			7,532	20.6
International business ¹¹	1,331.0	49.3	...	...
Pub. admin., defense			2,509	6.9
Services ¹¹			7,627	20.9
Other	44.2	1.6	2,193 ¹²	6.0 ¹²
TOTAL	2,701.4	100.0	36,476 ¹³	100.0

Population economically active (2007): total 36,476¹³; activity rate of total population 67.7% (participation rates: ages 15–64, 87.2%; female 48.0%; unemployed 3.8%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	88.6	89.2	93.1	100.0	100.8	104.5	108.8

Household income and expenditure (1999). Average household size 2.6; average annual income per household C\$52,400 (U.S.\$62,880); sources of income: wages and salaries 76.2%, self-employment 13.4%, transfers 1.2%; expenditure (1994)¹⁴: housing 25.8%; transportation 13.5%; food 12.0%; holiday expenses 7.2%; household furnishings 5.9%; energy 5.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 479; cruise ship visitors (mostly day-trip participants; 2007) 1,715,700; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 11,164. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; FDI (2005–07 avg.) 5,371.

Land use as % of total land area (2007): in temporary crops 3.8%, in permanent crops, n.a., in pasture 7.7%, forest area 47.7%.

Foreign trade¹⁵

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
CIS\$'000,000	–536.4	–704.9	–926.8	–846.5	–860.3	–862.7
% of total	93.2%	94.7%	90.4%	95.0%	95.2%	96.9%

Imports (2007): C\$881,800,000 (food products and beverages 24.7%; mineral fuels 18.1%; transportation equipment 11.4%; remainder 45.8%). **Major import sources:** U.S. 74.6%; Netherlands Antilles 8.4%; Japan 0.8%; U.K. 0.6%; Jamaica 0.6%.

Exports (2007): C\$21,500,000 (reexports 59.4%; domestic exports [including rum, other manufactured consumer goods, turtle products, fish, and cut flowers] 40.6%). **Major export destinations:** mostly the U.S.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 488 mi, 785 km (paved 100%). Vehicles (2007): passenger cars 25,636; trucks and buses 7,030. Air transport (2007)¹⁶: passengers arriving 479,800, passengers departing 489,700; freight loaded 498 metric tons, freight unloaded 3,486 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1997	23	639	PCs	2006	...	...
Telephones				Dailies	2007	18 ¹⁷	333 ¹⁷
Cellular	2004	34 ¹⁸	766 ¹⁸	Internet users	2007	22	406
Landline	2002	38	884	Broadband	2007	...	...

Education and health

Educational attainment (2006). Percentage of population age 15 and over having: no formal schooling/unknown 3.5%; incomplete primary education through incomplete secondary 19.0%; complete secondary 40.0%; vocational/technical degree 17.4%; higher 20.1%. **Literacy:** n.a.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–10)	286	3,461	12.1	81 ¹⁹
Secondary/Voc. (age 11–16)	316	2,899	9.2	96 ¹⁹
Tertiary	49	567	11.6	19 ²⁰ (age 17–21)

Health (2007): physicians 90 (1 per 601 persons); hospital beds 119 (1 per 455 persons); infant mortality rate per 1,000 live births 7.3; undernourished population, n.a.

Military

Total active duty personnel: none; defense is the responsibility of the United Kingdom.

¹Includes three nonelective seats. ²Per new constitution effective Nov. 6, 2009. ³Grand Cayman has no local government structure. ⁴Cayman Brac and Little Cayman together are administered by a district commissioner appointed by the governor. ⁵Includes c. 150 people on Little Cayman. ⁶Area includes 9 sq mi (23 sq km) of inland water. ⁷Density based on land area. ⁸In 2007 the population was 60.1% Caymanian and 39.9% non-Caymanian. ⁹Excludes marriages in which both the bride and groom are visitors. ¹⁰Grand Cayman only. ¹¹The Cayman Islands is the world's largest centre for offshore banking, with 278 licensed banks, including 260 offshore (only) banking facilities, in 2008. In that year the assets of Cayman Islands banks exceeded U.S.\$1,700,000,000,000. Trust management assets equal or exceed banking assets. Also of great importance to the economy are the captive insurance, mutual fund, and ship registration sectors. ¹²Includes 1,395 unemployed and 798 not adequately defined. ¹³Includes 18,466 Caymanian and 18,010 non-Caymanian. ¹⁴Weights of consumer price index components. ¹⁵Imports c.i.f.; exports f.o.b. ¹⁶Combined total for Grand Cayman and Cayman Brac airports. ¹⁷Circulation. ¹⁸Subscribers. ¹⁹2004–05. ²⁰2000–01.

Internet resources for further information:

- Economics and Statistics Office <http://www.eso.ky>
- Cayman Islands Government <http://www.gov.ky>

Central African Republic

Official name: République Centrafricaine (Central African Republic).

Form of government: multiparty republic with one legislative body (National Assembly [105]).

Chief of state: President.

Head of government: Prime Minister. **Capital:** Bangui.

Official languages: French; Sango.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12.



Area and population

	area	population		area	population
	sq km	2003 census		sq km	2003 census
Prefectures			Prefectures		
Bamingui-Bangoran	58,200	43,229	Ombella-M'poko	31,835	356,725
Basse-Kotto	17,604	249,150	Ouaka	49,900	276,710
Haut-Mbomou	55,530	57,602	Ouham	50,250	369,220
Haute-Kotto	86,650	90,316	Ouham-Pendé	32,100	430,506
Kemo	17,204	118,420	Sangha-Mbaéré	19,412	101,074
Lobaye	19,235	246,875	Vakaga	46,500	52,255
Mambéré-Kadéï	30,203	364,795			
Mbomou	61,150	164,009	Autonomous commune		
Nana-Gribizi	19,996	117,816	Bangui	67	622,771
Nana-Mambéré	26,600	233,666	TOTAL	622,436	3,895,139

Demography

Population (2009): 4,511,000.

Density (2009): persons per sq mi 18.8, persons per sq km 7.2.

Urban-rural (2007): urban 38.3%; rural 61.7%.

Sex distribution (2007): male 49.44%; female 50.56%.

Age breakdown (2007): under 15, 41.6%; 15–29, 29.6%; 30–44, 15.1%; 45–59, 7.7%; 60–74, 4.6%; 75–84, 1.2%; 85 and over, 0.2%.

Population projection: (2020) 5,225,000; (2030) 5,744,000.

Doubling time: 47 years.

Ethnolinguistic composition (2004): Gbaya (Baya) c. 33%; Banda c. 27%; Mandjia c. 13%; Sara c. 10%; Mbom c. 7%; Ngbaka c. 4%; other c. 6%.

Religious affiliation (2005): Protestant/independent Christian c. 51%¹; Roman Catholic c. 29%¹; traditional beliefs c. 10%; Muslim c. 10%¹.

Major urban localities (2003): Bangui 622,771; Bimbo 124,176; Berberati 76,918; Carnot 45,421; Bambari 41,356.

Vital statistics

Birth rate per 1,000 population (2007): 33.5 (world avg. 20.3).

Death rate per 1,000 population (2007): 18.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 15.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 4.32.

Life expectancy at birth (2007): male 43.9 years; female 44.1 years.

Adult population (ages 15–49) *living with HIV* (2007): 6.3%² (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 604; lower respiratory infections c. 184; malaria c. 158; diarrheal diseases c. 105.

National economy

Budget (2006). Revenue: CFAF 176,300,000,000 (grants 58.4%; taxes 34.3%, of which taxes on goods and services 24.3%; nontax revenue 7.3%). Expenditures: CFAF 107,200,000,000 (current expenditure 58.3%; development expenditure 41.7%).

Public debt (external, outstanding; 2007): U.S.\$836,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 565,000, yams 346,000, peanuts (groundnuts) 137,000, corn (maize) 115,000, bananas 110,000, plantains 80,000, cattle meat 74,000, sesame seeds 40,000, game meat 14,000, pig meat 13,200, natural honey 13,000, seed cotton (2007–08) 3,355, coffee (2007–08) 1,931; livestock (number of live animals) 3,378,000 cattle, 3,087,000 goats, 805,000 pigs; roundwood 2,832,000 cu m, of which fuelwood 71%; fisheries production 15,000 (from aquaculture, negligible). Mining and quarrying (2007–08): diamonds 326,000 carats³. Manufacturing (2004): aluminum sheets 184,100; soap 1,800; cigarettes 16,000,000 packets; logs and sawn wood 630,900 cu m; beer (2006) 123,100 hectolitres; soft drinks (2003) 38,400 hectolitres; other manufactures include footwear, textiles, and bicycles. Energy production (consumption): electricity (kW-hr; 2007–08) 94,100,000 ([2005] 110,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (81,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 5.3; average annual income per household (1988) CFAF 91,985 (U.S.\$435); sources of income: n.a.; expenditure (1991)⁴: food 70.5%, clothing 8.5%, energy 7.3%.

Population economically active (2006): total 1,883,000⁵; activity rate of total population 44.2%⁵ (participation rates: ages 15–64, 77.0%⁵; female 45.7%⁵; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	95.3	99.2	97.2	100.0	...	107.7	118.27

Gross national income (GNI; 2008): U.S.\$1,804,000,000 (U.S.\$410 per capita); purchasing power parity GNI (U.S.\$730 per capita).

Structure of gross domestic product and labour force

	2006		1988	
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture, fishing,				
forestry	421,900	54.0	1,113,900	80.4
Mining	55,800	7.1	15,400	1.1
Manufacturing	18,000	2.3	22,400	1.6
Construction	35,200	4.5	7,000	0.5
Public utilities	6,400	0.8	1,500	0.1
Transp. and commun.	35,400	4.5	1,500	0.1
Trade	86,500	11.1	118,000	8.5
Finance, real estate	20,800	2.7	—	—
Services	17,700	2.3	15,600	1.1
Pub. admin., defense	40,600	5.2	91,700	6.6
Other	42,700 ⁶	5.5 ⁶	—	—
TOTAL	781,000	100.0	1,387,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 4.0; remittances, n.a.; foreign direct investment (2005–07 avg.) 21; official development assistance (2007) 176. Disbursements for (U.S.\$'000,000): tourism (2004) 32; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 3.1%, in permanent crops 0.1%, in pasture 5.1%, forest area 36.4%.

Foreign trade⁸

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	+18.6	+6.1	−9.2	−24.8	−23.5	−33.8
% of total	10.0%	4.3%	6.1%	15.5%	12.5%	16.5%

Imports (2005): CFAF 98,300,000,000 (refined petroleum 16.7%; logs and sawn wood 14.8%; food products 13.6%, of which cereals 6.6%; machinery and apparatus 8.6%; road vehicles 8.3%). **Major import sources** (2007): France 16.6%; The Netherlands 13.0%; Cameroon 9.7%; U.S. 6.3%.

Exports (2007): CFAF 85,300,000,000 (wood and wood products 49.1%, diamonds 34.9%, coffee 4.9%, cotton 0.5%). **Major export destinations** (2007): Belgium 22.7%; Indonesia 19.3%; Italy 7.7%; France 7.1%; Spain 6.9%.

Transport and communications

Transport. Railroads: none. Roads (2005): total length 6,200 mi⁹, 10,000 km⁹ (paved c. 7%). Vehicles (2006): passenger cars 800; trucks and buses 700. Air transport (2003): passenger arrivals 19,250¹⁰, passenger departures 19,107¹⁰; metric ton-km cargo 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	24	6.1	PCs	2006	13	3.0
Telephones				Dailies	2007	51 ¹¹	1.2 ¹¹
Cellular	2008	154 ¹²	35 ¹²	Internet users	2008	19	4.3
Landline	2006	12	2.8	Broadband	2008	—	—

Education and health

Educational attainment (1994–95)¹³. Percentage of population age 25 and over having: no formal schooling 54.1%; at least some primary education 30.5%; at least some secondary education 14.4%; unknown 1.0%. **Literacy** (2007): total population age 15 and over literate 56.6%; males literate 67.6%; females literate 46.4%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	494,985	...	54
Secondary/Voc. (age 12–18)	...	71,893 ¹⁴	...	...
Tertiary	325 ¹⁵	4,462 ¹⁶	19.5 ¹⁵	11 ⁶ (age 19–23)

Health: physicians (2004) 331 (1 per 11,867 persons); hospital beds (2006) 5,118 (1 per 833 persons); infant mortality rate (2007) 83.7; undernourished population (2002–04) 1,700,000 (44% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 3,150 (army 63.5%; air force 4.8%; gendarmerie 31.7%)¹⁷. **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$4.

¹Adherents may also incorporate traditional beliefs. ²Statistically derived midpoint of range. ³Official figure; a roughly equal amount was smuggled out of the country. ⁴Weights of consumer price index components. ⁵ILO estimate. ⁶Indirect taxes and customs duties. ⁷Average of 2nd and 3rd quarters. ⁸Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ⁹National roads only; much of the 9,700 mi (15,600 km) local road network is unusable. ¹⁰Bangui airport only. ¹¹Circulation. ¹²Subscribers. ¹³Based on demographic and health survey of 9,414 people. ¹⁴2001–02. ¹⁵1999–2000. ¹⁶2005–06. ¹⁷Per the March 2009 announced transfer of responsibility, 3,300 EU troops protecting displaced persons in both the Central African Republic (CAR) and Chad (from March 2008) are to be replaced by 5,200 UN peacekeeping troops. UN troops numbering 500 are to be stationed in northern CAR.

Internet resource for further information:

• Statistics, Economic Studies, and Social Division
<http://www.stat-centrafrique.com>

Chad

Official name: Jumhūriyah Tshad (Arabic); République du Tchad (French) (Republic of Chad).

Form of government: unitary republic with one legislative body (National Assembly [155]).

Chief of state: President.

Head of government: Prime Minister.

Capital: N'Djamena.

Official languages: Arabic; French.

Official religion: none.

Monetary unit: CFA franc (CFAF);

valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12.



Area and population

area		population		area		population	
	sq km	1993 census			sq km	1993 census	
Regions¹			Regions¹				
Batha	88,800	288,458	Mayo-Kebbi Est	...	...	...
Bourkou-Ennedi-Tibesti	600,350	73,185	Mayo-Kebbi Ouest	...	...	...
Chari-Baguirmi	...	...	Moyen-Chari	...	...	...
Gouera	58,950	306,253	Quaddai	...	...	...
Hadjer-Lamis	...	...	Salamat	...	...	...
Kanem	114,520	279,927	Tandjilé	...	...	...
Lac	22,320	252,932	Wadi Fira	46,850	184,807	...	
Logone Occidental	8,695	455,489					
Logone Oriental	28,035	441,064	City¹				
Mandoul	...	...	N'Djamena	...	...	...
			TOTAL	1,284,000	6,279,931		

Demography

Population (2009): 10,329,000².

Density (2009): persons per sq mi 20.8, persons per sq km 8.0.

Urban-rural (2007): urban 26.3%; rural 73.7%.

Sex distribution (2007): male 47.92%; female 52.08%.

Age breakdown (2007): under 15, 47.3%; 15–29, 26.4%; 30–44, 13.7%; 45–59, 8.0%; 60–74, 3.8%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 12,756,000; (2030) 15,114,000.

Doubling time: 27 years.

Ethnolinguistic composition (1993): Sara 27.7%; Sudanic Arab 12.3%; Mayo-Kebbi peoples 11.5%; Kanem-Bornu peoples 9.0%; Ouaddai peoples 8.7%; Hadjeray (Hadjarai) 6.7%; Tangale (Tandjilé) peoples 6.5%; Gorane peoples 6.3%; Fitri-Batha peoples 4.7%; Fulani (Peul) 2.4%; other 4.2%.

Religious affiliation (2005): Muslim 57.0%; traditional beliefs 18.8%; Protestant 10.5%; other (significantly Roman Catholic and nonreligious) 13.7%.

Major cities (2000): N'Djamena (2007) 989,000³; Moundou 108,728; Sarh 95,050; Abéché 63,165; Kelo 36,643; Pala 31,281.

Vital statistics

Birth rate per 1,000 population (2007): 42.4 (world avg. 20.3).

Death rate per 1,000 population (2007): 16.7 (world avg. 8.6).

Total fertility rate (avg. births per childbearing woman; 2007): 5.56.

Life expectancy at birth (2007): male 46.2 years; female 48.3 years.

Adult population (age 15–49) *living with HIV* (2007): 3.5%⁴ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): lower respiratory infections c. 226; HIV/AIDS-related c. 204; malaria c. 181; diarrheal diseases c. 124.

National economy

Budget (2007). Revenue: CFAF 764,900,000,000 (petroleum revenue 73.6%, of which taxes on profits 55.7%, royalties and dividends 17.3%; nonpetroleum tax revenue 24.7%; other 1.7%). Expenditures: CFAF 709,300,000,000 (current expenditure 65.4%; development expenditure 34.6%).

Public debt (external, outstanding; December 2008): U.S.\$1,581,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 1,290,000, sorghum 700,000, millet 550,000, peanuts (groundnuts) 450,000, cassava 330,000, seed cotton 260,000, yams 235,000, corn (maize) 200,000, cow's milk 184,300, pulses 122,000, cattle meat 85,940, sesame seed 35,300, gum arabic (2006) 25,000; livestock (number of live animals) 6,820,300 cattle, 6,096,390 goats, 2,981,800 sheep, 749,500 camels; roundwood 7,474,800 cu m, of which fuelwood 90%; fisheries production 70,000 (from aquaculture, none). Mining and quarrying (2007): aggregate (gravel) 300,000; natron 12,000; gold 150 kg. Manufacturing (2004–05): cotton fibre 88,158; refined sugar 51,823; woven cotton fabrics (2000) 1,000,000 metres; carbonated beverages 104,205 hectolitres; beer 76,485 hectolitres; edible oil (2003–04) 74,514 hectolitres; cigarettes 41,873,000 packs. Energy production (consumption): electricity (kW-hr; 2006) 95,000,000 (88,300,000); coal, none (none); crude petroleum (barrels; 2008) 46,500,000 (n.a.); petroleum products (metric tons; 2006) none (65,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 5.0; average annual income per household (1993) CFAF 96,806 (U.S.\$458); sources of income (1995–96; urban): informal-sector employment and entrepreneurship 36.7%, transfers 24.8%, wages 23.6%, ownership of real estate 8.6%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 14; remittances, n.a.; foreign direct investment (2005–07 avg.) 639; official development assistance (2007) 352. Disbursements for (U.S.\$'000,000): tourism (2002) 80; remittances, n.a.

Population economically active (2006)⁵: total 4,179,000; activity rate of total population 39.9% (participation rates: ages 15–64, 74.7%; female 48.8%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	99.7	97.9	92.7	100.0	108.0	98.3	108.5

Gross national income (GNI; 2008): U.S.\$5,916,000,000 (U.S.\$530 per capita); purchasing power parity GNI (U.S.\$1,160 per capita).

Structure of gross domestic product and labour force

	2006		1993	
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture	723,700	20.9	1,904,248	83.1
Mining	1,560,700	45.0		
Manufacturing	226,600	6.5	33,670	1.4
Construction	32,800	0.9	10,885	0.5
Public utilities	9,800	0.3	2,026	0.1
Transp. and commun.	59,400	1.7	13,252	0.6
Trade, hotels	370,800	10.7	211,812	9.2
Finance, real estate	...	...	1,071	—
Pub. admin., defense	247,600	7.1	61,875	2.7
Services	167,400	4.8	45,453	2.0
Other	71,600 ⁶	2.1 ⁶	9,271	0.4
TOTAL	3,470,400	100.0	2,291,577⁷	100.0

Land use as % of total land area (2007): in temporary crops 3.4%, in permanent crops 0.02%, in pasture 35.7%, forest area 9.3%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	−904.7	−104.0	+657.3	+1,156.9	+1,076.4	+1,035.7
% of total	77.8%	13.0%	39.5%	53.6%	43.3%	41.8%

Imports (2007): CFAF 719,600,000,000 (petroleum sector 39.7%; nonpetroleum private sector 32.9%; public sector 12.0%). **Major import sources:** France 20.4%; Cameroon 16.1%; U.S. 10.9%; China 10.0%; Germany 7.5%.

Exports (2007): CFAF 1,755,300,000,000 (crude petroleum 87.0%; live cattle 6.9%; cotton 2.5%; gum arabic 0.9%). **Major export destinations:** U.S. 89.5%; Japan 3.7%; China 3.4%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 40,000 km (paved 2%).

Vehicles (2006): passenger cars 18,867; trucks and buses 28,152. Air transport: passenger-km (2001) 130,000,000; metric ton-km cargo (2004) 7,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	55	5.9	PCs	2006	19	2.0
Telephones				Dailies	2007	—	—
Cellular	2008	1,809 ⁸	179 ⁸	Internet users	2008	130	13
Landline	2006	13	1.3	Broadband	2008	—	—

Education and health

Educational attainment (2003)⁹. Percentage of population age 25 and over having: no formal schooling 74.5%; primary education 17.4%; secondary education 6.8%; higher education 1.3%. **Literacy** (2007): percentage of total population age 15 and over literate 53.7%; males 61.5%; females 46.3%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	19,989	1,262,393	63.2	60 ¹⁰
Secondary/Voc. (age 12–18)	6,921	236,754	34.2	10 ¹⁰
Tertiary	1,100	10,468	9.5	1 (age 19–23)

Health: physicians (2004) 345 (1 per 26,370 persons); hospital beds (2005) 3,760 (1 per 2,500 persons); infant mortality rate (2007) 102.1; undernourished population (2002–04) 3,000,000 (35% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): 25,350 (army 78.9%; air force 1.4%; other 19.7%)¹¹. **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$7.

¹The effectiveness of the 2002 administrative reorganization was unclear in mid-2007; the creation of 4 additional regions was announced in 2008. ²Excludes about 250,000 Sudanese refugees in eastern Chad in mid-2009. ³Urban agglomeration (on Chad side of border only). ⁴Statistically derived midpoint of range. ⁵ILÖ estimates. ⁶Taxes less subsidies. ⁷Official census total; summed total equals 2,293,563. ⁸Subscribers. ⁹Based on the 2003 Chad Demographic and Health Survey, comprising 27,879 people in 5,369 households, about 80% of which were in rural areas. ¹⁰2002–03. ¹¹Per the March 2009 announced transfer of responsibility, 3,300 EU troops protecting displaced persons and refugees in both Chad and the Central African Republic (from March 2008) are to be replaced by 5,200 UN peacekeeping troops. UN troops numbering 4,700 are to be stationed in eastern Chad.

Internet resources for further information:

- National Institute of Statistics and Economic and Demographic Studies
<http://www.inseed-tchad.org>
- La Banque de France: La Zone Franc
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Chile

Official name: República de Chile
(Republic of Chile).

Form of government: multiparty republic with two legislative houses (Senate [38]; Chamber of Deputies [120]).

Head of state and government: President.

Capital: Santiago¹.

Official language: Spanish.

Official religion: none.

Monetary unit: peso (Ch\$); valuation (Sept. 1, 2009) 1 U.S.\$ = Ch\$554.50; 1 £ = Ch\$899.73.



Area and population

	area	population		area	population
Regions	sq km	2007 estimate ²	Regions	sq km	2007 estimate ²
Aisén del General Carlos Ibáñez del Campo	108,494	101,500	Los Lagos	48,584	805,000
Antofagasta	126,049	554,800	Los Ríos ³	18,430	375,200
Araucanía	31,842	945,500	Magallanes y Antártica		
Arica y Parinacota ³	16,873	188,500	Chilena	132,297 ⁴	157,000 ⁵
Atacama	75,176	274,400	Maule	30,296	983,400
Bío-Bío	37,063	1,996,100	Región Metropolitana	15,403	6,676,700
Coquimbo	40,580	687,700	Tarapacá	42,226	293,200
Libertador General Bernardo O'Higgins	16,387	857,700	Valparaíso	16,396	1,701,300
			TOTAL	756,096 ⁴	16,598,100 ⁶

Demography

Population (2009): 16,602,000.

Density (2009): persons per sq mi 56.9, persons per sq km 22.0.

Urban-rural (2007): urban 89.0%; rural 11.0%.

Sex distribution (2008): male 49.46%; female 50.54%.

Age breakdown (2005): under 15, 24.9%; 15–29, 24.3%; 30–44, 23.0%; 45–59, 16.2%; 60–74, 8.3%; 75–84, 2.5%; 85 and over, 0.8%.

Population projection: (2020) 18,058,000; (2030) 18,984,000.

Ethnic composition (2002): mestizo c. 72%; white c. 22%; Amerindian c. 5%, of which Araucanian (Mapuche) c. 4%; other c. 1%.

Religious affiliation (2002): Roman Catholic 70.0%; Protestant/independent Christian 15.1%; atheist/nonreligious 8.3%; other 6.6%.

Major cities/urban agglomerations (2002): Santiago 200,792⁸/5,428,590⁹; Valparaíso–Viña del Mar (263,499; 286,931)/803,683; Concepción 212,003/666,381; La Serena–Coquimbo (147,815; 148,434)/296,253; Antofagasta 285,255/285,255.

Vital statistics

Birth rate per 1,000 population (2006): 14.8 (world avg. 20.3).

Death rate per 1,000 population (2006): 5.2 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 2.00.

Marriage/divorce rates per 1,000 population (2005/06): 3.3/0.2.

Life expectancy at birth (2006): male 74.8 years; female 80.8 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 151.9; malignant neoplasms (cancers) 128.0; diseases of the respiratory system 50.0; diseases of the digestive system 38.3; accidents 29.6.

National economy

Budget (2007). Revenue: Ch\$23,534,000,000,000 (tax revenue 78.1%; nontax revenue 17.0%; other 4.9%). Expenditures: Ch\$15,996,000,000,000 (social protection 28.8%; education 17.2%; health 15.9%; transportation 8.8%; defense 6.5%).

Public debt (external, outstanding; 2007): U.S.\$9,975,000,000.

Population economically active (2007): total 7,078,000; activity rate of total population 42.5% (participation rates: ages 15–64, 61.7%; female 36.8%; unemployed [November 2007–October 2008] 7.7%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.4	96.0	97.0	100.0	103.4	107.9	117.4
Hourly earnings index	89.2	92.6	95.3	100.0	105.4	113.1	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): grapes 2,350,000, sugar beets 1,806,600, corn (maize) 1,557,100, potatoes 1,445,000, apples 1,390,000, wheat 1,322,300, tomatoes 1,270,000, peaches and nectarines 330,000, kiwi fruit 170,000, avocados 167,000; livestock (number of live animals) 4,350,000 cattle, 3,480,000 pigs, 3,420,000 sheep; roundwood 52,910,000 cu m, of which fuelwood 27%; fisheries production (2006) 4,635,927 (from aquaculture 18%); aquatic plants production 359,770 (from aquaculture 6%). Mining (2007): copper 5,557,000¹⁰; iron ore 4,195,000¹⁰; lithium carbonate (2006) 50,035; molybdenum 44,900¹⁰; iodine 15,500; silver 1,936,000 kg; gold 41,500 kg. Manufacturing (value added in U.S.\$'000,000; 2005): nonferrous base metals 20,677; refined petroleum 6,245; food products 5,239; base chemicals 2,113; beverages 2,005; paper and paper products 1,723. Energy production (consumption): electricity (kW-hr; 2007) 57,576,000,000 ([2006] 59,840,000,000); hard coal (metric tons; 2007) 288,000 ([2006] 5,402,000); crude petroleum (barrels; 2008) 963,000 ([2006] 80,800,000); petroleum products (metric tons; 2006) 10,701,000 (9,630,000); natural gas (cu m; 2007) 2,015,000,000 (4,191,000,000).

Land use as % of total land area (2007): in temporary crops 1.0%, in permanent crops 0.6%, in pasture 19.9%, forest area 21.8%.

Gross national income (GNI; 2008): U.S.\$157,460,000,000 (U.S.\$9,400 per capita); purchasing power parity GNI (U.S.\$13,270 per capita).

Structure of gross domestic product and labour force

	2007			
	in value Ch\$'000,000,000 ¹¹	% of total value ¹¹	labour force	% of labour force
Agriculture, fishing	3,080	4.9	808,300	11.4
Mining	4,570	7.3	93,000	1.3
Manufacturing	10,118	16.1	857,000	12.1
Public utilities	1,488	2.4	40,100	0.6
Construction	4,514	7.2	545,000	7.7
Transp. and commun.	6,096	9.7	538,600	7.6
Trade, hotels	6,567	10.4	1,285,000	18.2
Finance, real estate	10,188	16.2	618,400	8.7
Pub. admin., defense	2,511	4.0	1,780,200	25.2
Services	10,170	16.2		
Other	3,491 ¹²	5.6 ¹²	510,700 ¹³	7.2 ¹³
TOTAL	62,793	100.0	7,076,800 ⁶	100.0

Household income and expenditure. Average household size (2006) 3.5; average annual income per household Ch\$6,231,600 (U.S.\$11,780); sources of income: wages and salaries 53.9%, rent and transfers 26.7%, self-employment 12.1%, other 7.3%; expenditure: n.a.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,419; remittances (2008) 3; foreign direct investment (FDI; 2005–07 avg.) 9,600; official development assistance (2007) 120. Disbursements for (U.S.\$'000,000): tourism (2007) 1,762; remittances (2008) 6; FDI (2005–07 avg.) 2,963.

Foreign trade¹⁴

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+3,723	+9,585	+10,775	+22,586	+23,653	+8,846
% of total	9.4%	17.3%	15.0%	23.9%	21.2%	7.1%

Imports (2007): U.S.\$42,732,000,000 (petroleum 22.7%; machinery and apparatus 21.4%; chemical products 11.1%; road vehicles 9.9%; food 6.5%). **Major import sources:** U.S. 17.0%; China 11.4%; Brazil 10.5%; Argentina 10.1%; South Korea 7.2%.

Exports (2007): U.S.\$65,739,000,000 (refined copper 36.4%; copper ore 20.5%; food products 12.5%, of which fruits 4.0%, fish 3.8%; other base metal ores 5.4%). **Major export destinations:** China 15.2%; U.S. 12.8%; Japan 10.8%; Netherlands 5.9%; South Korea 5.9%.

Transport and communications

Transport. Railroads (2006): route length 3,128 mi, 5,034 km; passenger-km 843,131,000; metric ton-km cargo 3,660,000,000. Roads (2003): total length 50,023 mi, 80,505 km (paved 22%). Vehicles (2006): passenger cars 1,514,220; trucks and buses 735,901. Air transport (2007): passenger-km 16,056,000,000; metric ton-km cargo 1,294,968,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	4,305	268	PCs	2006	2,277	141
Telephones				Dailies	2007	851 ¹⁵	52 ¹⁵
Cellular	2008	14,797 ¹⁶	899 ¹⁶	Internet users	2008	5,456	332
Landline	2008	3,526	214	Broadband	2008	1,426 ¹⁶	87 ¹⁶

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling/other 5.4%; incomplete primary education 24.6%; complete primary 8.7%; secondary 43.9%; higher technical 4.9%; university 12.5%. **Literacy** (2006): total population age 15 and over literate 96.4%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	65,852	1,694,765	25.7	...
Secondary/Voc. (age 12–17)	66,927	1,633,868	24.4	...
Tertiary	...	661,142	...	47 (age 18–22)

Health (2006): physicians 21,100 (1 per 765 persons); hospital beds 37,374 (1 per 432 persons); infant mortality rate 7.6; undernourished population (2002–04) 600,000 (4% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2008): 60,560 (army 57.8%, navy 29.4%, air force 12.8%). **Military expenditure as percentage of GDP** (2008): 3.0%¹⁷; per capita expenditure U.S.\$286¹⁷.

¹Legislative bodies meet in Valparaíso. ²Official projection based on 2002 census. ³Created in March 2007. ⁴Excludes the 480,000 sq mi (1,250,000 sq km) section of Antarctica claimed by Chile and "inland" (actually tidal) water areas. ⁵Includes 130 people (in 2005) in Chilean-claimed Antarctica. ⁶Detail does not add to total given because of rounding. ⁷For population age 15 years and older. ⁸1 of 32 communes constituting Santiago province (4,656,690). ⁹Extends beyond Santiago province within the Región Metropolitana. ¹⁰Metal content. ¹¹In constant prices of 2003. ¹²Import duties and VAT less imported bank service charges. ¹³Unemployed. ¹⁴Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹⁵Circulation. ¹⁶Subscribers. ¹⁷Includes military pensions and funding for the paramilitary and the Copper Stabilisation Fund.

Internet resources for further information:

- Instituto Nacional de Estadísticas <http://www.inec.cl>
- Banco Central de Chile <http://www.bcentral.cl/eng>

China

Official name: Zhonghua Renmin Gongheguo (People's Republic of China).

Form of government: single-party people's republic with one legislative house (National People's Congress [3,000¹]).

Chief of state: President.

Head of government: Premier.

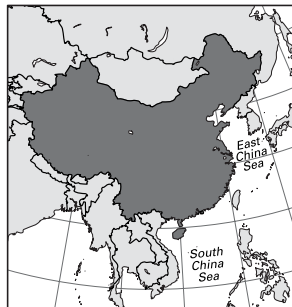
Capital: Beijing (Peking).

Official language: Mandarin Chinese.

Official religion: none.

Monetary unit: renminbi (yuan) (Y); valuation (Sept. 1, 2009)

1 U.S.\$ = Y 6.83; 1 £ = Y 11.08.



Area and population²

Provinces ⁵	Capitals ⁵	area ³		population
		sq mi	sq km	2007 ⁴ estimate
Anhui (Anhui)	Hefei	54,000	139,900	61,100,000
Fujian (Fujian)	Fuzhou	47,500	123,100	35,580,000
Gansu (Kansu)	Lanzhou	141,500	366,500	26,060,000
Guangdong (Kwangtung)	Guangzhou (Canton)	76,100	197,100	93,570,000
Guizhou (Kweichow)	Guiyang	67,200	174,000	37,570,000
Hainan	Haikou	13,200	34,300	8,360,000
Hebei (Hoppeh)	Shijiazhuang	78,200	202,700	68,980,000
Heilongjiang	Harbin	179,000	463,600	38,230,000
Henan (Honan)	Zhengzhou	64,500	167,000	93,920,000
Hubei (Hupeh)	Wuhan	72,400	187,500	56,930,000
Hunan	Changsha	81,300	210,500	63,420,000
Jiangsu (Kiangsu)	Nanjing (Nanking)	39,600	102,600	75,500,000
Jiangxi (Kiangsi)	Nanchang	63,600	164,800	43,390,000
Jilin (Kirin)	Changchun	72,200	187,000	27,230,000
Liaoning (Liaoning)	Shenyang	58,300	151,000	42,710,000
Qinghai (Tsinghai)	Xining	278,400	721,000	5,480,000
Shaanxi (Shensi)	Xi'an (Sian)	75,600	195,800	37,350,000
Shandong (Shantung)	Jinan	59,200	153,300	93,090,000
Shanxi (Shansi)	Taiyuan	60,700	157,100	33,750,000
Sichuan (Szechwan)	Chengdu	188,000	487,000	81,690,000
Yunnan	Kunming	168,400	436,200	44,830,000
Zhejiang (Chekiang)	Hangzhou	39,300	101,800	49,800,000
Autonomous regions⁵				
Guangxi Zhuang (Kwangsi Chuang)	Nanning	85,100	220,400	47,190,000
Inner Mongolia (Nei Mongol)	Hohhot	454,600	1,177,500	23,970,000
Ningxia Hui (Ningsia Hui)	Yinchuan	25,600	66,400	6,040,000
Tibet (Xizang)	Lhasa	471,700	1,221,600	2,810,000
Xinjiang Uygur (Sinkiang Uighur)	Ürümchi (Urumchi)	635,900	1,646,900	20,500,000
Municipalities⁵				
Beijing (Peking)	—	6,500	16,800	15,810,000
Chongqing (Chungking)	—	31,700	82,000	28,080,000
Shanghai	—	2,400	6,200	18,150,000
Tianjin (Tientsin)	—	4,400	11,300	10,750,000
TOTAL		3,696,100	9,572,900	1,314,480,000⁶

Demography

Population (2009): 1,331,433,000.

Density (2009): persons per sq mi 360.2; persons per sq km 139.1.

Urban-rural (2009⁴): urban 45.7%; rural 54.3%.

Sex distribution (2009⁴): male 51.47%; female 48.53%.

Age breakdown (2007)⁷: under 15, 17.9%; 15–29, 21.4%; 30–44, 26.8%; 45–59, 20.3%; 60–74, 10.4%; 75–84, 2.7%; 85 and over, 0.5%.

Population projection: (2020) 1,409,432,000; (2030) 1,440,274,000.

Ethnic composition (2005)⁸: Han (Chinese) 90.95%; Chuang 1.37%; Manchu 0.82%; Yi 0.79%; Hui 0.77%; Miao 0.75%; Uighur 0.74%; Tuchia 0.65%; Tibetan 0.57%; Mongolian 0.49%; Tung 0.28%; Puyi 0.26%; Yao 0.24%; Korean 0.14%; Pai 0.14%; Hani 0.12%; Li 0.11%; Kazakh 0.09%; Tai 0.08%; other 0.64%.

Religious affiliation (2005): nonreligious 39.2%; Chinese folk-religionist 28.7%; Christian 10.0%, of which unregistered Protestant 7.7%⁹, registered Protestant 1.2%⁹, unregistered Roman Catholic 0.5%⁹, registered Roman Catholic 0.4%⁹; Buddhist 8.4%; atheist 7.8%; traditional beliefs 4.4%; Muslim 1.5%.

Major urban agglomerations (2007)¹⁰: Shanghai 14,987,000; Beijing 11,106,000; Guangzhou 8,829,000; Shenzhen 7,581,000; Wuhan 7,243,000; Tianjin 7,180,000; Chongqing 6,461,000; Shenyang 4,787,000; Dongguan 4,528,000; Chengdu 4,123,000; Xi'an 4,009,000; Nanjing 3,679,000; Guiyang 3,662,000; Harbin 3,621,000; Changchun 3,183,000; Dalian 3,167,000; Zibo 3,061,000; Hangzhou 3,007,000; Kunming 2,931,000; Taiyuan 2,913,000; Qingdao 2,866,000; Jinan 2,798,000; Zhengzhou 2,636,000; Fuzhou 2,606,000; Changsha 2,604,000; Lanzhou 2,561,000; Xiamen 2,519,000; Jinxi 2,426,000.

Households⁸. Average family household size (2005) 3.1, of which urban family households 3.0, rural family households 3.3; 1 person 10.7%, 2 persons 24.5%, 3 persons 29.8%, 4 persons 19.2%, 5 persons 10.2%, 6 persons 3.8%, 7 persons 1.1%, 8 or more persons 0.7%.

Mobility (2007)⁷. Population residing in registered enumeration area 90.4%; population not residing in registered enumeration area 9.6%.

Vital statistics

Birth rate per 1,000 population (2008): 12.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 5.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.77.

Marriage/divorce rates per 1,000 population (2007): 7.5/1.6.

Life expectancy at birth (2007): male 71.3 years; female 74.8 years.

Adult population (ages 15–49) *living with HIV* (2007): 0.1%¹¹ (world avg. 0.8%).

Major causes of death per 100,000 population (2006): malignant neoplasms (cancers) 136.5; cerebrovascular diseases 100.3; heart diseases 80.1; diseases of the respiratory system 78.1; accidents and poisoning 40.1; endocrine, nutritional, and metabolic diseases 17.3; diseases of the digestive system 12.3.

Social indicators

Educational attainment (2007)⁷. Percentage of population age 6 and over having: no formal schooling 8.0%; incomplete/complete primary education 31.8%; some secondary 40.2%; complete secondary 13.4%; some postsecondary through advanced degree 6.6%.

Distribution of income (2004)

percentage of urban household income by quintile				
1	2	3	4	5 (highest)
9.2	13.7	17.5	22.4	37.2

Quality of working life. Average workweek (November 2007; hours actually worked): 45.5 hours. Annual rate per 100,000 workers for (2008): death in mining, industrial, or commercial enterprises 2.82. Death toll from work accidents (2008) 91,172.

Access to services. Percentage of population having access to electricity (2005) 99.4%. Percentage of total (urban, rural) population with safe public water supply (2002) 83.6% (94.0%, 73.0%). Sewage system (1999): total (urban, rural) households with flush apparatus 20.7% (50.0%, 4.3%), with pit latrines 69.3% (33.6%, 86.7%), with no latrine 5.3% (7.8%, 4.1%).

Social participation. Eligible voters participating in last national election: n.a. Population participating in voluntary work: n.a. Trade union membership in total labour force (2006): 169,942,200 (c. 22%). Percentage of population who consider themselves religious (2005–06) 31.4%.

Social deviance. Annual reported arrest rate per 100,000 population (2007) for: theft 248.0; robbery 22.2; fraud 16.6; injury 12.3; rape 2.4; homicide 1.2.

Material well-being. Urban households possessing (number per household; 2004): bicycles 1.4; colour televisions (2007) 1.4; washing machines 1.0; refrigerators 0.9; air conditioners 0.7; cameras 0.5; computers (2007) 0.5. Rural families possessing (number per household; 2004): bicycles 1.2; colour televisions (2007) 0.9; washing machines 0.4; refrigerators 0.2; air conditioners 0.05; cameras 0.04; computers (2007) 0.04.

National economy

Gross national income (GNI; 2008): U.S.\$3,678,488,000,000 (U.S.\$2,770 per capita); purchasing power parity GNI (U.S.\$6,020 per capita).

Structure of gross domestic product and labour force

	2006		2002	
	in value Y '000,000,000	% of total value	labour force ('000)	% of labour force
Agriculture, forestry,				
fishing	2,404	11.3	324,870	43.1
Mining	1,208	5.7	5,580	0.7
Manufacturing	7,121	33.6	83,070	11.0
Public utilities	802	3.8	2,900	0.4
Construction	1,185	5.6	38,930	5.2
Transp. and commun.	1,248	5.9	20,840	2.8
Trade, hotels	2,026	9.6	49,690	6.6
Finance/real estate	2,143	10.1	4,580	0.6
Information services	533	2.5	...	...
Pub. admin.	2,522	11.9	10,750	1.4
Services			33,150	4.4
Other			179,240 ¹²	23.8 ¹²
TOTAL	21,192	100.0	753,600	100.0

Budget (2007). Revenue: Y 5,132,178,000,000 (tax revenue 88.9%, of which VAT 30.1%, corporate income taxes 17.1%, business tax 12.8%, individual income tax 6.2%; nontax revenue 11.1%). Expenditures: Y 4,978,135,000,000 (general administration 17.1%; education 14.3%; social security 10.9%; manufacturing, trade, and finance 8.6%; defense 7.1%; public security/police 7.0%; agriculture and forestry 6.8%; health 4.0%).

Public debt (external, outstanding; 2007): U.S.\$87,653,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): grains—rice 185,490,000, corn (maize) 151,830,000, wheat 109,860,000, barley 3,851,000; oilseeds—soybeans 15,600,000, peanuts (groundnuts) 13,016,000, rapeseed 10,375,000, sunflower seeds 1,800,000; fruits and nuts—watermelons 63,000,000, apples 27,500,000, citrus 19,617,100, cantaloupes 13,650,000, pears 12,500,000, bananas 7,100,000; other—sugarcane 105,651,000, sweet potatoes 102,000,000, potatoes 72,000,000, cabbage 36,000,000, tomatoes 33,500,000, cucumbers 28,000,000, seed cotton 22,872,000, onions 20,500,000, eggplants 18,000,000, chilies and peppers 14,000,000, garlic 12,000,000, spinach 12,000,000, asparagus 6,250,000, tobacco leaves 2,395,000, tea 1,186,500, silkworm cocoons (2003) 667,000; livestock (number of live animals) 501,475,621 pigs, 197,267,883 goats, 171,961,000 sheep, 116,859,793 cattle, 22,717,000 water buffalo, 4,509,633,000 chickens, 736,912,000 ducks; roundwood 294,401,900 cu m, of which fuelwood 68%; fisheries production 46,079,311 (from aquaculture 68%); aquatic plants production 10,081,245 (from aquaculture 97%). Mining and quarrying (2005; by world rank): metal content of mine output—iron ore 138,000,000 (3), zinc 2,450,000 (1), manganese 1,100,000 (5), lead 1,000,000 (1), copper 740,000 (7), antimony 120,000 (1), tin 110,000 (1), tungsten 61,000 (1), silver 2,500 (3), gold 225 (2); metal ores—bauxite 18,000,000 (3), vanadium 17,000 (1); nonmetals—salt 44,547,000 (2), phosphate rock 9,130,000 (2), magnesite 4,700,000 (1), barite 4,200,000 (1), talc 3,000,000 (1), fluorspar 2,700,000 (1), asbestos 520,000 (2), strontium 140,000 (2). Distribution of industrial production (percentage of total value added by source of funding;

2007) from: domestic sources 68.5%, of which private enterprises 23.2%, limited liability corporations 22.3%, shareholding corporations 9.9%, state-owned enterprises 9.0%, collectives 2.5%; foreign sources 21.0%; Hong Kong-, Macau-, or Taiwan-based enterprises 10.5%. Retail trade (percentage of total sales by sector; 2007): domestically funded enterprises 88.0%, of which limited liability corporations 29.6%, private enterprises 26.6%, shareholding corporations 20.1%, state-owned enterprises 6.9%, collectives 2.2%; foreign-funded enterprises 8.1%; Hong Kong-, Macau-, or Taiwan-based enterprises 3.9%.

Manufacturing and mining enterprises (2007)

	no. of enterprises	no. of employees	value added (Y '000,000)
Manufacturing			
Iron and steel (base)	7,161	3,044,300	900,714
Telecommunications equipment, computers, other electronics	11,220	5,879,200	792,457
Industrial chemicals, paints, soaps	22,981	3,802,800	734,042
Transport equipment	14,091	4,085,900	697,448
Electrical machinery/apparatus	19,322	4,491,500	605,378
General purpose machinery	26,757	4,207,100	510,754
Textiles	27,914	6,262,600	491,392
Cement, bricks, ceramics, other related products	24,278	4,484,100	484,919
Food processing	18,140	2,648,000	464,245
Nonferrous metals (base)	6,701	1,562,700	447,761
Refined petroleum, coke, nuclear fuel	2,149	806,400	309,698
Special purpose machinery	13,409	2,565,100	306,736
Fabricated metal products	18,008	2,734,800	301,041
Tobacco products	150	186,100	291,882
Medicines and pharmaceuticals	5,748	1,373,400	228,660
Clothing and footwear	14,770	4,141,900	226,511
Plastics	15,376	2,240,500	213,714
Beverages	4,422	1,010,200	188,366
Food manufactures	6,644	1,350,300	186,156
Paper and paper products	8,376	1,380,300	174,305
Leather and fur products	7,452	2,569,800	148,039
Professional, scientific, and measuring equipment	4,526	1,069,700	116,325
Sawn wood; products of wood, bamboo, and rattan (excl. furniture)	7,852	1,061,800	103,029
Mining			
Petroleum and natural gas	184	906,700	645,083
Coal	7,537	4,637,000	469,633
Nonferrous metals	2,183	551,100	97,332
Ferrous metals	2,899	491,400	92,878
Nonmetals	3,004	466,200	51,724

Energy production (consumption): electricity (kW-hr; 2008) 3,392,304,000,000 (3,450,200,000,000); hard coal (metric tons; 2007) 2,430,000,000 ([2008] 2,740,000,000 [including lignite]); lignite (metric tons; 2007) 120,000 (n.a.); crude petroleum (barrels; 2008) 1,450,000,000 (2,635,000,000); petroleum products (metric tons; 2006) 238,365,000 (256,345,000); natural gas (cu m; 2008) 80,314,000,000 (80,700,000,000).

Financial aggregates¹³

	2003	2004	2005	2006	2007	2008
Exchange rate, Y per:						
U.S. dollar	8.28	8.28	8.07	7.81	7.30	6.83
£	14.77	15.99	13.90	15.33	14.62	9.96
SDR	12.30	12.85	11.53	11.75	11.54	10.53
International reserves (U.S.\$)						
Total (excl. gold; '000,000)	408,151	614,500	821,514	1,068,493	1,530,282	...
SDRs ('000,000)	1,102	1,247	1,251	1,068	1,192	1,199
Reserve pos. in IMF ('000,000)	3,798	3,320	1,391	1,081	840	2,031
Foreign exchange ('000,000)	403,251	609,932	818,872	1,066,344	1,528,249	...
Gold ('000,000 fine troy oz)	19.3	19.3	19.3	19.3	19.3	...
% world reserves	2.1	2.1	2.2	2.2	2.2	...
Interest and prices						
Central bank discount (%)	2.70	3.33	3.33	3.33	3.33	2.79
Govt. bond yield (%)	...	...	...	...	...	...
Industrial share prices	...	...	...	...	...	...
Balance of payments (U.S.\$'000,000)						
Balance of visible trade, of which:						
Imports, f.o.b.	-393,618	-534,410	-628,295	-751,936	-904,618	...
Exports, f.o.b.	438,270	593,393	762,484	969,682	1,220,000	...
Balance of invisibles	+1,223	+9,677	+26,629	+35,522	+56,452	...
Balance of payments, current account	+45,875	+68,659	+160,818	+253,268	+371,833	...

Population economically active (2006): total 792,324,000¹⁴; activity rate of total population 59.6%¹⁴ (participation rates: ages 15–64, 81.2%¹⁴; female 45.8%¹⁴; registered unemployed in urban areas [2008] 4.0%; urban unemployed including migrants [2008] up to 9%; rural unemployment [2008] is substantial).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.0	94.7	98.3	100.0	101.5	106.4	112.7
Monthly earnings index ¹⁵	69.8	79.3	89.1	100.0	114.0	132.5	153.5

Household income and expenditure. Average annual per capita disposable income of household (2008): rural households Y 4,761 (U.S.\$685), urban households Y 15,781 (U.S.\$2,271). Sources of income (2007): rural households—income from household businesses 65.2%, wages and salaries 27.6%,

transfers 5.0%, property 2.2%; urban households—wages and salaries 68.7%, transfers 22.7%, business income 6.3%, property 2.3%. Expenditure (2007): rural (urban) households—food 40.8% (30.7%), housing and energy 18.3% (15.0%), education and recreation 9.0% (11.1%), transportation and communications 9.7% (11.2%), clothing 5.7% (8.6%), health and personal effects 6.4% (8.9%), household furnishings and operation 4.4% (5.0%).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 37,233; remittances (2008) 40,641; foreign direct investment (FDI; 2005–07 avg.) 76,214; official development assistance (2007) 1,439. Disbursements for (U.S.\$'000,000): tourism (2007) 29,786; remittances (2008) 5,737; FDI (2005–07 avg.) 18,630.

Land use as % of total land area (2007): in temporary crops 15.1%, in permanent crops 1.3%, in pasture 42.9%, forest area 22.0%.

Foreign trade¹⁶

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+25,468	+32,097	+102,000	+177,475	+261,820	+297,038
% of total	2.9%	2.8%	7.2%	10.1%	12.0%	11.6%

Imports (2007): U.S.\$955,956,000,000 (machinery and apparatus 39.4%, of which electronic integrated circuits and micro-assemblies 13.4%, computers and office machines 4.8%, telecommunications equipment and parts 3.7%; chemicals and chemical products 11.2%, of which organic chemicals 4.0%; mineral fuels 11.0%, of which crude petroleum 8.4%; metal ore and metal scrap 7.3%; optical instruments and apparatus 4.8%). **Major import sources:** Japan 14.0%; South Korea 10.9%; Taiwan 10.6%; China free trade zones 9.0%; United States 7.3%; Germany 4.7%; Malaysia 3.0%; Australia 2.7%; Thailand 2.4%; Philippines 2.4%.

Exports (2007): U.S.\$1,217,776,000,000 (machinery and apparatus 43.0%, of which computers/office machines/parts 13.6%, electrical machinery and electronics 10.6%, telecommunications equipment and parts 8.4%; wearing apparel and accessories 9.5%; chemicals and chemical products 4.9%; textile yarn, fabrics, and made-up articles 4.6%; iron and steel 4.2%). **Major export destinations:** United States 19.1%; Hong Kong 15.1%; Japan 8.4%; South Korea 4.6%; Germany 4.0%; Netherlands 3.4%; United Kingdom 2.6%; Singapore 2.4%; Russia 2.3%; India 2.0%.

Transport and communications

Transport. Railroads: route length (2007) 48,467 mi, 78,000 km; (2008) passenger-km 777,860,000,000; (2008) metric ton-km cargo 2,511,180,000,000. Roads (2005): total length 1,199,582 mi, 1,930,544 km (paved 82%). Vehicles (2007): passenger cars 31,959,900; trucks 10,540,600. Air transport (2008): passenger-km 288,280,000,000; metric ton-km cargo 11,960,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	493,902	381	PCs	2007	75,118	57
Telephones				Dailies	2007	106,320 ^{17, 18}	81 ^{17, 18}
Cellular	2009 ⁴	641,230 ¹⁹	482 ¹⁹	Internet users	2008	298,000	225
Landline	2009 ⁴	340,810	256	Broadband	2008	83,366 ¹⁹	63 ¹⁹

Education and health

Literacy (2007)⁷: total population age 15 and over literate 91.6%; males literate 95.7%; females literate 87.6%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–11)	5,967,878	108,925,227	18.3	...
Secondary/Voc. (age 12–17)	5,766,256	101,195,119	17.5	...
Tertiary	1,332,483	23,360,535	17.5	22 (age 18–22)

Health (2009⁴): physicians²⁰ 2,050,000 (1 per 650 persons); hospital beds 3,690,000 (1 per 361 persons); infant mortality rate per 1,000 live births (2007) 22.9; undernourished population (2002–04) 150,000,000 (12% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2008): 2,185,000 (army 73.2%, navy 11.7%, air force 15.1%). **Military expenditure as percentage of GDP** (2007): 3.0%; per capita expenditure U.S.\$97.

¹Statutory number; includes 36 seats allotted to Hong Kong and 12 to Macau. ²Data for Taiwan, Quemoy, and Matsu (parts of Fujian province occupied by Taiwan) included; Hong Kong and Macau are excluded. ³Estimated figure(s). ⁴January 1. ⁵Preferred names in all instances are based on Pinyin transliteration (except for Inner Mongolia and Tibet, which are current English-language conventional names). ⁶Total includes 5,730,000 military personnel not distributed by province, autonomous region, or municipality; detail does not add to total given because the national total population, but not the regional figures, was adjusted for survey and sampling errors. ⁷Based on 2007 national sample survey (about 0.9% of the total population). ⁸Based on 2005 national sample survey (about 1.0% of the total population). ⁹Percentage is rough estimate. ¹⁰Per United Nations *World Urbanization Prospects: The 2007 Revision*. ¹¹Statistically derived midpoint of range. ¹²Includes 7,700,000 registered unemployed; remainder mostly activities not defined. ¹³All data are for end of period. ¹⁴ILO estimate. ¹⁵Manufacturing only. ¹⁶Imports c.i.f., exports f.o.b. ¹⁷Circulation. ¹⁸Free dailies only. ¹⁹Subscribers. ²⁰Includes assistant doctors.

Internet resource for further information:

• National Bureau of Statistics of China
<http://www.stats.gov.cn/english>

Colombia

Official name: República de Colombia
(Republic of Colombia).

Form of government: unitary, multiparty republic with two legislative houses (Senate [102]; House of Representatives [166]).

Head of state and government: President.

Capital: Bogotá.

Official language: Spanish.

Official religion: none.

Monetary unit: peso (Col\$); valuation (Sept. 1, 2009) 1 U.S.\$ = Col\$2,067; 1 £ = Col\$3,353.



Population (2007 estimate)					
Departments	population	Departments	population	Departments	population
Amazonas	68,519	Cundinamarca	2,355,408	San Andrés y Providencia	72,923
Antioquia	5,831,851	Guainia	36,381	Santander	1,975,963
Arauca	238,605	Guaviare	98,189	Sucre	792,377
Atlántico	2,227,713	Huila	1,038,061	Tolima	1,371,253
Bolívar	1,924,139	La Guajira	715,175	Valle del	4,257,741
Boyacá	1,265,198	Magdalena	1,180,703	Vaupés	39,231
Caldas	973,226	Meta	817,857	Vichada	60,463
Caquetá	427,634	Nariño	1,578,877		
Casanare	306,510	Norte de Santander	1,267,028		
Cauca	1,285,794	Putumayo	319,804	Capital District	
Cesar	929,096	Quindío	542,752	Bogotá	7,050,133
Chocó	467,374	Risaralda	911,239	TOTAL	43,941,792
Córdoba	1,514,575				

Demography

Area: 440,832 sq mi, 1,141,749 sq km.

Population (2009): 44,972,000².

Density (2009): persons per sq mi 102.0, persons per sq km 39.4.

Urban-rural (2005): urban 73.6%; rural 26.4%.

Sex distribution (2007): male 49.01%; female 50.99%.

Age breakdown (2007): under 15, 29.8%; 15–29, 25.4%; 30–44, 22.3%; 45–59, 14.4%; 60–74, 6.2%; 75–84, 1.6%; 85 and over, 0.3%.

Population projection: (2020) 50,912,000; (2030) 55,768,000.

Ethnic composition (2006): mestizo c. 58%; white c. 20%; mulatto c. 14%; black c. 4%; black-Amerindian c. 3%; Amerindian c. 1%.

Religious affiliation (2007): Roman Catholic c. 80.0%; Protestant/independent Christian c. 13.5%; Mormon c. 0.3%; nonreligious c. 2.0%; other c. 4.2%.

Major cities (2007): Bogotá 7,033,914; Medellín 2,248,912; Cali 2,139,535; Barranquilla 1,144,470; Cartagena 871,342; Cúcuta 582,332.

Vital statistics

Birth rate per 1,000 population (2007): 20.2 (world avg. 20.3).

Death rate per 1,000 population (2007): 5.5 (world avg. 8.5).

Total increase rate per 1,000 population (2007): 14.7 (world avg. 11.8).

Natural fertility rate (avg. births per childbearing woman; 2007): 2.51.

Life expectancy at birth (2007): male 68.4 years; female 76.2 years.

Major causes of death per 100,000 population (2005)³: diseases of the circulatory system 164.4; malignant neoplasms (cancers) 90.4; violence and suicides 70.1; diseases of the respiratory system 56.9; accidents 31.6.

Adult population (ages 15–49) **living with HIV** (2007): 0.6% (world avg. 0.8%).

National economy

Budget (2007). Revenue: Col\$103,986,000,000,000 (tax revenue 56.4%, of which taxes on goods and services 26.1%, income taxes 16.7%; nontax revenue 39.3%; other 4.3%). Expenditures: Col\$110,014,000,000,000 (interest on debt 25.1%; other 74.9%).

Population economically active (2006): total 20,177,100; activity rate 44.5% (participation rates: ages 12–55, 63.2%; female 43.0%; unemployed [April 2008–March 2009] 11.5%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	83.9	89.9	95.2	100.0	104.3	110.1	117.8
Monthly earnings index	52.0	60.6	92.2	100.0	100.6	97.1	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 40,000,000, plantains 3,600,000, rice 2,250,000, cassava 2,100,000, bananas 1,800,000, corn (maize) 1,400,000, coffee 710,000, avocados 200,000;⁴ livestock (number of live animals) 26,000,000 cattle, 3,400,000 sheep, 2,500,000 horses; roundwood 10,439,900 cu m, of which fuelwood 85%; fisheries production 156,100 (from aquaculture 38%). Mining and quarrying (2006): nickel (metal content) 94,100; gold 15,700 kg; emeralds 5,734,000 carats. Manufacturing (value added in U.S.\$'000,000; 2005): processed food 3,471; petroleum products 2,873; medicines, fertilizers, soaps 1,956; beverages 1,813; iron and steel 1,120; cement, bricks, and ceramics 1,042; plastics 858; clothing 836.⁵ Energy production (consumption): electricity (kW-hr; 2006) 51,830,000,000 (52,963,000,000); hard coal (metric tons; 2007) 71,700,000 (4,480,000); crude petroleum (barrels; 2008) 214,400,000 ([2007] 105,500,000); petroleum products (metric tons; 2006) 13,247,000 (9,442,000); natural gas (cu m; 2006) 6,600,000,000 (9,298,000,000).

Land use as % of total land area (2007): in temporary crops 1.8%, in permanent crops 1.4%, in pasture 35.0%, forest area 54.6%.

Gross national income (GNI; 2008): U.S.\$207,425,000,000 (U.S.\$4,660 per capita); purchasing power parity GNI (U.S.\$8,510 per capita).

Structure of gross domestic product and labour force

	2007			
	in value Col\$'000,000	% of total value	labour force ⁶	% of labour force ⁶
Agriculture, forestry	33,349	8.1	3,341,900	16.4
Mining	16,402	4.0	108,300	0.5
Manufacturing	69,279	16.8	2,444,500	12.0
Construction	28,835	7.0	916,900	4.5
Public utilities	11,576	2.8	88,700	0.5
Transp. and commun.	32,839	8.0	1,491,800	7.3
Trade, hotels	47,573	11.5	4,563,100	22.4
Finance, real estate	64,864	15.7	1,301,600	6.4
Pub. admin., defense	26,415	6.4	3,894,900	19.1
Services	45,630	11.0	2,213,500 ⁷	10.9 ⁷
Other	35,881	8.7		
TOTAL	412,643	100.0	20,365,200	100.0

Public debt (external, outstanding; December 2008): U.S.\$24,855,000,000.

Household income and expenditure. Average household size (March 2004) 3.8; sources of income (2002): wages 42.6%, self-employment 38.9%; expenditure (2004): food and nonalcoholic beverages 28.0%, housing and energy 15.4%, transportation 12.2%, hotel and café expenditures 6.4%, household furnishings 5.4%, health 5.2%, alcohol and tobacco 5.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,669; remittances (2008) 4,884; foreign direct investment (FDI; 2005–07 avg.) 8,577; official development assistance (2007) 731. Disbursements for (U.S.\$'000,000): tourism (2007) 1,537; remittances (2008) 88; FDI (2005–07 avg.) 2,043.

Foreign trade⁸

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+50	+594	+1,347	–146	–1,030	+1,110
% of total	0.2%	1.9%	3.3%	0.3%	1.7%	1.5%

Imports (2007): U.S.\$32,897,000,000 (machinery and apparatus 26.5%, chemicals and chemical products 18.5%, road vehicles 12.0%, base and fabricated metals 9.8%). **Major import sources:** U.S. 26.2%; China 10.1%; Mexico 9.3%; Brazil 7.3%; Venezuela 4.2%.

Exports (2007): U.S.\$29,991,000,000 (crude petroleum 18.5%, coal 11.1%, refined petroleum 5.8%, coffee 5.7%, ferromanganese 5.6%, apparel and clothing accessories 4.5%, road vehicles/parts 3.9%, cut flowers 3.7%). **Major export destinations:** U.S. 35.4%; Venezuela 17.4%; Ecuador 4.3%; Switzerland 3.0%; Netherlands 2.8%.

Transport and communications

Transport. Railroads (2006): route length 1,261 mi, 2,030 km; passenger-km (2004) 25,000,000; metric ton-km cargo (2005) 8,236,000,000. Roads (2006): total length 102,077 mi, 164,278 km (paved [2000] 23%). Vehicles (2005): cars 1,606,880; trucks and buses 1,079,247. Air transport (2007): passenger-km 9,552,000,000; metric ton-km cargo 189,804,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	11,358	268	PCs	2007	3,513	80
Telephones				Dailies	2007	1,580 ⁹	36 ⁹
Cellular	2008	41,365 ¹⁰	931 ¹⁰	Internet users	2008	17,117	385
Landline	2008	6,820	153	Broadband	2008	1,903 ¹⁰	43 ¹⁰

Education and health

Educational attainment (2005)¹¹. Percentage of population age 25 and over having: no schooling/unknown 10.2%; primary education 40.1%; secondary 34.2%; higher 15.5%. **Literacy** (2006): population age 15 and over literate 92.3%; males literate 92.4%; females literate 92.2%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	187,821	5,298,567	28.2	87
Secondary/Voc. (age 11–16)	164,484	4,657,360	28.3	67
Tertiary	87,397 ¹²	1,372,674	15.0	32 (age 17–21)

Health: physicians (2006) 51,095 (1 per 849 persons); hospital beds (2004) 50,824 (1 per 833 persons); infant mortality rate (2007) 20.1; undernourished population (2002–04) 5,900,000 (13% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): 267,231 (army 84.7%, navy 11.5%, air force 3.8%). **Military expenditure as percentage of GDP** (2008): 4.7%¹³; per capita expenditure U.S.\$186¹³.

¹Up to five seats are reserved for representatives from indigenous community. ²Includes 2.7 million to 4.4 million internally displaced persons. ³Projected rates based on about 79% of total deaths. ⁴Also major producer of cut flowers (particularly roses and carnations). ⁵Illegal cocaine production (2007) 600 metric tons. ⁶Third quarter; includes ages 10 and over; excludes military. ⁷Unemployed. ⁸Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹Based on the 2005 Colombia Demographic and Health Survey, comprising 117,205 people. ¹²2005–06. ¹³Includes paramilitary.

Internet resource for further information:

• **National Administration Department of Statistics** <http://www.dane.gov.co>

Comoros¹

Official names: Udzima wa Komori (Comorian); Jumhūriyat al-Qamar al-Muttaḥidah (Arabic); Union des Comores (French); (Union of the Comoros)².

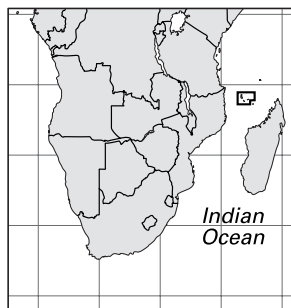
Form of government: republic³ with one legislative house (Assembly of the Union [33⁴]).

Head of state and government: President assisted by Vice Presidents. **Capital:** Moroni.

Official languages²: Comorian (Shikomori); Arabic; French.

Official religion: Islam.

Monetary unit: Comorian franc (CF); valuation (Sept. 1, 2009) 1 U.S.\$ = CF 343.95; 1 £ = CF 558.09.



Area and population

		area		population
		sq mi	sq km	2003 census ⁵
Autonomous islands	Capitals			
Mwali (Mohéli)	Fomboni	112	290	35,751
Ngazidia (Grande Comore)	Moroni	443	1,148	296,177
Nzwani (Anjouan)	Mutsamudu	164	424	243,732
TOTAL		719	1,862	575,660

Demography

Population (2009): 676,000⁶.

Density (2009): persons per sq mi 940.2, persons per sq km 363.1.

Urban-rural (2008): urban 28.1%; rural 71.9%.

Sex distribution (2006): male 49.61%; female 50.39%.

Age breakdown (2006): under 15, 42.7%; 15–29, 26.6%; 30–44, 17.8%; 45–59, 8.2%; 60–74, 3.9%; 75 and over, 0.8%.

Population projection: (2020) 838,000; (2030) 975,000.

Doubling time: 27 years.

Ethnic composition (2000): Comorian (a mixture of Bantu, Arab, Malay, and Malagasy peoples) 97.1%; Makua 1.6%; French 0.4%; other 0.9%.

Religious affiliation (2005): Muslim (nearly all Sunni) 98.4%; other 1.6%.

Major cities (2002): Moroni (2007) 46,000; Mutsamudu 21,558; Domoni 13,254; Fomboni 13,053; Tsémbéhou 10,552.

Vital statistics

Birth rate per 1,000 population (2008): 32.6 (world avg. 20.3).

Death rate per 1,000 population (2008): 6.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 26.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.03.

Life expectancy at birth (2006): male 60.0 years; female 64.7 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 261.6, of which malaria 65.0, diarrheal diseases 52.0, measles 49.8; diseases of the circulatory system 118.9; accidents and injuries 68.1; perinatal conditions 59.2; malignant neoplasms (cancers) 46.9.

National economy

Budget (2007). Revenue: CF 33,945,000,000 (tax revenue 49.1%, of which taxes on international trade 17.6%, taxes on goods and services 11.5%; grants 37.7%; nontax revenue 13.2%). Expenditures: CF 37,314,000,000 (current expenditures 72.5%, of which interest on debt 2.2%; development expenditures 27.5%).

Public debt (external, outstanding; 2008): U.S.\$277,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 77,000, bananas 65,000, cassava 58,000, rice 17,000, taro 9,000, yams 4,000, corn (maize) 4,000, cloves 2,500, vanilla 90, ylang-ylang essence 25; other export crops grown in small quantities include coffee, cinnamon, and tuberoses; livestock (number of live animals) 115,000 goats, 45,000 cattle, 21,000 sheep; roundwood 8,650, of which fuelwood, n.a.; fisheries production 16,000 (from aquaculture, none). Mining and quarrying: sand, gravel, and crushed stone from coral mining for local construction. Manufacturing: products of small-scale industries include processed vanilla and ylang-ylang, cement, handicrafts, soaps, soft drinks, woodwork, and clothing. Energy production (consumption): electricity (kW-hr; 2006) 50,600,000 (22,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (32,000); natural gas, none (none).

Population economically active (2006): total 348,000⁷; activity rate of total population 42.5%⁷ (participation rates: ages 15–64, 73.8%⁷; female 43.1%⁷; unemployed [2005] 13.3%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	105.6	109.4	113.4	118.5	120.9	126.3	132.1

Household income and expenditure. Average household size (2004) 5.8; average annual income per household (2004) CF 699,000⁸ (U.S.\$1,764); sources of income (2004)⁸: wages/self-employment 36.9%, value ascribed to self-produced food 27.7%, value ascribed to principal dwelling 23.9%; expenditure (1999)⁹: food, beverages, and tobacco products 68.0%, housing and energy 15.5%, clothing and footwear 4.7%, education 4.2%.

Gross national income (GNI; 2007): U.S.\$425,000,000 (U.S.\$680 per capita); purchasing power parity GNI (U.S.\$1,150 per capita).

Structure of gross domestic product and labour force

	2007		2004	
	in value CF '000,000	% of total value	labour force ¹⁰	% of labour force ¹⁰
Agriculture, fishing	84,119	50.3	270,000	71.8
Mining	...	...	...	...
Manufacturing	6,995	4.2	...	...
Construction	8,197	4.9	...	...
Public utilities	2,916	1.7	...	...
Transportation and communications	21,288	12.7	...	...
Trade, restaurants, hotels	26,387 ¹¹	15.8 ¹¹	106,000	28.2
Finance, insurance, real estate	7,948	4.8	...	...
Public admin., defense	16,371	9.8	...	...
Services	116	0.1	...	...
Other	-7,211 ¹²	-4.3 ¹²	...	...
TOTAL	167,126	100.0	376,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 27; remittances (2007) 12; foreign direct investment (2005–07 avg.)¹³; official development assistance (2007) 44. Disbursements for (U.S.\$'000,000): tourism (2006) 11; remittances, n.a.

Land use as % of total land area (2005): in temporary crops c. 43%, in permanent crops c. 28%, in pasture c. 8%, forest area c. 3%.¹⁴

Foreign trade¹⁵

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CF '000,000,000	-17.6	-18.4	-28.1	-34.3	-41.3	-44.8
% of total	47.1%	43.6%	70.9%	78.3%	84.1%	81.9%

Imports (2007): CF 49,716,000,000 (petroleum products 21.4%, rice 10.4%, meat 6.8%, cement 4.9%, iron and steel 2.3%, other 54.2%). **Major import sources** (2005): South Africa 15.4%; France 13.8%; Pakistan 3.1%; Mauritius 3.0%; Belgium-Luxembourg 2.4%.

Exports (2007): CF 4,965,000,000 (cloves 57.7%, vanilla 25.7%, ylang-ylang 14.3%). **Major export destinations** (2005): France 73.3%; Germany 10.4%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 493 mi, 793 km (paved 70%). Vehicles (1996): passenger cars 9,100; trucks and buses 4,950. Air transport (2001): passengers arriving/departing Moroni 108,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	13	23	PCs	2004	5.0	6.3
Telephones				Dailies	2005	16	16
Cellular	2007	40 ¹⁷	48 ¹⁷	Internet users	2006	21	26
Landline	2005	17	28	Broadband	2006	...	...

Education and health

Educational attainment (1996)¹⁸. Percentage of population age 25 and over having: no formal schooling 72.7%¹⁹; primary education 11.0%¹⁹; secondary 15.1%; unknown 1.2%. **Literacy** (2007): total population age 15 and over literate 57.1%; males literate 64.2%; females literate 50.1%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	3,050	106,700	35.0	55 ²⁰
Secondary/Voc. (age 12–18)	3,138	43,349	13.8	...
Tertiary ²¹	130	1,779	13.7	2 (age 19–23)

Health (2004): physicians 48 (1 per 12,417 persons); hospital beds (1995) 1,450¹³ (1 per 342¹³ persons); infant mortality rate per 1,000 live births (2006) 72.9; undernourished population (2002–04) 500,000^{22, 23} (60% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (2008): the 1,100-member national army is not necessarily accepted by each of the islands; each island also has its own armed security. France provides training for military personnel. **Military expenditure as percentage of GDP** (2005): c. 3.5%; per capita expenditure U.S.\$21.

¹Excludes Mayotte, an overseas possession of France, unless otherwise indicated. ²³languages are official per 2001 constitution. ³A constitutional referendum effective from May 23, 2009, returned greater powers to the central government. ⁴Includes 15 indirectly elected seats. ⁵Preliminary. ⁶Excludes Comorians living abroad in France or Mayotte (about 150,000 people). ⁷ILO Employment Trends Unit estimate. ⁸Includes both monetary and nonmonetary income. ⁹Weights of consumer price index components. ¹⁰FAO estimate. ¹¹Includes import duties and taxes. ¹²Less imputed bank service charge. ¹³Estimated figure. ¹⁴In addition other equals c. 18%. ¹⁵Imports c.i.f.; exports f.o.b. ¹⁶Circulation data unavailable for the one daily newspaper. ¹⁷Subscribers. ¹⁸Based on sample survey of 4,881 persons on all three islands. ¹⁹Basic education may also be received through Qur'anic schools. ²⁰1999–2000. ²¹2003–04. ²²Based on FAO population estimate. ²³Includes Mayotte.

Internet resource for further information:

- Banque Centrale des Comores
<http://www.bancecom.com>

Congo, Democratic Republic of the

Official name: République Démocratique du Congo (Democratic Republic of the Congo).

Form of government: unitary multiparty republic with two legislative bodies (Senate [108]; National Assembly [500]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Kinshasa.

Official language: French¹.

Official religion: none.

Monetary unit: Congo franc (FC); valuation (Sept. 1, 2009) 1 U.S.\$ = FC 812.91; 1 £ = FC 1,319.²



Area and population		area		population
		sq mi	sq km	1998 estimate
Provinces ³	Capitals			
Bandundu	Bandundu	114,154	295,658	5,201,000
Bas-Congo	Matadi	20,819	53,920	2,835,000
Equateur	Mbandaka	155,712	403,292	4,820,000
Kasai-Occidental	Kananga	59,746	154,742	3,337,000
Kasai-Oriental	Mbuji-Mayi	65,754	170,302	3,830,000
Katanga	Lubumbashi	191,845	496,877	4,125,000
Maniema	Kindu	51,062	132,250	1,246,787
Nord-Kivu	Goma	22,967	59,483	3,564,434
Oriental	Kisangani	194,302	503,239	5,566,000
Sud-Kivu	Bukavu	25,147	65,130	2,837,779
City				
Kinshasa	—	3,847	9,965	4,787,000
TOTAL		905,355	2,344,858	42,150,000

Demography

Population (2009): 66,020,000.

Density (2009): persons per sq mi 72.9, persons per sq km 28.2.

Urban-rural (2005): urban 32.1%; rural 67.9%.

Sex distribution (2005): male 49.48%; female 50.52%.

Age breakdown (2005): under 15, 47.2%; 15–29, 27.1%; 30–44, 14.2%; 45–59, 7.4%; 60–74, 3.4%; 75–84, 0.6%; 85 and over, 0.1%.

Population projection: (2020) 87,640,000; (2030) 108,594,000.

Doubling time: 23 years.

Ethnic composition (1983): Luba 18.0%; Kongo 16.1%; Mongo 13.5%; Rwanda 10.3%; Azande 6.1%; Bangi and Ngale 5.8%; Rundi 3.8%; Teke 2.7%; Boa 2.3%; Chokwe 1.8%; Lugbara 1.6%; Banda 1.4%; other 16.6%.

Religious affiliation (2004): Roman Catholic c. 50%; Protestant c. 20%; Kimbanguist (indigenous Christian) c. 10%; Muslim c. 10%; traditional beliefs and syncretic sects c. 10%.

Major urban areas (2004): Kinshasa 7,273,947; Lubumbashi 1,283,380; Mbuji-Mayi 1,213,726; Kananga 720,362; Kisangani 682,599; Bukavu 471,789.

Vital statistics

Birth rate per 1,000 population (2007): 43.4 (world avg. 20.3).

Death rate per 1,000 population (2007): 11.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 31.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 6.37.

Life expectancy at birth (2007): male 51.9 years; female 55.4 years.

Adult population (ages 15–49) **living with HIV** (2007): 1.2–1.5% (world avg. 0.8%).

Major causes of death per 100,000 population (2002): diarrheal diseases c. 219; HIV/AIDS-related c. 217; lower respiratory infections c. 211; malaria c. 191; war and violence c. 107.

National economy

Budget (2005). Revenue: FC 564,900,000,000 (grants 31.1%; customs and excise taxes 25.7%; direct and indirect taxes 19.7%; petroleum royalties and taxes 17.4%). Expenditures: FC 655,500,000,000 (current expenditure 65.3%, of which interest on external debt 14.8%; capital expenditure 17.4%; expenditure on demobilization and reintegration 14.8%).

Public debt (external, outstanding; 2007): U.S.\$10,853,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 15,000,000, sugarcane 1,550,000, plantains 1,200,000, corn (maize) 1,155,000, rice 315,000, bananas 315,000, peanuts (groundnuts) 260,000, papayas 215,000, mangoes 200,000, pineapples 195,000, dried beans 100,000, avocados 62,000, melonseed 40,000, (2005) pimento, allspice 33,000, coffee 21,300; livestock (number of live animals) 4,000,000 goats, 957,000 pigs, game meat 89,000 metric tons; roundwood 77,660,800 cu m, of which fuelwood 94%; fisheries production 238,970 (from aquaculture 1%). Mining and quarrying (2006): copper 130,000⁴; cobalt 28,400⁴; tin 3,500⁴; silver 67,633 kg; gold 10,000 kg; diamonds 28,540,000 carats⁵. Manufacturing (2004): cement 402,500; flour 199,000; steel 130,000; sugar 81,000; paints 67,000; printed fabrics 4,200,000 sq m; cigarettes 2,922,000,000 cartons; shoes 3,223,000 pairs; beer 1,690,000 hectolitres; soft drinks 1,160,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2006) 7,240,000,000 (5,160,000,000); coal (metric tons; 2007) 116,000 (296,000); crude petroleum (barrels; 2008) 7,290,000 (negligible); petroleum products (metric tons; 2006) none (373,000); natural gas, none (none).

Household income and expenditure. Expenditure (1995)⁶: food 61.4%, housing and energy 13.9%, clothing and footwear 4.8%, other 19.9%.

Gross national income (GNI; 2008): U.S.\$9,843,000,000 (U.S.\$150 per capita); purchasing power parity GNI (U.S.\$290 per capita).

Structure of gross domestic product and labour force

	2004		2003	
	in value FC '000,000	% of total value	labour force	% of labour force
Agriculture	1,796,000	43.1	8,417,000	38.2
Mining	337,000	8.1		
Manufacturing	216,000	5.2		
Construction	182,000	4.4		
Public utilities	164,000	3.9		
Transp. and commun.	162,000	3.9		
Trade	818,000	19.6		
Pub. admin., defense	167,000	4.0		
Finance and services	168,000	4.0		
Other	159,000 ⁷	3.8 ⁷		
TOTAL	4,169,000	100.0	22,021,000	100.0

Population economically active (2003)⁸: total 21,718,000; activity rate 40.0% (participation rates: ages 15–64, 77.1%; female 41.1%; unemployed, n.a.).

Price index (2005 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	50.8	70.2	79.3	82.4	100.0	113.1	132.2

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 1.0; remittances, n.a.; foreign direct investment (2004–06 avg.) 37⁹; official development assistance (2005) 1,828. Disbursements for (U.S.\$'000,000): tourism (1997) 7.0; remittances, n.a.

Land use as % of total land area (2003): in temporary crops 3.0%, in permanent crops 0.5%, in pasture 6.6%; overall forest area (2005) 58.9%.

Foreign trade

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.\$'000,000	+217	+73	–17	–156	–243	–423
% of total	13.8%	4.3%	0.8%	5.5%	6.3%	9.4%

Imports (2005): U.S.\$2,465,000,000 (aid-related imports 22.9%, other imports 77.1%). **Major import sources** (2004): South Africa 18.5%; Belgium 15.6%; France 10.9%; U.S. 6.2%; Germany 5.9%; Kenya 4.9%.

Exports (2005): U.S.\$2,042,000,000 (diamonds 48.4%, crude petroleum 20.0%, cobalt [2004] 15.0%, copper [2004] 3.3%, coffee [2004] 0.9%, gold [2004] 0.7%). **Major export destinations:** Belgium 42.5%; Finland 17.8%; Zimbabwe 12.2%; U.S. 9.2%; China 6.5%.

Transport and communications

Transport. Railroads (2004): length 5,138 km¹⁰; passenger-km (2003) 152,930,000; metric ton-km cargo (2003) 506,010,000. Roads (2004): total length 153,497 km (paved c. 2%). Vehicles (1999): passenger cars 172,600; trucks and buses 34,600. Air transport (1999): passenger-km 263,000,000; metric ton-km cargo 39,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	146	2.7	PCs	2007	...	...
Telephones				Dailies	2007	50	0.8
Cellular	2008	9,263 ¹¹	143 ¹¹	Internet users	2008	290	4.5
Landline	2008	37	0.6	Broadband	2007	1.5 ¹¹	0.02 ¹¹

Education and health

Educational attainment: n.a. **Literacy** (2003): percentage of total population age 15 and over literate 65.5%; males literate 76.2%; females literate 55.1%.

Education (2002–03)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	162,797	5,589,634	34.3	...
Secondary/Voc. (age 12–17)	113,904	1,655,023	14.5	...
Tertiary	3,788	60,341	15.9	1 (age 18–22)

Health: physicians (2004) 5,827 (1 per 9,585 persons); hospital beds, n.a.; infant mortality rate per 1,000 live births (2005) 116.5; undernourished population (2002–04) 39,000,000 (74% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): c. 145,000 (army c. 79.0%, central staff c. 9.5%, republican guard c. 5.0%, air force c. 2.0%, navy c. 4.5%); UN peacekeepers (March 2009): 16,600 troops; 1,100 police. **Military expenditure as percentage of GDP** (2007): 1.7%; per capita expenditure U.S.\$3.

¹National languages are Kongo, Lingala, Swahili, and Tshiluba. ²Most transactions are conducted outside of the banking system and often with U.S. dollars. ³To be formally reorganized into 25 provinces and 1 city (Kinshasa) in mid-2009 or later. ⁴Mine output, metal content. ⁵Mostly artisanally mined; 20% of diamonds are of gem quality. ⁶Weights of consumer price index components. ⁷Import duties. ⁸Estimates of the ILO Employment Trends Unit. ⁹Estimated figure. ¹⁰Not all operational because of civil strife. ¹¹Subscribers.

Internet resource for further information:

• Central Bank of the Democratic Republic of the Congo <http://www.bcc.cd>

Congo, Republic of the

Official name: République du Congo
(Republic of the Congo).

Form of government: republic
with two legislative houses (Senate
[72¹]; National Assembly [137¹]).

Chief of state and government: President.²

Capital: Brazzaville.

Official language: French³.

Official religion: none.

Monetary unit: CFA franc (CFAF);

valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2008 ⁴ estimate
Bouenza	Madingou	4,733	12,258	245,382
Cuvette	Owando	18,861	48,850	145,365
Cuvette-Ouest	Ewo	10,039	26,000	58,095
Kouilou	Pointe-Noire	5,270	13,650	82,782
Lékoumou	Sibiti	8,089	20,950	84,005
Likouala	Impfondo	25,500	66,044	91,882
Niari	Dolisie	10,007	25,918	106,608
Plateaux	Djambala	14,826	38,400	183,534
Pool	Kinkala	13,110	33,955	405,235
Sangha	Ouessou	21,542	55,795	49,964
Communes				
Brazzaville	—	39	100	1,308,700
Dolisie	—	7	18	118,562
Mossendjo	—	2	5	18,835
Nkayi	—	3	8	60,453
Ouessou	—	2	5	26,994
Pointe-Noire	—	17	44	647,152
TOTAL		132,047	342,000	3,633,548

Demography

Population (2009): 3,683,000.

Density (2009): persons per sq mi 27.9, persons per sq km 10.8.

Urban-rural (2007): urban 61.0%; rural 39.0%.

Sex distribution (2008): male 49.72%; female 50.28%.

Age breakdown (2008): under 15, 46.1%; 15–29, 27.4%; 30–44, 14.8%; 45–59, 7.4%; 60–74, 3.4%; 75–84, 0.8%; 85 and over, 0.1%.

Population projection: (2020) 4,699,000; (2030) 5,479,000.

Doubling time: 24 years.

Ethnic composition (2000): Kongo 21.2%; Yombe 11.5%; Teke 10.7%; Kougni 8.0%; Mboshi 5.4%; Ngala 4.2%; Sundi 4.0%; other 35.0%.

Religious affiliation (2005): Roman Catholic c. 49%; independent Christian c. 13%; Protestant c. 11%; Muslim c. 2%; other (mostly traditional beliefs and nonreligious) c. 25%.

Major cities (2008⁴): Brazzaville 1,308,700; Pointe-Noire 647,152; Dolisie 118,562; Nkayi 60,453; Ouesso 26,994.

Vital statistics

Birth rate per 1,000 population (2008): 41.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 12.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 29.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 5.92.

Life expectancy at birth (2008): male 52.5 years; female 55.0 years.

Adult population (ages 15–49) living with HIV (2007): 3.5% (world avg. 0.8%).

National economy

Budget (2005). Revenue: CFAF 1,300,100,000,000 (petroleum revenue 80.6%; nonpetroleum receipts 16.9%; grants 2.5%). Expenditures: CFAF 736,400,000,000 (current expenditure 77.0%, of which interest 20.4%, wages and salaries 17.7%; capital expenditure 23.0%).

Public debt (external, outstanding; 2006): U.S.\$5,328,000,000.

Household income and expenditure. Average household size (2000) 5.9.

Gross national income (GNI; 2008): U.S.\$7,134,000,000 (U.S.\$1,970 per capita); purchasing power parity GNI (U.S.\$290 per capita).

Structure of gross domestic product and labour force				
	2004		2003	
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	132,800	5.7	934,000	61.9
Petroleum, mining	1,212,600	52.4		
Manufacturing	139,200	6.0		
Construction	92,600	4.0		
Public utilities	19,700	0.9		
Trade	199,700	8.6		
Transp. and commun.	137,500	5.9		
Pub. admin., defense	153,500	6.6		
Services	157,000	6.8		
Other	71,300	3.1		
TOTAL	2,315,900	100.0	1,509,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 915,000, sugarcane 550,000, oil palm fruit 90,000, bananas 87,000, plantains 62,000, mangoes 25,000, peanuts (groundnuts) 24,000, coffee 2,000, rubber 1,350, cacao beans 1,000; livestock (number of live animals) 290,000 goats, 110,000 cattle, 99,000 sheep; roundwood 3,706,300 cu m, of which fuel-

wood 34%; fisheries production 59,966 (from aquaculture, negligible). Mining and quarrying (2007): gold 100 kg; diamonds, n.a.⁵. Manufacturing (2001): residual fuel oil 206,000⁶; refined sugar 71,814; distillate fuel oils 62,000⁶; gasoline 40,000⁶; aviation gas 38,000⁶; wheat flour 35,000; kerosene 21,000⁶; soap 1,620⁶; cigarettes 4,000,000 cartons; beer 610,000 hectolitres; nonalcoholic drinks 349,000 hectolitres; veneer sheets 12,000 cu m. Energy production (consumption): electricity (kW-hr; 2006) 453,000,000 (864,000,000); coal, none (none); crude petroleum (barrels; 2007) 82,600,000 ([2006] 4,909,000); petroleum products (metric tons; 2006) 625,000 (355,000); natural gas (cu m; 2006) 23,600,000 (23,700,000).

Population economically active (2006): total 1,482,000⁷; activity rate of total population 40.2%⁷ (participation rates: ages 15–64, 69.5%⁷; female 41.3%⁷; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.9	97.1	98.1	100.0	108.1	108.9	117.7

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 54; remittances (2008) 15; foreign direct investment (2005–07 avg.) 473; official development assistance (2007) 127. Disbursements for (U.S.\$'000,000): tourism (2007) 168; remittances (2008) 102.

Land use as % of total land area (2005): in temporary crops 1.4%, in permanent crops 0.1%, in pasture 29.3%, forest area 65.8%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	+1,118	+1,074	+1,074	+1,738	+2,126	+1,491
% of total	54.3%	52.7%	48.2%	53.8%	50.4%	37.2%

Imports (2005): CFAF 746,400,000,000 (nonpetroleum sector 85.9%; petroleum sector 14.1%). **Major import sources** (2002): France c. 26%; U.S. c. 11%; Italy c. 8%; Lebanon c. 6%; Netherlands c. 5%.

Exports (2005): CFAF 2,484,300,000,000 (crude petroleum 92.5%, wood and wood products 4.6%, refined petroleum 1.2%). **Major export destinations** (2002): Taiwan c. 27%; North Korea c. 11%; U.S. c. 10%; South Korea c. 7%; France c. 7%; China c. 7%.

Transport and communications

Transport. Railroads (1998): length 894 km; passenger-km 242,000,000; metric ton-km cargo 135,000,000. Roads (2004): total length 17,289 km (paved 5%). Vehicles: passenger cars (2002) 30,000; trucks and buses (1997) 15,500. Air transport (2002): passenger-km 27,000,000; metric ton-km cargo 3,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	40	12	PCs	2006	17	5.0
Telephones				Dailies	2007	8	3.9
Cellular	2008	1,807 ⁸	470 ⁸	Internet users	2008	155	40
Landline	2005	16	4.0	Broadband	2008	—	—

Education and health

Educational attainment (2005). Percentage of population ages 15–49 having⁹: no formal schooling 5.6%; primary education 28.1%; lower secondary 47.2%; upper secondary/higher 19.1%. **Literacy** (2005): total population age 15 and over literate 87.4%; males literate 92.3%; females literate 82.9%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	10,631	621,702	58.5	55 ¹⁰
Secondary/Voc. (age 12–18)	6,866 ¹¹	235,294 ¹¹	34.3 ¹¹	...
Tertiary ¹²	894	12,456	13.9	4 (age 19–23)

Health: physicians (2000) 540 (1 per 5,745 persons); hospital beds (2001) 5,195 (1 per 623 persons); infant mortality rate per 1,000 live births (2008) 81.7; undernourished population (2003–05) 800,000 (22% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 10,000 (army 80.0%, navy 8.0%, air force 12.0%). **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$26.

¹Statutory number. ²The post of prime minister, an extraconstitutional creation from January 2005, was abolished on September 15, 2009. ³“Functional” national languages are Lingala and Monokutuba. ⁴January 1 projection of the Congolese statistical office. ⁵Republic of the Congo was a major illegal transshipment conduit for diamonds from nearby countries and was expelled from the Kimberley Process in 2004; it was readmitted in 2007. ⁶2000. ⁷Estimate of the ILO Employment Trends Unit. ⁸Subscribers. ⁹Survey of 9,975 persons only (including 7,051 females and 2,924 males). ¹⁰2005–06. ¹¹2003–04. ¹²2002–03.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>
- **Republique du Congo: Centre National de la Statistique**
<http://www.cnsee.org>

Costa Rica

Official name: República de Costa Rica (Republic of Costa Rica).

Form of government: unitary multiparty republic with one legislative house (Legislative Assembly [57]).

Head of state and government: President.

Capital: San José.

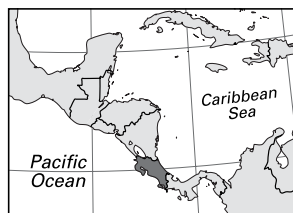
Official language: Spanish.

Official religion: Roman Catholicism.

Monetary unit: Costa Rican colón

(₡); valuation (Sept. 1, 2009)

1 U.S.\$ = ₡588.84; 1 £ = ₡955.45.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2007 ¹ estimate
Alajuela	Alajuela	3,766	9,753	810,165
Cartago	Cartago	1,207	3,125	484,186
Guanacaste	Liberia	3,915	10,141	298,897
Heredia	Heredia	1,026	2,657	398,865
Limón	Limón	3,547	9,188	392,616
Puntarenas	Puntarenas	4,354	11,277	408,654
San José	San José	1,915	4,959	1,505,851
TOTAL		19,730	51,100	4,299,234

Demography

Population (2009): 4,509,000.

Density (2009): persons per sq mi 228.5, persons per sq km 88.2.

Urban-rural (2003): urban 60.6%; rural 39.4%.

Sex distribution (2006²): male 50.76%; female 49.24%.

Age breakdown (2005): under 15, 28.4%; 15–29, 28.1%; 30–44, 21.5%; 45–59, 13.7%; 60–74, 5.9%; 75–84, 1.8%; 85 and over, 0.6%.

Population projection: (2020) 5,084,000; (2030) 5,563,000.

Doubling time: 55 years.

Ethnic composition (2000): white 77.0%; mestizo 17.0%; black/mulatto 3.0%; East Asian (mostly Chinese) 2.0%; Amerindian 1.0%.

Religious affiliation (2004): Roman Catholic (practicing) c. 47%; Roman Catholic (nonpracticing) c. 25%; Evangelical Protestant c. 13%; nonreligious c. 10%; other c. 5%.

Major cities (2006²): San José 344,747³ (urban agglomeration 1,085,000⁴); Limón 68,215⁵; Alajuela 49,376⁵; San Isidro de El General 46,490⁵; San Francisco 45,972⁵; Liberia 45,365⁵.

Vital statistics

Birth rate per 1,000 population (2008): 16.9 (world avg. 20.3); within marriage (2007) 40.1%; outside of marriage (2007) 59.9%.

Death rate per 1,000 population (2008): 4.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 12.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.97.

Marriage/divorce rates per 1,000 population: (2007) 5.8/(1998) 2.2.

Life expectancy at birth (2008): male 76.7 years; female 81.7 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 105.0; communicable diseases 92.3; malignant neoplasms (cancers) 78.1; accidents and violence 46.0.

National economy

Budget (2007). Revenue: ₡2,106,400,000,000 (taxes on goods and services 59.1%, income tax 25.2%, taxes on international trade 7.9%, social contributions 1.8%, grants 1.0%). Expenditures: ₡2,025,500,000,000 (education 31.8%, interest on debt 20.7%, social protection 16.0%, public order 11.4%, transportation 10.7%, health 2.5%).

Public debt (external, outstanding; 2007): U.S.\$3,750,000,000.

Gross national income (2008): U.S.\$27,447,000,000 (U.S.\$6,060 per capita); purchasing power parity GNI (U.S.\$10,950).

Structure of gross domestic product and labour force				
	2005		2008 ²	
	in value ₡'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	753,382	8.0	241,632	11.7
Mining	12,347	0.1	2,167	0.1
Manufacturing	1,895,002	20.0	239,538	11.6
Construction	407,312	4.3	152,445	7.4
Public utilities	261,120	2.8	27,953	1.4
Transp. and commun.	815,033	8.6	143,045	6.9
Trade, restaurants	1,684,867	17.8	477,917	23.2
Finance, real estate	1,205,148	12.7	190,920	9.3
Public administration	344,121	3.6	93,762	4.6
Services	1,580,203	16.7	377,311	18.3
Other	509,695 ⁶	5.4 ⁶	112,923 ⁷	5.5 ⁷
TOTAL	9,468,230	100.0	2,059,613	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,300,000, bananas 2,240,000, pineapples 1,225,000, oil palm fruit 830,000, oranges 332,500, cassava 300,000, cantaloupes/other melons 245,000, rice 155,000, green coffee 110,400, plantains 80,000; livestock (number of live animals) 1,000,000 cattle, 550,000 pigs, 19,500,000 chickens; roundwood 4,608,500 cu m, of which fuelwood 74%; fisheries production 47,500 (from aquaculture 54%). Mining and quarrying (2006): limestone 900,000; gold 1,210 kg. Manufacturing (value added in U.S.\$'000,000; 2003): food products 734; beverages 188; paints, soaps, and pharmaceuticals 169; plastic products 121; paper and paper products 96; bricks, tiles, and cement 95; print-

ing and publishing 95; fabricated metal products 74. Energy production (consumption): electricity (kW-hr; 2006) 8,697,000,000 (8,786,000,000); coal (metric tons; 2006) none (60,000); crude petroleum (barrels; 2006) none (4,911,000); petroleum products (metric tons; 2006) 637,000 (2,132,000); natural gas, none (none).

Population economically active (2008²): total 2,059,613; activity rate of total population 45.4% (participation rates: ages 12–59 [2005] 60.8%; female [2005] 36.2%; unemployed 4.9%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71.5	78.2	87.9	100.0	111.5	121.9	138.3
Monthly earnings index	...	...	...	...	...	...	...

Household income and expenditure (2004–05). Average household size 3.7; average annual household income ₡4,225,680 (U.S.\$9,214); sources of income: wages and salaries 67.9%, rent 11.0%, transfers 10.9%, self-employment 8.1%; expenditure: food, beverages, and tobacco 21.9%, housing and energy 19.3%, transportation 14.8%, recreation and culture 7.9%, wearing apparel 6.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,029; remittances (2008) 635; foreign direct investment (FDI; 2005–07 avg.) 1,409; foreign development assistance (2007) 53. Disbursements for (U.S.\$'000,000): tourism (2007) 628; remittances (2008) 271; FDI (2005–07 avg.) 106.

Land use as % of total land area (2007): in temporary crops 3.9%, in permanent crops 5.9%, in pasture 44.1%, forest area 46.9%⁸.

Foreign trade⁹

Balance of trade (current prices) ¹⁰						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–1,561	–1,852	–2,489	–3,324	–3,615	–5,868
% of total	11.3%	12.6%	14.8%	16.8%	16.2%	23.6%

Imports (2005): U.S.\$9,640,100,000 (machinery and apparatus 34.2%; chemicals and chemical products 11.0%; mineral fuels 10.5%; plastics 7.0%; fabricated metal products 6.8%). **Major import sources:** U.S. 40.1%; Japan 5.8%; Mexico 5.0%; Venezuela 4.9%; Ireland 4.5%.

Exports (2005): U.S.\$7,150,690,000 (machinery and apparatus 29.8%; food products 24.8%, of which bananas 6.8%, pineapples 4.6%, coffee 3.7%; professional and scientific equipment 8.1%; textiles 7.5%; chemicals and chemical products 6.0%). **Major export destinations:** U.S. 40.2%; Hong Kong 6.8%; Netherlands 6.3%; Guatemala 4.0%; Nicaragua 3.9%.

Transport and communications

Transport. Railroads (2004): 278 km¹¹. Roads (2006): total length 22,359 mi, 35,983 km (paved 25%). Vehicles (2004): passenger cars 620,992; trucks and buses 220,456. Air transport (2005)¹²: passenger-km 2,284,000,000; metric ton-km cargo 10,351,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,068	257	PCs	2005	1,000	233
Telephones				Dailies	2007	229 ¹³	70 ¹³
Cellular	2008	1,887 ¹⁴	416 ¹⁴	Internet users	2007	1,500	336
Landline	2008	1,438	317	Broadband	2008	176 ¹⁴	39 ¹⁴

Education and health

Educational attainment (2004). Percentage of population age 5 and over having: no formal schooling 9.9%; incomplete primary education 23.3%; complete primary 24.5%; incomplete secondary 18.2%; complete secondary 8.5%; higher 12.7%; other/unknown 2.9%. **Literacy** (2003): total population age 15 and over literate 96.0%; males literate 95.9%; females literate 96.1%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	27,518	536,436	19.5	...
Secondary/Voc. (age 12–16)	21,097	377,924	17.9	64
Tertiary	4,494 ¹⁵	110,717 ¹⁶	17.7 ¹⁵	25 ¹⁶ (age 17–21)

Health: physicians (2004) 6,600 (1 per 644 persons); hospital beds (2003) 5,908 (1 per 714 persons); infant mortality rate per 1,000 live births (2008) 9.0; undernourished population (2003–05) less than 5% of total population.

Military

Paramilitary expenditure as percentage of GDP (2008): 0.7%; per capita expenditure U.S.\$43. The army was officially abolished in 1948. Paramilitary (police) forces had 9,800 members in November 2008.

¹January 1. ²July 1. ³Population of San José canton. ⁴2003 estimate. ⁵District population. ⁶Taxes less subsidies and imputed bank service charges. ⁷Includes 101,905 unemployed. ⁸Forest area overlaps with other categories. ⁹Imports c.i.f., exports f.o.b. ¹⁰Includes goods imported for reassembly and reexported. ¹¹National rail service was not in regular service from 1995 through 2000. Limited service resumed in 2000. ¹²Lacsa (Costa Rican Airlines) only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵2002–03. ¹⁶2004–05.

Internet resources for further information:

- Central Bank of Costa Rica <http://www.bccr.fi.cr>
- National Institute of Statistics and the Census <http://www.inec.go.cr>

Côte d'Ivoire

Official name: République de Côte d'Ivoire (Republic of Côte d'Ivoire [Ivory Coast]).

Form of government: transitional regime¹ with one legislative house (National Assembly [225²]).

Chief of state and government: President assisted by Prime Minister³.

De facto capital: Abidjan.

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF);

valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12.



Area and population

area		population		area		population	
Regions	sq km	2002 estimate		Regions	sq km	2002 estimate	
Agnebi	9,080	720,900		Moyen-Cavally	14,150	443,200	
Bafing	8,720	178,400		Moyen-Comoé	6,900	488,200	
Bas-Sassandra	25,800	443,200		N'zi-Comoé	19,560	909,800	
Denguélé	20,600	277,000		Savanes	40,323	1,215,100	
Dix-huit Montagnes	16,600	1,125,800		Sud-Bandama	10,650	826,300	
Fromager	6,900	679,900		Sud-Comoé	6,250	536,500	
Haut-Sassandra	15,200	1,186,600		Vallée du Bandama	28,530	1,335,500	
Lacs	8,940	597,500		Worodougou	21,900	400,200	
Lagunes	14,200	4,210,200		Zanzan	38,000	839,000	
Marahoué	8,500	651,700		TOTAL	320,803	17,065,000	

Demography

Population (2009): 20,617,000.

Density (2009): persons per sq mi 166.5, persons per sq km 64.3.

Urban-rural (2008): urban 49.0%; rural 51.0%.

Sex distribution (2007): male 50.75%; female 49.25%.

Age breakdown (2007): under 15, 41.2%; 15–29, 29.2%; 30–44, 16.5%; 45–59, 8.4%; 60–74, 3.9%; 75–84, 0.6%; 85 and over, 0.2%.

Population projection: (2020) 25,504,000; (2030) 29,724,000.

Ethnolinguistic composition (1998)⁴: Akan 42.1%; Mande 26.5%; other 31.4%.

Religious affiliation (2005): traditional beliefs c. 37%; Christian c. 32%, of which Roman Catholic c. 17%, Protestant c. 8%, independent Christian c. 7%; Muslim c. 28%; other c. 3%.

Major cities (2005): Abidjan (agglomeration) 3,576,000; Bouaké 573,700; Daloa 215,100; Yamoussoukro (2003) 185,600; Korhogo (2003) 115,000.

Vital statistics

Birth rate per 1,000 population (2008): 37.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 13.6 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 4.33.

Life expectancy at birth (2008): male 50.3 years; female 53.7 years.

Adult population (ages 15–49) *living with HIV* (2007): 3.9%⁵ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 299; malaria c. 153; lower respiratory infections c. 132; diarrheal diseases c. 102; perinatal conditions c. 92.

National economy

Budget (2005). Revenue: CFAF 1,566,000,000,000 (tax revenue 79.9%; nontax revenue 14.1%; grants 6.0%). Expenditures: CFAF 1,536,600,000,000 (current expenditure 78.4%; interest on public debt 11.5%; remainder 10.1%).

Public debt (external, outstanding; 2006): U.S.\$10,830,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): yams 4,900,000, cassava 2,110,000, plantains 1,590,000, oil palm fruit 1,448,000, cacao beans 1,300,000, sugarcane 1,100,000, rice 677,000, corn (maize) 600,000, taro 355,000, seed cotton 290,000, bananas 235,000, coffee 171,000, cashew nuts 130,000, natural rubber 128,000, peanuts (groundnuts) 85,000, fonio 9,700; livestock (number of live animals) 1,523,000 sheep, 1,500,000 cattle; roundwood 10,254,400 cu m, of which fuelwood 86%; fisheries production 33,416 (from aquaculture 2%). Mining and quarrying (2007): gold 1,243 kg; diamonds 300,000 carats⁶. Manufacturing (value added in CFAF '000,000,000; 1997): food 156.6, of which cocoa and chocolate 72.4, vegetable oils 62.7; chemicals 60.2; wood products 55.9; refined petroleum 46.0; textiles 37.9. Energy production (consumption): electricity (kW-hr; 2006) 5,510,300 ([2005] 4,181,000,000); coal, none (none); crude petroleum (barrels; 2007) 18,800,000 ([2005] 30,000,000); petroleum products (metric tons; 2005) 3,136,000 (974,000); natural gas (cu m; 2005) 1,661,000,000 (1,661,000,000).

Population economically active (2006)⁷: total 6,937,000; activity rate of total population 36.7% (participation rates: ages 15–64, 66.2%; female 30.5%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.8	94.9	96.3	100.0	102.5	104.4	111.0

Household income and expenditure. Average household size (2004) 8.0; expenditure (1996)⁸: food 32.2%, housing and energy 13.9%, hotels and restaurants 12.3%, transportation 9.6%, clothing 7.4%, household equipment 5.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 104; remittances (2008) 215; foreign direct investment (2005–07 avg.) 353; official development assistance (2007) 165. Disbursements for (U.S.\$'000,000): tourism (2007) 396; remittances (2008) 19.

Gross national income (GNI; 2008): U.S.\$20,257,000,000 (U.S.\$980 per capita); purchasing power parity GNI (U.S.\$1,580 per capita).

Structure of gross domestic product and labour force

	2004			
	in value CFAF '000,000,000	% of total value	labour force	% of labour force
Agriculture	1,895.9	23.2	3,107,000	44.8
Mining	116.4	1.4		
Manufacturing	1,331.3	16.3		
Public utilities	190.4	2.3	3,827,000	55.2
Construction	248.9	3.0		
Transp. and commun.	381.2	4.7		
Trade	1,141.1	14.0		
Public admin., defense	2,271.4	27.8		
Finance, services	601.99	7.49	6,934,000	100.0
Other	8,178.5	100.0 ¹⁰		

Land use as % of total land area (2007): in temporary crops 8.8%, in permanent crops 13.2%, in pasture 41.5%, forest area 32.8%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	+1,965	+1,486	+1,388	+1,263	+1,626	+1,219
% of total	36.5%	28.3%	23.4%	19.1%	22.5%	17.7%

Imports (2005): CFAF 2,687,000,000,000 (machinery and transport equipment 40.1%, crude and refined petroleum 32.3%, food products 17.0%). **Major import sources** (2004): France 24.3%; Nigeria 19.2%; U.K. 4.0%; China 4.0%; Italy 3.8%.

Exports (2005): CFAF 3,950,000,000,000 (cocoa beans and products 27.5%, crude petroleum and petroleum products 26.9%, wood and wood products 3.8%, coffee 2.1%). **Major export destinations** (2004): U.S. 11.6%; Netherlands 10.3%; France 9.5%; Italy 5.5%; Belgium 4.7%; Germany 4.7%.

Transport and communications

Transport. Railroads (1999): route length (2004) 660 km; passenger-km 93,100,000; metric ton-km cargo 537,600,000. Roads (2004): total length 80,000 km (paved 8%). Vehicles: passenger cars (2002) 114,000; trucks and buses (2001) 54,900. Air transport (2002)¹¹: passenger arrivals and departures 821,400; cargo unloaded and loaded 16,699 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	880	52	PCs	2004	262	16
Telephones				Dailies	2007	200 ¹²	19 ¹²
Cellular	2008	10,449 ¹³	533 ¹³	Internet users	2008	66	34
Landline	2008	357	18	Broadband	2005	1.2 ¹³	0.07 ¹³

Education and health

Educational attainment (1998–99)¹⁴. Percentage of population age 25 and over having: no formal schooling 62.3%; primary education 19.4%; secondary 14.3%; higher 3.3%; unknown 0.7%. **Literacy** (2007): percentage of population age 15 and over literate 55.5%; males 65.1%; females 45.5%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	53,161	2,179,801	41.0	55 ¹⁵
Secondary/Voc. (age 12–18)	23,184 ¹⁶	736,649 ¹⁷	28.6 ¹⁶	20 ¹⁷
Tertiary ^{15, 18}	1,131	42,500	37.6	...

Health: physicians (2004) 2,081 (1 per 8,143 persons); hospital beds (2001) 5,981 (1 per 2,660 persons); infant mortality rate (2008) 98.3; undernourished population (2003–05) 2,600,000 (14% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (November 2008): 17,050 (army 38.1%, navy 5.3%, air force 4.1%, presidential guard 7.9%, gendarmerie¹⁹ 44.6%). **Military expenditure as percentage of GDP** (2007): 1.4%; per capita expenditure U.S.\$15.²⁰

¹Côte d'Ivoire was split between a government-controlled south and a rebel-held north from September 2002 through March 2007. The peace accord signed between the warring factions in March 2007 enabled the creation of a power-sharing transitional government in April 2007. ²Statutory number; no elections between December 2000 and August 2009. ³Both positions were transitional as of August 2009. ⁴Local population only (in 1998 foreigners constituted 26% of the population). At least 1 million foreigners have been forced to leave southern Côte d'Ivoire from September 2002. ⁵Statistically derived midpoint of range. ⁶A UN embargo on rough diamond exports was in effect from November 2004 to November 2007. ⁷Estimates of the ILO Employment Trends Unit. ⁸Weights of consumer price index components. ⁹Import duties and taxes. ¹⁰Detail does not add to total given because of rounding. ¹¹Abidjan airport only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Based on sample survey of 4,572 persons (38% urban, 62% rural). ¹⁵2002–03. ¹⁶2000–01. ¹⁷2001–02. ¹⁸Universities of Abobo-Adjamé and Cocody only. ¹⁹The gendarmerie or the national police force reinforces the army. ²⁰Peacekeeping troops: UN (March 2009) 7,800, French (November 2008) 1,800; however, dismantling of the buffer zone occupied by the peacekeeping troops began in April 2007.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>
- **Institut National de la Statistique** <http://www.ins.ci>

Croatia

Official name: Republika Hrvatska (Republic of Croatia).

Form of government: multiparty republic with one legislative house (Croatian Parliament [153]).

Head of state: President.

Head of government: Prime Minister.

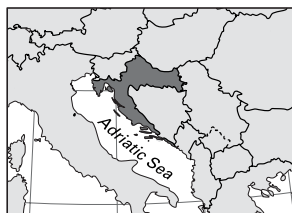
Capital: Zagreb.

Official language: Croatian.

Official religion: none¹.

Monetary unit: kuna (kn; plural kune); valuation (Sept. 1, 2009)

1 U.S.\$ = kn 5.14; 1 £ = kn 8.34.



Area and population

	area	population		area	population
	sq km	2007 estimate		sq km	2007 estimate
Counties			Counties		
Bjelovar-Bilogora	2,638	126,651	Sisak-Moslavina	4,448	176,189
Dubrovnik-Neretva	1,782	125,966	Slavonski Brod-Posavina	2,027	174,111
Istra (Istria)	2,813	212,915	Split-Dalmatia	4,524	480,696
Karlovac	3,622	134,479	Varaždin	1,260	181,244
Koprivnica-Križevci	1,734	120,645	Virovitica-Podravina	2,021	88,983
Krapina-Zagorje	1,230	137,735	Vukovar-Srijem	2,448	198,761
Lika-Senj	5,350	51,167	Zadar	3,643	172,982
Medimurje	730	117,994	Zagreb	3,078	325,037
Osijek-Baranja	4,149	322,327			
Požega-Slavonia	1,821	83,110	City		
Primorje-Gorski kotar	3,590	304,738	Zagreb	640	785,866
Sibenik-Knin	2,994	114,386	TOTAL	56,542	4,435,982

Demography

Population (2009): 4,431,000.

Density (2009): persons per sq mi 203.0, persons per sq km 78.4.

Urban-rural (2005): urban 56.5%; rural 43.5%.

Sex distribution (2006): male 48.17%; female 51.83%.

Age breakdown (2004): under 15, 16.1%; 15–29, 20.2%; 30–44, 20.9%; 45–59, 20.7%; 60–74, 15.9%; 75–84, 5.3%; 85 and over, 0.9%.

Population projection: (2020) 4,335,000; (2030) 4,197,000.

Ethnic composition (2001): Croat 89.6%; Serb 4.5%; Bosniac 0.5%; Italian 0.4%; Hungarian 0.4%; other 4.6%.

Religious affiliation (2001): Christian 92.6%, of which Roman Catholic 87.8%, Eastern Orthodox 4.4%; Muslim 1.3%; nonreligious/atheist 5.2%; other 0.9%.

Major cities (2001): Zagreb 691,724; Split 175,140; Rijeka 143,800; Osijek 90,411; Zadar 69,556.

Vital statistics

Birth rate per 1,000 population (2007): 9.4 (world avg. 20.3); within marriage 88.5%; outside of marriage 11.5%.

Death rate per 1,000 population (2007): 11.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): –2.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.40.

Marriage/divorce rates per 1,000 population (2007): 5.2/1.1.

Life expectancy at birth (2007): male 72.3 years; female 79.2 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 561.8; malignant neoplasms (cancers) 279.3; diseases of the respiratory system 65.2; accidents, violence, and poisoning 64.6; diseases of the digestive system 53.3.

National economy

Budget (2007). Revenue: kn 108,321,000,000 (tax revenue 59.3%, of which VAT 35.0%, excise taxes 11.2%; social security contributions 34.3%; nontax revenue 6.0%; grants 0.4%). Expenditures: kn 108,008,000,000 (social security and welfare 44.6%; compensation of employees 25.5%; goods and services 4.2%; other 25.7%).

Population economically active (2005): total (1,802,000); activity rate 40.5% (participation rates: ages 15–64, 58.3%; female 45.5%; unemployed [July 2005–June 2006] 12.7%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.2	94.8	96.8	100.0	103.2	106.2	112.6
Annual earnings index	85.0	90.0	95.4	100.0	105.2	110.6	118.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 1,582,606, corn (maize) 1,424,599, wheat 950,000, potatoes 215,333, grapes 180,000, barley 149,000, soybeans 90,637, apples 78,747, sunflower seed 54,303, tomatoes 43,600, olives 34,527, tobacco leaves 10,000; livestock (number of live animals) 1,489,000 pigs, 680,000 sheep, 483,000 cattle; roundwood 4,210,000 cu m, of which fuelwood 18%; fisheries production (2006) 52,750 (from aquaculture 28%). Mining and quarrying (2005): ceramic clay 200,000; ornamental stone 1,000,000 sq m. Manufacturing (value added in kn '000,000; 2004): food products and beverages 7,112; refined petroleum 4,005; chemicals and chemical products 2,774; bricks, cement, and ceramics 2,642; fabricated metals 2,623; printing and publishing 2,224. Energy production (consumption): electricity (kW-hr; 2007) 12,540,000,000 ([2006] 18,052,000,000); coal (metric tons; 2006) none (1,071,000); crude petroleum (barrels; 2007) 6,710,000 ([2006] 34,300,000); petroleum products (metric tons; 2006) 4,537,000 (4,490,000); natural gas (cu m; 2007) 2,713,000,000 ([2006] 2,802,000,000).

Gross national income (GNI; 2008): U.S.\$60,192,000,000 (U.S.\$13,570 per capita); purchasing power parity GNI (U.S.\$18,420 per capita).

Structure of gross domestic product and labour force

	2007		2008	
	in value kn '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, hunting, fishing	16,477	6.0	74,943	4.2
Mining			9,302	0.5
Manufacturing	56,296	20.5	302,117	16.9
Public utilities			26,849	1.5
Construction	16,417	6.0	145,656	8.1
Transp. and commun.	24,048	8.7	99,112	5.5
Trade, restaurants	38,579	14.0	360,592	20.1
Finance, real estate	45,479	16.5	154,756	8.6
Pub. admin., defense	43,980	16.0	110,059	6.1
Services			271,419	15.1
Other	33,805 ²	12.3 ²	236,741 ³	13.2 ³
TOTAL	275,078⁴	100.0	1,791,546	100.0⁴

Public debt (external, outstanding; 2007): U.S.\$14,212,000,000.

Household income and expenditure. Average household size (2001) 3.0; average annual income per household (2005) kn 69,180 (U.S.\$11,629); sources: wages 51.0%, pensions 17.9%, self-employment 16.5%; expenditure (2007): food and nonalcoholic beverages 31.6%, housing and energy 13.3%, transportation 11.5%, clothing and footwear 7.9%, recreation and culture 6.2%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 9,233; remittances (2008) 1,602; foreign direct investment (FDI; 2004–06 avg.) 2,191; official development assistance (2006) 200. Disbursements for (U.S.\$'000,000): tourism (2007) 985; remittances (2008) 110; FDI (2004–06 avg.) 267.

Land use as % of total land area (2007): in temporary crops 14.9%, in permanent crops 1.5%, in pasture 5.6%, forest area (2005) 39.6%.

Foreign trade⁵

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–8,022	–8,565	–9,788	–11,126	–13,469	–16,617
% of total	39.3%	34.7%	35.8%	34.9%	35.3%	37.1%

Imports (2007): U.S.\$23,658,000,000 (basic manufactures 20.0%, mineral fuels 15.0%, chemicals and chemical products 11.0%, road vehicles/parts 9.3%).

Major import sources: Italy 16.3%; Germany 14.4%; Russia 9.9%; China 6.2%; Slovenia 6.0%; Austria 5.2%.

Exports (2007): U.S.\$11,294,000,000 (basic manufactures 15.7%, mineral fuels 12.7%, ships and boats [particularly tankers] 11.5%, chemicals and chemical products 9.4%, food 8.0%). **Major export destinations:** Italy 19.2%; Bosnia and Herzegovina 14.4%; Germany 10.1%; Slovenia 8.3%; Austria 6.2%.

Transport and communications

Transport. Railroads (2004): length 2,726 km; (2007) passenger-km 1,611,–000,000; (2007) metric ton-km cargo 3,574,000,000. Roads (2005): total length 28,472 km (paved [2003] 85%). Vehicles (2008⁶): passenger cars 1,529,271; trucks and buses 175,455. Air transport (2007): passenger-km 1,080,000,000; metric ton-km cargo 2,220,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Television	2003	1,401	315	PCs	2004	842	191
Telephones				Dailies	2007	795 ⁷	216 ⁷
Cellular	2008	5,924 ⁸	1,302 ⁸	Internet users	2008	2,244	493
Landline	2008	1,851	407	Broadband	2008	525 ⁸	115 ⁸

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no schooling or unknown 3.5%; incomplete primary education 15.8%; primary 21.7%; secondary 47.1%; postsecondary and higher 11.9%. **Literacy** (2003): population age 15 and over literate 98.5%; males 99.4%; females 97.8%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	11,415	194,748	17.1	90
Secondary/Voc. (age 11–18)	41,491	395,836	9.5	87
Tertiary	9,486	136,646	14.4	44 (age 19–23)

Health (2005): physicians 8,216 (1 per 541 persons); hospital beds 24,000 (1 per 185 persons); infant mortality rate per 1,000 live births 5.7; undernourished population (2002–04) 300,000 (7% of total population based on the consumption of a minimum daily requirement of 2,010 calories).

Military

Total active duty personnel (November 2008): 18,600 (army 61.2%, navy 10.0%, air force 18.8%, joint staff 10.0%). **Military expenditure as percentage of GDP** (2008): 1.7%; per capita expenditure U.S.\$217.

¹However, the Roman Catholic Church receives state financial support through concordats with the Vatican. ²Taxes less subsidies and less imputed bank service charges.

³Unemployed. ⁴Detail does not add to total given because of rounding. ⁵Imports c.i.f.; exports f.o.b. ⁶September 30. ⁷Circulation. ⁸Subscribers.

Internet resources for further information:

- Croatian Bureau of Statistics <http://www.dzs.hr>
- Croatian National Bank <http://www.hnb.hr/eindex.htm>

Cuba

Official name: República de Cuba
(Republic of Cuba).

Form of government: unitary socialist republic with one legislative house (National Assembly of the People's Power [614]).

Head of state and government: President.

Capital: Havana.

Official language: Spanish.

Official religion: none.

Monetary unit: Cuban peso (CUP); valuation (Sept. 1, 2009)
1 U.S.\$ = CUP 23.15¹;
1 £ = CUP 37.56¹.



Area and population		area ²		population
Provinces	Capitals	sq mi	sq km	2008 estimate
Camagüey	Camagüey	6,029	15,615	782,488
Ciego de Avila	Ciego de Avila	2,619	6,783	421,675
Cienfuegos	Cienfuegos	1,614	4,180	402,817
Ciudad de la Habana	—	278	721	2,152,391
Granma	Bayamo	3,234	8,375	834,108
Guantánamo	Guantánamo	2,381	6,168	510,963
Holguín	Holguín	3,588	9,293	1,036,314
La Habana ³	Havana	2,213	5,732	741,900
Las Tunas	Las Tunas	2,544	6,588	533,703
Matanzas	Matanzas	4,557	11,803	685,959
Pinar del Río	Pinar del Río	4,210	10,904	730,734
Sancti Spiritus	Sancti Spiritus	2,601	6,737	464,620
Santiago de Cuba	Santiago de Cuba	2,377	6,156	1,044,773
Villa Clara	Santa Clara	3,248	8,412	807,687
Special municipality				
Isla de la Juventud	Nueva Gerona	934	2,419	86,309
TOTAL		42,427	109,886	11,236,444⁴

Demography

Population (2009): 11,235,000.

Density (2009): persons per sq mi 264.8, persons per sq km 102.2.

Urban-rural (2005): urban 75.5%; rural 24.5%.

Sex distribution (2008): male 50.09%; female 49.91%.

Age breakdown (2005): under 15, 19.2%; 15–29, 20.5%; 30–44, 27.6%; 45–59, 17.0%; 60–74, 10.8%; 75–84, 3.6%; 85 and over, 1.3%.

Population projection (2020) 11,207,000; (2030) 11,033,000.

Ethnic composition (1994): mixed 51.0%; white 37.0%; black 11.0%; other 1.0%.

Religious affiliation (2005): Roman Catholic c. 47%; Protestant c. 5%; nonreligious c. 22%; other c. 26%.⁵

Major cities (2006): Havana 2,174,790; Santiago de Cuba 425,990; Camagüey 306,702; Holguín 274,805; Santa Clara 208,739; Guantánamo 208,579.

Vital statistics

Birth rate per 1,000 population (2008): 10.9 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 3.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.50.

Marriage/divorce rates per 1,000 population (2008): 5.5/3.2.

Life expectancy at birth (2005–07): male 76.0 years; female 80.0 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 191.3; malignant neoplasms (cancers) 181.5; cerebrovascular disease 81.1; influenza and pneumonia 52.3; accidents 37.4; lower respiratory diseases 25.5.

National economy

Budget (2008). Revenue: CUP 42,055,600,000 (tax revenue 61.5%; nontax revenue 38.5%). Expenditures: CUP 46,255,600,000 (current revenue 90.3%, of which education 16.2%, health 15.5%, social security contributions 9.5%, public safety and defense 4.4%; capital expenditure 9.7%).

Public debt (external, outstanding; 2004): U.S.\$12,000,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 11,100,000, tomatoes 640,000, plantains 540,000, rice 500,000, cassava 460,000, pumpkins, squash, and gourds 450,000, oranges 420,000, corn (maize) 390,000, sweet potatoes 310,000, tobacco leaves 30,000; livestock (number of live animals) 3,750,000 cattle, 2,765,000 sheep, 1,765,000 pigs, 30,000,000 chickens; roundwood 2,345,000 cu m, of which fuelwood 68%; fisheries production 62,144 (from aquaculture 50%). Mining and quarrying (2006): nickel (metal content) 75,000; cobalt (metal content) 4,300. Manufacturing (2006): cement 1,713,900; steel 257,200; cigarettes (2004) 12,800,000,000 units; colour televisions 157,500 units; beer 2,298,100 hectolitres; other alcoholic beverages (excluding wine) 294,700 hectolitres. Energy production (consumption): electricity (kW-hr; 2008) 17,957,100,000 (17,957,100,000); coal (metric tons; 2006) none (11,000); crude petroleum (barrels; 2006) 18,700,000 (39,400,000); petroleum products (metric tons; 2006) 1,861,000 (4,527,000); natural gas (cu m; 2006) 1,085,000,000 (1,085,000,000).

Population economically active (2008): total 5,027,800; activity rate 44.7% (participation rates: ages 15 and over [2004] 52.3%; female 38.0%; unemployed 1.6%).

Price and earnings indexes (2000 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	104.3 ⁶	105.0 ⁶	106.0 ⁶	110.5 ⁶	114.5	121.8	125.9
Monthly earnings index	112.4	123.2	132.6	...	...	...	...

Gross national income (2007): U.S.\$51,167,000,000 (U.S.\$4,541 per capita).

Structure of gross domestic product and labour force			
	2008	2004	
	in value CUP '000 ⁷	% of total value ⁷	labour force ⁸ % of labour force ⁸
Agriculture	1,913,600	4.2	982,400 21.2
Mining	286,300	0.6	27,600 0.6
Manufacturing	6,129,000	13.4	573,100 12.3
Public utilities	658,900	1.4	62,600 1.3
Construction	2,870,600	6.3	236,700 5.1
Transp. and commun.	4,074,700	8.9	278,200 6.0
Finance, real estate	2,592,700	5.7	104,000 2.2
Trade, hotels, and restaurants	10,349,500	22.6	610,300 13.1
Pub. admin., social security	1,793,100	3.9	— —
Services	14,167,200	31.0	1,766,800 38.1
Other	938,400	2.1	— —
TOTAL	45,774,000	100.0⁹	4,641,700 100.0⁹

Household income and expenditure. Average household size (2002) 3.2.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,141; remittances (2003) 1,200; foreign direct investment (2005–07 avg.) 20⁶; official development assistance (2007) 92. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 32.6%, in permanent crops 3.8%, in pasture 23.9%, forest area 25.7%.

Foreign trade¹⁰

Balance of trade (current prices)					
	2001	2002	2003	2004	2005 ⁶
U.S.\$'000,000	–3,586	–2,755	–2,985	–3,278	–5,539
% of total	51.9%	49.2%	47.1%	41.3%	58.1%

Imports (2004): U.S.\$5,610,000,000 (food 18.4%, of which cereals 8.0%; machinery and apparatus 17.5%; refined petroleum 12.8%; chemicals and chemical products 9.6%; crude petroleum 9.4%). **Major import sources** (2006): Venezuela 23.5%; China 16.7%; Spain 9.0%; Germany 6.5%; U.S. 5.1%.

Exports (2004): U.S.\$2,332,000,000 (nickel oxide 45.5%; food 19.7%, of which raw cane sugar 11.5%; cigars 8.7%; medicine 6.0%). **Major export destinations** (2006): The Netherlands 28.0%; Canada 19.8%; Venezuela 10.7%; China 8.9%; Spain 5.4%.

Transport and communications

Transport. Railroads (2003)¹¹: length 2,651 mi, 4,226 km; (2001) passenger-km 1,766,600; metric ton-km cargo 806,900,000. Roads (2000): total length 37,814 mi, 60,856 km (paved 49%). Vehicles (1998): passenger cars 172,574; trucks and buses 185,495. Air transport (2003)¹²: passenger-km 2,044,000,000; metric ton-km cargo 40,933,000.

Communications			units		
Medium	date	number in '000s	per 1,000 persons	Medium	date
Televisions	2004	3,000	267	PCs	2005
Telephones				Dailies	2007
Cellular	2008	332 ¹⁴	29 ¹⁴	Internet users	2008
Landline	2008	1,104	98	Broadband	2007

Education and health

Educational attainment (2002): Percentage of population age 25 and over having: no formal schooling 14.1%; primary education 17.2%; secondary 26.6%; vocational/technical/teacher training 32.8%; university 9.3%. **Literacy** (2004): total population age 15 and over literate 96.9%; males 97.0%; females 96.8%.

Education (2006–07)			
	teachers	students	enrollment rate (%)
Primary (age 6–11)	91,530	883,132	9.6
Secondary/Voc. (age 12–17)	93,311	898,833	9.6
Tertiary	135,800	864,846	6.4

Health (2006): physicians 70,594 (1 per 160 persons); hospital beds (2004) 70,079 (1 per 160 persons); infant mortality rate per 1,000 live births (2008) 4.7; undernourished population (2003–04) less than 5% of total population.

Military

Total active duty personnel (November 2008): 49,000 (army 77.6%, navy 6.1%, air force 16.3%); U.S. military forces at Naval Base Guantanamo Bay (November 2008) 903. **Military expenditure as percentage of GDP** (2005): 3.8%; per capita expenditure U.S.\$151.

¹Domestic transactions only; the Cuban convertible peso (CUC) is used for international transactions—1 U.S.\$ = CUC 0.93; 1 £ = CUC 1.51. ²Geographic areas: island of Cuba 40,369 sq mi (104,556 sq km); Isla de la Juventud 851 sq mi (2,204 sq km); numerous adjacent cays (administratively a part of provinces or the Isla de la Juventud) 1,207 sq mi (3,126 sq km). ³Province bordering Ciudad de la Habana on the east, south, and west. ⁴Reported total; summed total is 11,236,441. ⁵Up to 70% of the population also practice Santería. ⁶Estimated figure(s). ⁷At constant 1997 prices. ⁸Employed persons only. ⁹Detail does not add to total given because of rounding. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Cuban Railways only; length of railways exclusively for the transport of sugar equals 4,811 mi (7,742 km). ¹²Cubana airline only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵2004–05.

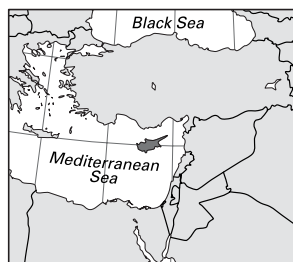
Internet resources for further information:

- Oficina Nacional de Estadísticas <http://www.one.cu>
- Naciones Unidas en Cuba <http://www.onu.org.cu>

Cyprus

Island of Cyprus

Area: 3,572 sq mi, 9,251 sq km.
Population (2009): 1,084,000¹.



Two de facto states currently exist on the island of Cyprus: the Republic of Cyprus (ROC), predominantly Greek in character, occupying the southern two-thirds of the island, which is the original and still the internationally recognized de jure government of the whole island; and the Turkish Republic of Northern Cyprus (TRNC), proclaimed unilaterally Nov. 15, 1983, on territory originally secured for the Turkish Cypriot population by the July 20, 1974, intervention of Turkey. Only Turkey recognizes the TRNC. Provision of separate data below does not imply recognition of either state's claims but is necessitated by the lack of unified data.

Republic of Cyprus

Official name: Kipriakí Dhimokratía (Greek); Kıbrıs Cumhuriyeti (Turkish) (Republic of Cyprus).

Form of government: unitary multiparty republic with a unicameral legislature (House of Representatives [80²]).

Head of state and government: President.

Capital: Lefkosia (conventional Nicosia).

Official languages: Greek; Turkish.

Monetary unit: euro (€); valuation (Sept. 1, 2009)

1 U.S.\$ = €0.70; 1 £ = €1.13³.

Demography

Area⁴: 2,276 sq mi, 5,896 sq km.

Population (2009): 808,000⁵.

Age breakdown (2008⁶): under 15, 17.5%; 15–29, 24.0%; 30–44, 21.6%; 45–59, 19.6%; 60–74, 12.2%; 75 and over, 5.1%.

Ethnic composition (2000): Greek Cypriot 91.8%; Armenian 3.3%; Arab 2.9%, of which Lebanese 2.5%; British 1.4%; other 0.6%.

Religious affiliation (2001): Greek Orthodox 94.8%; Roman Catholic 2.1%, of which Maronite 0.6%; Anglican 1.0%; Muslim 0.6%; other 1.5%.

Urban areas (2008⁶): Lefkosia 231,800⁷; Limassol 183,000; Larnaca 81,700.

Vital statistics

Birth rate per 1,000 population (2007): 10.9 (world avg. 20.3).

Death rate per 1,000 population (2007): 6.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 1.39.

Life expectancy at birth (2006–07): male 78.3 years; female 81.9 years.

National economy

Budget (2005). Revenue: £C 3,273,700,000 (excises and import duties 41.4%, income tax 22.3%, social security contributions 19.9%). Expenditures: £C 3,459,300,000 (current expenditures 91.3%, development expenditures 8.7%).

Gross national income (GNI; 2007): U.S.\$19,617,000,000 (U.S.\$24,940 per capita); purchasing power parity GNI (U.S.\$26,370 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	306.1	2.0	16,500	4.5
Mining	49.4	0.3	800	0.2
Manufacturing	1,031.3	6.6	40,000	10.9
Construction	1,261.7	8.1	40,200	10.9
Public utilities	278.7	1.8	2,700	0.8
Transp. and commun.	1,015.8	6.5	18,500	5.0
Trade, restaurants	2,749.6	17.6	87,400	23.8
Finance, insurance	3,826.1	24.5	42,700	11.6
Pub. admin., defense	1,375.6	8.8	26,300	7.2
Services	1,923.8	12.4	69,900	19.0
Other	1,778.2 ⁸	11.4 ⁸	22,500	6.1
TOTAL	15,596.3	100.0	367,500	100.0

Production. Agriculture/livestock (in '000 metric tons; 2007): potatoes 135.0, pork 50.4, grapes 45.5, chicken meat 22.0, olives 18.0. Manufacturing (value added in U.S.\$'000,000; 2005): food products, beverages, and tobacco 281; cement, bricks, and ceramics 98; base metals and fabricated metal products 67; paper and paper products 56. Energy production (consumption): electricity (kW-hr; 2006) 4,652,000,000 (4,652,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,687; remittances (2008) 279; foreign direct investment (FDI; 2005–07 avg.) 1,590. Disbursements for (U.S.\$'000,000): tourism (2007) 1,479; remittances (2008) 577; FDI (2005–07 avg.) 826.

Land use as % of total land area (2007)⁹: in temporary crops 10.3%, in permanent crops 4.4%, in pasture 0.1%, forest area 18.9%.

Foreign trade¹⁰

Imports (2006): U.S.\$7,046,000,000 (refined petroleum 17.2%, machinery and apparatus 16.4%, road vehicles 11.0%, food 9.2%). **Major import sources:** Greece 17.3%; Italy 11.4%; U.K. 8.9%; Germany 8.9%; Israel 6.2%.

Exports (2006): U.S.\$1,414,900,000 (refined petroleum 18.2%, telecommunications equipment 9.9%, road vehicles 9.8%, vegetables and fruit 8.9%, medicine 8.6%, cigars/cigarettes 4.5%). **Major export destinations:** U.K. 14.6%; Greece 13.2%; France 7.4%; Germany 4.5%; unspecified 18.6%¹¹.

Transport and communications

Transport. Roads (2004): total length 12,059 km (paved c. 65%). Vehicles (2007): cars 410,936; trucks and buses 120,790. Air transport (2008): passenger-km 3,384,000,000; metric ton-km cargo 46,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	276	384	PCs	2004	249	309
Telephones				Dailies	2007	102 ^{9, 12}	162 ^{9, 12}
Cellular	2008	1,017 ^{9, 13}	1,177 ^{9, 13}	Internet users	2007	380 ⁹	445 ⁹
Landline	2008	413 ⁹	479 ⁹	Broadband	2008	104 ^{9, 13}	120 ^{9, 13}

Education and health

Educational attainment (2008). Percentage of population age 20 and over having: no formal schooling/incomplete primary education 7%; complete primary 18%; secondary 47%; higher education 28%.

Health (2006): physicians 1,950 (1 per 395 persons); hospital beds 2,864 (1 per 269 persons); infant mortality rate per 1,000 live births (2007) 3.1.

Military

Total active duty personnel (2008): 10,000 (national guard 100%); Greek troops 950. **Military expenditure as percentage of GDP** (2007): 2.3%; per capita expenditure U.S.\$635.

Internet resources for further information:

- **Central Bank of Cyprus** <http://www.centralbank.gov.cy>
- **Rep. of Cyprus Statistical Service** http://www.pio.gov.cy/mof/cystat/statistics.nsf/index_en/index_en?OpenDocument

Turkish Republic of Northern Cyprus

Official name: Kuzey Kıbrıs Türk Cumhuriyeti (Turkish) (Turkish Republic of Northern Cyprus).

Capital: Lefkoşa (conventional Nicosia).

Official language: Turkish.

Monetary unit: new Turkish lira (YTL); valuation (Sept. 1, 2009) 1 U.S.\$ = YTL 1.50; 1 £ = YTL 2.44; 1 YTL = 1,000,000 (old TL).

Population (2009): 276,000¹ (Lefkoşa 49,237¹⁴; Mağusa [Famagusta] 34,803¹⁴; Girne [Kyrenia] 24,122¹⁴; Güzelyurt [Morphou] 12,425¹⁴).

Sex distribution (2006): male 53.99%; female 46.01%.

Ethnic composition (2006): Turkish Cypriot/Turkish 96.8%; other 3.2%.

Birth rate per 1,000 population (2007): 15.0 (world avg. 20.3).

Death rate per 1,000 population (2007): 6.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007) 1.80.

Structure of gross domestic product and labour force

	2007		2003	
	in value YTL '000	% of total value	labour force	% of labour force
Agriculture and fishing	288,152	6.2	14,339	14.9
Mining	48,682	1.1	1,177	1.2
Manufacturing	204,295	4.4	6,438	6.7
Construction	364,429	7.9	16,591	17.2
Public utilities	177,832	3.9	1,444	1.5
Transp. and commun.	533,410	11.6	8,396	8.7
Trade, restaurants	630,287	13.7	10,803	11.2
Pub. admin.	1,003,490	21.8	18,605	19.3
Finance, real estate	453,546	9.9	2,404	2.5
Services	493,519	10.7	14,828	15.4
Other	406,650 ¹⁵	8.8 ¹⁵	1,375 ¹⁶	1.4 ¹⁶
TOTAL	4,604,292	100.0	96,400	100.0

Budget (2007). Revenue: YTL 1,912,021,000 (indirect taxes 29.4%, direct taxes 20.5%, foreign aid 14.8%, other 35.3%). Expenditures: YTL 2,125,064,000 (social transfers 39.8%, wages 35.6%, investments 10.7%, defense 5.6%).

Imports¹¹ (2004): U.S.\$853,100,000 (machinery and transport equipment 35.7%, food 9.4%). **Major import sources:** Turkey 60.1%; U.K. 10.7%.

Exports¹¹ (2004): U.S.\$62,000,000 (citrus fruits 32.4%, clothing 18.9%). **Major export destinations:** Turkey 46.3%; U.K. 21.8%.

Health (2007): physicians 474 (1 per 529 persons); hospital beds 1,380 (1 per 194 persons); infant mortality rate per 1,000 live births 15.0.

Internet resource for further information:

- **Turkish Republic of Northern Cyprus State Planning Organization** <http://www.devplan.org>

¹Includes 140,000–150,000 immigrants (mostly from Turkey); excludes 3,050 British military in the Sovereign Base Areas (SBA) in the ROC and 869 UN peacekeeping troops. ²Twenty-four seats reserved for Turkish Cypriots are not occupied. ³The Cyprus pound (£C) was the former monetary unit; on Jan. 1, 2008, 1 £C = €1.71. ⁴Area includes 99 sq mi (256 sq km) of British military SBA and c. 107 sq mi (c. 278 sq km) of the UN Buffer Zone. ⁵Excludes British and UN military forces. ⁶January 1. ⁷ROC only. ⁸Import duties and VAT less imputed bank service charges. ⁹Island of Cyprus. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹May represent bunker and ships' stores. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴2006 census. ¹⁵Import duties. ¹⁶Unemployed.

Czech Republic

Official name: Česká Republika
(Czech Republic).

Form of government: unitary multiparty
republic with two legislative
houses (Senate [81]; Chamber of
Deputies [200]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Prague.

Official language: Czech.

Official religion: none.

Monetary unit: koruna (Kč); valuation
(Sept. 1, 2009) 1 U.S.\$ = Kč 17.87;
1 £ = Kč 29.00.



Area and population

	area	population		area	population
Regions	sq km	2009 ¹ estimate	Regions	sq km	2009 ¹ estimate
Central Bohemia	11,015	1,230,691	South Bohemia	10,057	636,328
Hradec Králové	4,758	554,520	South Moravia	7,196	1,147,146
Karlovy Vary	3,315	308,403	Ústí	5,335	835,891
Liberec	3,163	437,325	Vysočina	6,796	515,411
Moravia-Silesia	5,427	1,250,255	Zlín	3,964	591,412
Olomouc	5,267	642,137			
Pardubice	4,519	515,185			
Písek	7,561	569,627			
			Capital city		
			Prague (Praha)	496	1,233,211
			TOTAL	78,867²	10,467,542

Demography

Population (2009): 10,504,000.

Density (2009): persons per sq mi 344.9, persons per sq km 133.2.

Urban-rural (2003): urban 74.3%; rural 25.7%.

Sex distribution (2006): male 48.83%; female 51.17%.

Age breakdown (2005): under 15, 14.9%; 15–29, 22.1%; 30–44, 21.3%; 45–59, 22.0%; 60–74, 13.6%; 75–84, 5.2%; 85 and over, 0.9%.

Population projection: (2020) 10,737,000; (2030) 10,688,000.

Ethnic composition (2001): Czech 90.4%; Moravian 3.7%; Slovak 1.9%; Polish 0.5%; German 0.4%; Silesian 0.1%; Rom (Gypsy) 0.1%; other 2.9%.

Religious affiliation (2000): Christian 63.0%, of which Roman Catholic 40.4%, unaffiliated Christian 16.0%, Protestant (mostly Lutheran) 3.1%, independent Christian (mostly independent Catholic [Hussite Church of the Czech Republic]) 2.6%; atheist 5.0%; Jewish 0.1%; nonreligious 31.9%.

Major cities (2009¹): Prague 1,233,211; Brno 370,592; Ostrava 307,767; Plzeň 169,273; Liberec 100,914; Olomouc 100,373.

Vital statistics

Birth rate per 1,000 population (2008): 11.5 (world avg. 20.3); within marriage 58.6%; outside of marriage 41.4%.

Death rate per 1,000 population (2008): 10.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 1.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.50.

Marriage/divorce rates per 1,000 population (2008): 5.0/3.0.

Life expectancy at birth (2007): male 73.7 years; female 79.9 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 538.9; malignant neoplasms (cancers) 276.1; accidents, poisoning, and violence 62.3; diseases of the respiratory system 59.0; diseases of the digestive system 47.1.

National economy

Budget (2007). Revenue: Kč 1,151,050,000,000 (tax revenue 92.0%, of which social security contributions 45.3%, taxes on goods and services 26.9%, taxes on income and profits 18.8%; grants 4.3%; nontax revenue 3.7%). Expenditures: Kč 1,210,270,000,000 (social security and welfare 33.7%; health 16.1%; education 9.4%; transportation and communications 7.0%; defense 3.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cereals 7,065,752 (of which wheat 3,955,437, barley 1,919,712, corn [maize] 608,179), sugar beets 2,598,676, rapeseed 1,038,400, potatoes 784,661; live-stock (number of live animals) 2,741,300 pigs, 1,389,600 cattle; roundwood 18,508,000 cu m, of which fuelwood 10%; fisheries production 24,723 (from aquaculture 83%). Mining and quarrying (2007): kaolin 3,604,000; feldspar 514,000. Manufacturing (value added in Kč '000,000; 2003): base and fabricated metals 93,380; food, beverages, and tobacco products 81,440; electrical and optical equipment 70,800; transport equipment 64,144; nonelectrical machinery and apparatus 57,837; glass, cement, and ceramics 46,589; rubber and plastic products 37,035. Energy production (consumption): electricity (kW-hr; 2007) 88,187,000,000 ([2006] 71,730,000,000); hard coal (metric tons; 2007) 12,900,000 ([2005] 9,220,000); lignite (metric tons; 2007) 49,300,000 ([2005] 47,600,000); crude petroleum (barrels; 2006) 2,332,000 (53,800,000); petroleum products (metric tons; 2006) 5,578,000 (6,761,000); natural gas (cu m; 2007) 223,000,000 ([2006] 10,661,000,000).

Household income and expenditure (2004). Average household size 2.5; average annual money income per household Kč 295,011 (U.S.\$11,479); sources of income: wages and salaries 66.7%, transfer payments 20.6%, self-employment 8.8%, other 3.9%; expenditure: food and nonalcoholic beverages 21.3%, housing and energy 19.3%, transportation 11.0%, recreation and culture 10.9%, household furnishings 6.5%.

Population economically active (2007): total 5,198,300; activity rate of total population 50.4% (participation rates: ages 15–64, 69.8%; female 43.6%; unemployed 6.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	95.4	95.5	98.2	100.0	102.5	105.5	112.2
Annual earnings index	83.5	89.1	95.0	100.0	106.5	114.2	124.0

Public debt (external, outstanding; 2004): U.S.\$12,020,000,000.

Gross national income (GNI; 2008): U.S.\$173,154,000,000 (U.S.\$16,600 per capita); purchasing power parity GNI (U.S.\$22,790 per capita).

Structure of gross domestic product and labour force

	2008		2005	
	in value Kč '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	77,416	2.1	189,000	3.7
Mining	47,429	1.3	49,000	0.9
Manufacturing	850,283	22.9	1,296,000	25.0
Construction	208,902	5.6	459,000	8.9
Public utilities	139,800	3.8	77,000	1.5
Transportation and communications	331,541	8.9	360,000	7.0
Trade, hotels	511,663	13.8	797,000	15.4
Finance, real estate	589,787	15.9	385,000	7.4
Pub. admin., defense	184,464	5.0	333,000	6.4
Services	377,309	10.2	819,000	15.8
Other	387,274 ³	10.5 ³	410,000 ⁴	7.9 ⁴
TOTAL	3,705,868	100.0	5,174,000	100.0²

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 6,637; remittances (2008) 1,415; foreign direct investment (FDI; 2005–07 avg.) 8,931. Disbursements for (U.S.\$'000,000): tourism (2007) 3,647; remittances (2008) 3,826; FDI (2005–07 avg.) 927.

Land use as % of total land area (2007): in temporary crops 35.8%, in permanent crops 3.1%, in pasture 12.7%, forest area 34.3%.

Foreign trade⁵

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
Kč '000,000,000	-71.3	-69.8	-26.4	+64.0	+68.7	+122.1
% of total	2.7%	2.5%	0.8%	1.7%	1.6%	2.5%

Imports (2006): Kč 2,111,100,000,000 (machinery and apparatus 31.9%; chemicals and chemical products 10.2%; mineral fuels 9.0%; road vehicles/parts 8.5%). **Major import sources:** Germany 28.5%; China 6.1%; Russia 6.0%; Poland 5.6%; Slovakia 5.4%.

Exports (2006): Kč 2,149,800,000,000 (machinery and apparatus 34.7%, of which computers/office machines/parts 7.8%, general industrial machinery 6.8%; motor vehicles/parts 15.7%; chemicals and chemical products 5.8%; fabricated metals 5.5%). **Major export destinations:** Germany 31.9%; Slovakia 8.4%; Poland 5.7%; France 5.5%; Austria 5.1%.

Transport and communications

Transport. Railroads (2004): route length 9,441 km; passenger-km (2005) 6,667,000; metric ton-km cargo (2005) 14,866,000,000. Roads (2006): total length 128,512 km (paved [2004] 100%). Vehicles (2005): passenger cars 3,958,708; trucks and buses 435,235. Air transport (2008): passenger-km 6,300,000,000; metric ton-km cargo 27,180,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,488	538	PCs	2004	5,100	500
Telephones				Dailies	2007	2,364 ⁶	268 ⁶
Cellular	2008	13,780 ⁷	1,353 ⁷	Internet users	2007	4,400	432
Landline	2008	2,278	224	Broadband	2008	1,760 ⁷	173 ⁷

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal schooling 0.2%; primary education 21.6%; secondary 68.7%; higher 9.5%. **Literacy** (2001): 99.8%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	30,226	473,269	15.7	93 ⁸
Secondary/Voc. (age 11–18)	91,622	966,280	10.5	...
Tertiary	22,549	338,009	15.0	50 (age 19–23)

Health (2005): physicians 36,381 (1 per 282 persons); hospital beds 65,022⁹ (1 per 158 persons); infant mortality rate per 1,000 live births (2008) 2.8; undernourished population (2003–05) less than 5% of total population.

Military

Total active duty personnel (November 2008): 24,083 (army 55.5%, air force 20.5%, joint staff 24.0%). **Military expenditure as percentage of GDP** (2008): 1.5%; per capita expenditure U.S.\$279.

¹January 1. ²Detail does not add to total given because of rounding. ³Taxes less subsidies on products. ⁴Unemployed. ⁵Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ⁶Circulation of daily newspapers. ⁷Subscribers. ⁸2004–05. ⁹Excludes beds at resorts with mineral springs.

Internet resources for further information:

- Czech Statistical Office <http://www.czso.cz>
- Czech National Bank <http://www.cnb.cz/en/index.html>

Denmark¹

Official name: Kongeriget Danmark (Kingdom of Denmark).

Form of government: constitutional monarchy with one legislative house (Folketing [179]).

Chief of state: Danish Monarch.

Head of government: Prime Minister.

Capital: Copenhagen.

Official language: Danish.

Official religion: Evangelical Lutheran.

Monetary unit: Danish krone (DKK;

plural kroner); valuation (Sept. 1, 2009)

1 U.S.\$ = DKK 5.21; 1 £ = DKK 8.44.



Area and population		area		population
Regions ²	Capitals	sq. mi	sq. km	2009 ³ estimate
Capital (Hovedstaden)	Hillerød	989	2,561	1,662,285
Central Jutland (Midtjylland)	Viborg	5,067	13,124	1,247,732
North Jutland (Nordjylland)	Ålborg	3,062	7,933	580,515
South Denmark (Syddanmark)	Vejle	4,713	12,206	1,199,667
Zealand (Sjælland)	Soro	2,808	7,273	821,252
TOTAL		16,640 ⁴	43,098 ⁴	5,511,451

Demography

Population (2009): 5,523,000.

Density (2009): persons per sq mi 331.9, persons per sq km 128.1.

Urban-rural (2004): urban 85.4%; rural 14.6%.

Sex distribution (2009³): male 49.57%; female 50.43%.

Age breakdown (2007³): under 15, 18.6%; 15–29, 17.3%; 30–44, 21.9%; 45–59, 20.2%; 60–74, 15.0%; 75–84, 5.1%; 85 and over, 1.9%.

Population projection: (2020) 5,705,000; (2030) 5,853,000.

Ethnic composition (2007³): Danish 91.9%; Turkish 0.6%; German 0.5%; Iraqi 0.4%; Swedish 0.4%; Norwegian 0.3%; Bosnian 0.3%; other 5.6%.

Religious affiliation (2006): Evangelical Lutheran 83.0%; other Christian 1.3%;

Muslim 3.7%; nonreligious 5.4%; atheist 1.5%; other 5.1%.

Major urban areas (2008³): Greater Copenhagen 1,153,615; Århus 237,551; Odense 158,163; Ålborg 121,818; Esbjerg 70,880.

Vital statistics

Birth rate per 1,000 population (2008): 11.8 (world avg. 20.3); within marriage 53.8%; outside of marriage 46.2%.

Death rate per 1,000 population (2008): 9.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 1.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.89.

Marriage/divorce rates per 1,000 population (2008): 6.8/2.7.

Life expectancy at birth (2007–08): male 76.3 years; female 80.7 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 324.4; malignant neoplasms (cancers) 281.1; diseases of the respiratory system 96.6; mental disorders/diseases of the nervous system 71.1.

National economy

Budget (2007). Revenue: DKK 694,084,000,000 (taxes on income and profits 44.4%; taxes on goods and services 39.8%; other 15.8%). Expenditures: DKK 613,412,000,000 (social protection 35.1%, education 11.4%, economic affairs 5.8%, defense 4.3%, health 0.2%).

National debt (December 2006): U.S.\$57,887,000,000.

Population economically active (2007): total 2,893,200⁶; activity rate of total population 53.0%⁷ (participation rates: ages 15–64, 80.2%⁶; female 47.1%⁶; unemployed [July 2005–June 2006] 5.0%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	95.1	97.1	98.2	100.0	101.9	103.6	107.2
Hourly earnings index	90.9	94.3	97.2	100.0	103.1	107.0	...

Household income and expenditure. Average household size (2005) 2.2; average annual disposable income per household (2003) DKK 270,176 (U.S.\$41,010); sources of gross income (2003): wages and salaries 63.8%, transfers 24.6%, property income 6.8%, self-employment 3.9%; expenditure (2003): housing 22.5%, transportation and communications 15.7%, food 11.1%, recreation and entertainment 11.1%, energy 7.5%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 4,600,000, wheat 4,519,200, barley 3,104,200, sugar beets 2,255,300, potatoes 1,625,600, rapeseed 596,300, oats 311,600; livestock (number of live animals) 13,599,000 pigs, 1,579,000 cattle; roundwood 2,566,000 cu m, of which fuelwood 43%; fisheries production 684,191 metric tons (from aquaculture 5%). Mining and quarrying (2007): sand and gravel 28,600,000 cu m; chalk 1,950,000 metric tons. Manufacturing (value of sales in DKK '000,000; 2005): food products 121,040; nonelectrical machinery and apparatus 66,050; computer and telecommunications equipment 49,078; fabricated metals 35,716; pharmaceuticals 35,046; printing and publishing 27,387. Energy production (consumption): electricity (kW-hr; 2007) 37,394,000,000 (2006) 38,781,000,000; coal (metric tons; 2006) none (9,436,000); crude petroleum (barrels; 2007) 111,300,000 ([2006] 59,111,000); petroleum products (metric tons; 2006) 7,840,000 (6,800,000); natural gas (cu m; 2006) 10,053,000,000 (4,918,000,000).

Gross national income (GNI; 2008): U.S.\$325,060,000,000 (U.S.\$59,130 per capita); purchasing power parity GNI (U.S.\$37,280 per capita).

Structure of gross domestic product and labour force				
	2008		2005	
	in value DKK '000,000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture, fishing	18,489	1.1	80,400	2.8
Mining	66,853	3.8	...	...
Manufacturing	209,269	12.0	442,300	15.4
Construction	86,243	5.0	192,500	6.7
Public utilities	23,622	1.4	15,200	0.5
Transp. and commun.	128,823	7.4	175,300	6.1
Trade, restaurants	193,272	11.1	470,500	16.4
Finance, real estate	357,182	20.5	342,300	11.9
Pub. admin., defense	87,814	5.0	166,700	5.8
Services	306,960	17.6	832,500	28.9
Other	261,188 ⁸	15.0 ⁸	158,400 ⁹	5.5 ⁹
TOTAL	1,739,716 ⁴	100.0 ⁴	2,876,100	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 6,218; remittances (2008) 1,087; foreign direct investment (FDI; 2005–07 avg.) 9,243. Disbursements for (U.S.\$'000,000): tourism (2007) 8,791; remittances (2008) 3,227; FDI (2005–07 avg.) 13,914.

Land use as % of total land area (2007): in temporary crops 43.0%, in permanent crops 0.2%, in pasture 19.3%, forest area 11.9%.

Foreign trade¹⁰

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
DKK '000,000	+59,571	+52,275	+55,755	+33,346	+21,767	+25,008
% of total	7.5%	6.1%	5.9%	3.2%	2.0%	2.2%

Imports (2006): DKK 502,587,000,000 (machinery and apparatus 25.9%; chemicals and chemical products 10.8%; food 9.2%; road vehicles 8.5%). **Major import sources:** Germany 21.5%; Sweden 14.3%; Netherlands 6.2%; U.K. 5.8%; China 5.3%.

Exports (2006): DKK 535,933,000,000 (machinery and apparatus 23.3%, of which general industrial machinery 6.4%, power-generating machinery 4.5%; food 16.1%, of which meat 5.6% (including swine meat 3.8%); petroleum 9.3%; medicine and pharmaceuticals 7.3%). **Major export destinations:** Germany 15.5%; Sweden 13.8%; U.K. 8.4%; U.S. 6.0%; Norway 5.7%.

Transport and communications

Transport. Railroads (2005³): route length 2,644 km; passenger-km 6,132,000,000; metric ton-km cargo 1,976,000,000. Roads (2006): total length 72,362 km (paved 100%). Vehicles (2007³): passenger cars 2,020,013; trucks and buses 508,788. Air transport (2008)¹¹: passenger-km 5,316,000,000; metric ton-km cargo (2007) 8,748,000.

Communications		units		units	
Medium	date	number in '000s	per 1,000 persons	Medium	date
Televisions	2003	5,264	977	PCs	2004
Telephones				Dailies	2007
Cellular	2008	6,551 ¹³	1,201 ¹³	Internet users	2008
Landline	2008	2,487	456	Broadband	2008
					number in '000s
					per 1,000 persons
					659
					647 ¹²
					849
					369 ¹³

Education and health

Educational attainment (2004). Percentage of population age 25–69 having: completed lower secondary or not stated 30.3%; completed upper secondary or vocational 43.9%; undergraduate 19.6%; graduate 6.2%. **Literacy:** 100%.

Education (2005–06)				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–12)	39,854 ¹⁴	415,793	9.9 ¹⁴	96
Secondary/Voc. (age 13–18)	43,921 ¹⁴	463,617	10.1 ¹⁴	89
Tertiary	...	228,893	...	67 (age 19–23)

Health: physicians (2004) 19,450 (1 per 278 persons); hospital beds (2005) 20,487 (1 per 265 persons); infant mortality rate per 1,000 live births (2008) 4.0; undernourished population (2003–05) less than 5% of total population.

Military

Total active duty personnel (November 2008): 29,550¹⁵ (army 48.2%, air force 12.1%, navy 11.8%, joint staff 27.9%). **Military expenditure as percentage of GDP** (2008): 1.3%; per capita expenditure U.S.\$746.

¹Data in this statistical presentation nearly always exclude the Faroe Islands and Greenland. ²New administrative scheme as of Jan. 1, 2007. ³January 1. ⁴Detail does not add to total given because of rounding. ⁵Based on native land. ⁶De jure population only. ⁷Percentage of de jure population economically active based on total population. ⁸Taxes less subsidies on products. ⁹Includes 15,100 not adequately defined and 143,300 unemployed. ¹⁰Imports c.i.f., exports f.o.b. ¹¹Danish share of Scandinavian Airlines System. ¹²Circulation. ¹³Subscribers. ¹⁴2000–01. ¹⁵In addition, the home guard (reserves) number 53,507.

Internet resources for further information:

- Statistics Denmark <http://www.dst.dk/yearbook>
- StatBank Denmark <http://www.statbank.dk>

Djibouti

Official name: Jumhūriyah Jībūtī (Arabic); République de Djibouti (French) (Republic of Djibouti).

Form of government: multiparty republic with one legislative house (National Assembly [65]).

Head of state and government: President.

Capital: Djibouti.

Official languages: Arabic; French.

Official religion: Islam.

Monetary unit: Djibouti franc (FDJ); valuation (Sept. 1, 2009) 1 U.S.\$ = FDJ 177.72¹; 1 £ = FDJ 288.37.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2009 estimate
Ali Sabieh	Ali Sabieh	850	2,200	...
Arta	Arta	700	1,800	...
Dikhil	Dikhil	2,775	7,200	...
Obock	Obock	1,800	4,700	...
Tadjourah	Tadjourah	2,750	7,100	...
City				
Djibouti	—	75	200	...
TOTAL		8,950	23,200	864,000 ^{2, 3}

Demography

Population (2009): 864,000^{2, 3}.

Density (2009): persons per sq mi 96.5, persons per sq km 37.2.

Urban-rural (2007): urban 86.9%; rural 13.1%.

Sex distribution (2006): male 51.19%; female 48.81%.

Age breakdown (2006): under 15, 43.3%; 15–29, 28.0%; 30–44, 13.7%; 45–59, 9.2%; 60–74, 5.1%; 75 and over, 0.7%.

Population projection: (2020) 1,027,000³; (2030) 1,192,000³.

Doubling time: 35 years.

Ethnic composition (2000): Somali 46.0%; Afar 35.4%; Arab 11.0%; mixed African and European 3.0%; French 1.6%; other/unspecified 3.0%.

Religious affiliation (2000): Muslim (nearly all Sunni) 94.1%; Christian 4.5%, of which Orthodox 3.0%, Roman Catholic 1.4%; nonreligious 1.3%; other 0.1%.

Major city and towns: Djibouti (2007) 583,000; Ali Sabieh (2009) 23,000; Dikhil (2009) 16,700; Arta (2009) 11,600; Tadjourah (2009) 8,700.

Vital statistics

Birth rate per 1,000 population (2006): 39.5 (world avg. 20.3).

Death rate per 1,000 population (2006): 19.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 20.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.31.

Marriage/divorce rates per 1,000 population (1999): 8.9/2.8.

Life expectancy at birth (2006): male 41.9 years; female 44.5 years.

Major causes of death per 100,000 population (2002): communicable diseases 742; cardiovascular diseases 205; accidents, injuries, and violence 81; malignant neoplasms (cancers) 62; respiratory diseases 22.

Adult population (ages 15–49) *living with HIV* (2007): 3.1% (world avg. 0.8%).

National economy

Budget (2005). Revenue: FDJ 46,710,000,000 (tax revenue 65.8%, of which indirect taxes 26.3%, direct taxes 24.8%, transit taxes, harbour dues, and other registration fees 14.7%; nontax revenue 17.5%; grants 16.7%). Expenditures: FDJ 46,378,000,000 (current expenditures 74.7%; capital expenditures 25.3%).

Public debt (external, outstanding; February 2006): U.S.\$474,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): vegetables 25,597, lemons and limes 1,800, dry beans 1,500, tomatoes 1,200, dry chilies and peppers 300; livestock (number of live animals) 512,000 goats, 466,000 sheep, 297,000 cattle, 69,000 camels; roundwood, none; fisheries production 265 (from aquaculture, none). Mining and quarrying: mineral production limited to locally used construction materials such as basalt and evaporated salt (2006) 138,000. Manufacturing (2003): structural detail, n.a.; products of limited value include furniture, nonalcoholic beverages, meat and hides, light electromechanical goods, and mineral water. Energy production (consumption): electricity (kW-hr; 2006) 280,000,000 (280,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (139,000); natural gas (cu m; 2004) none (4,380,000); geothermal, wind, and solar resources are substantial but largely undeveloped.

Population economically active (2003): total 299,000⁴; activity rate of total population 39.1%⁴ (participation rates: ages 15–64, 69.0%⁴; female 39.5%⁴; unemployed [2006] c. 60%).

Price index (2000 = 100)				
	2000	2001	2002	2003
Consumer price index	100.0	101.8	102.4	104.5

Household income and expenditure. Average household size (2004) 6.3; income per household: n.a.; sources of income: n.a.; expenditure (1999)⁵: food 36.2%, housing and energy 18.1%, tobacco and related products 14.4%, transportation 8.8%, household furnishings 7.7%.

Gross national income (GNI; 2008): U.S.\$957,000,000 (U.S.\$1,030 per capita); purchasing power parity GNI (U.S.\$2,330 per capita).

Structure of gross domestic product and labour force

	2005		2003	
	in value FDJ '000,000	% of total value	labour force	% of labour force
Agriculture	4,051	3.2	270,000	77.4
Mining	3,145	2.5		
Manufacturing	9,314	7.4		
Construction	6,688	5.3		
Public utilities	30,061	24.0		
Transp. and commun.	18,518	14.8	79,000	22.6
Trade	14,961	11.9		
Finance, insurance	22,252	17.7		
Pub. admin., defense	16,384 ⁶	13.1 ⁶		
Services	125,376 ⁷	100.0 ⁷	349,000	100.0
Other				
TOTAL				

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 9.2; remittances (2008) 29; foreign direct investment (2005–07 avg.) 139; official development assistance (2006) 117. Disbursements for (U.S.\$'000,000): tourism (2006) 3.5; remittances (2008) 5.

Land use as % of total land area (2007): in temporary crops 0.6%, in permanent crops, negligible, in pasture 73.3%, forest area 0.2%.

Foreign trade

Balance of trade (current prices) ⁸				
	2003	2004	2005	2006
U.S.\$'000,000	–201.0	–223.4	–237.8	–280.5
% of total	73.0%	74.6%	75.1%	71.8%

Imports (1999): U.S.\$152,700,000⁹ (%food and beverages 25.0%; machinery and electric appliances 12.5%; khat 12.2%; petroleum products 10.9%; transport equipment 10.3%). **Major import sources** (2004)⁸: Saudi Arabia 21.9%; India 18.7%; China 10.2%; Ethiopia 4.8%; France 4.7%.

Exports (2001): U.S.\$10,200,000⁹ (%aircraft parts 24.5%; hides and skins of cattle, sheep, goats, and camels 20.6%; unspecified special transactions 8.8%; leather 7.8%; live animals 6.9%). **Major export destinations** (2005)⁸: Somalia 66.4%; Ethiopia 21.5%; Yemen 3.4%.

Transport and communications

Transport. Railroads (2006): length 62 mi, 100 km¹⁰; (1999) passenger-km 81,000,000; (2002) metric ton-km cargo 201,000,000. Roads (2002): total length 1,796 mi, 2,890 km (paved 13%). Vehicles (2002): passenger cars 15,700; trucks and buses 3,200. Air transport (2005): passenger arrivals and departures 219,119; metric tons of freight loaded and unloaded 10,973.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	53	114	PCs	2005	19	41
Telephones				Dailies	2005	0 ¹¹	0 ¹¹
Cellular	2007	45 ¹²	54 ¹²	Internet users	2006	11	23
Landline	2005	11	23	Broadband	2005	0.04 ¹²	0.09 ¹²

Education and health

Educational attainment: n.a. **Literacy** (2007): percentage of population age 15 and over literate 72.2%; males literate 81.2%; females literate 63.8%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	1,598	53,745	33.6	38
Secondary/Voc. (age 12–18)	967	30,265	31.3	22 ¹³
Tertiary	110	1,928	17.5	2 (age 19–23)

Health: physicians (2004) 129 (1 per 3,619 persons); hospital beds (2000) 694 (1 per 621 persons); infant mortality rate per 1,000 live births (2006) 102.4; undernourished population (2002–04) 200,000¹⁴ (24% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 10,450 (army 76.6%, navy 1.9%, air force 2.4%, national security force 19.1%). Foreign troops (November 2008): French Foreign Legion 2,850; U.S. 1,900; German 100. **Military expenditure as percentage of GDP** (2007): 1.9%; per capita expenditure U.S.\$20.

¹Pegged rate of Djibouti franc to U.S.\$.

²First census since 1983 was to be conducted in April 2009.

³Estimate of United Nations *World Population Prospects: The 2008 Revision*.

⁴Estimate of the ILO Employment Trends Unit.

⁵Weights of consumer price index components for Djibouti city only.

⁶Indirect taxes.

⁷Detail does not add to total given because of rounding.

⁸Includes trade with Ethiopia (via rail).

⁹Excludes Ethiopian trade via rail.

¹⁰Djibouti portion of 492 mi (791 km) Chemins de Fer Djibouti-Ethiopien linking Djibouti city and Addis Ababa, Ethiopia.

¹¹Circulation of daily newspapers.

¹²Subscribers.

¹³2004–05.

¹⁴Based on FAO population estimate.

Internet resource for further information:

- Banque Centrale de Djibouti
<http://www.banque-centrale.dj>

Dominica

Official name: Commonwealth of Dominica.

Form of government: multiparty republic with one legislative house (House of Assembly [32]).

Chief of state: President.

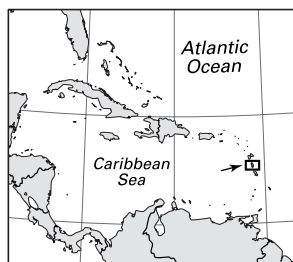
Head of government: Prime Minister.

Capital: Roseau.

Official language: English.

Official religion: none.

Monetary unit: Eastern Caribbean dollar (EC\$); valuation (Sept. 1, 2009) 1 U.S.\$ = EC\$2.70; 1 £ = EC\$4.38.



Area and population			
Parishes	area		population
	sq mi	sq km	2001 census
St. Andrew	69.3	179.6	10,240
St. David	49.0	126.8	6,758
St. George	20.7	53.5	19,825
St. John	22.5	58.5	5,327
St. Joseph	46.4	120.1	5,765
St. Luke	4.3	11.1	1,571
St. Mark	3.8	9.9	1,907
St. Patrick	32.6	84.4	8,383
St. Paul	26.0	67.4	8,397
St. Peter	10.7	27.7	1,452
TOTAL	285.3 ²	739.0 ²	69,625 ³

Demography

Population (2009): 71,900.

Density (2009)²: persons per sq mi 247.9, persons per sq km 95.7.

Urban-rural (2003): urban 72.0%; rural 28.0%.

Sex distribution (2006): male 50.34%; female 49.66%.

Age breakdown (2006): under 15, 26.1%; 15–29, 23.8%; 30–44, 27.4%; 45–59, 12.4%; 60–74, 7.0%; 75 and over, 3.3%.

Population projection: (2020) 75,000; (2030) 77,000.

Doubling time: 82 years.

Ethnic composition (2000): black 88.3%; mulatto 7.3%; black-Amerindian 1.7%; British expatriates 1.0%; Indo-Pakistani 1.0%; other 0.7%.

Religious affiliation (2001): Roman Catholic c. 61%; four largest Protestant groups (including Seventh-day Adventist, Pentecostal groups, and Methodist) c. 28%; nonreligious c. 6%; other c. 5%.

Major towns (2006): Roseau 16,600; Portsmouth 3,600; Marigot 2,900; Berekua 2,600; Atkinson 2,500.

Vital statistics

Birth rate per 1,000 population (2006): 15.3 (world avg. 20.3); (1991) within marriage 24.1%; outside of marriage 75.9%.

Death rate per 1,000 population (2006): 6.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 8.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 1.94.

Marriage/divorce rates per 1,000 population: (1999) 4.7/(1998) 0.9.

Life expectancy at birth (2006): male 72.0 years; female 77.9 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 262.1; malignant neoplasms (cancers) 173.3; endocrine and metabolic diseases 61.6; diseases of the respiratory system 51.6; infectious and parasitic diseases 34.4.

National economy

Budget (2008). Revenue: EC\$467,600,000 (tax revenue 65.7%, of which VAT 24.4%, taxes on international trade and transactions 14.7%, taxes on income and profits 11.1%; grants 27.8%; nontax revenue 6.5%). Expenditures: EC\$458,300,000 (current expenditures 66.2%, of which wages 26.2%, transfers 13.9%, debt payment 7.2%; development expenditures and net lending 33.8%).

Public debt (external, outstanding; 2005): U.S.\$208,400,000.

Gross national income (GNI; 2007): U.S.\$310,000,000 (U.S.\$4,250 per capita).

	2008		2001	
	in value EC\$'000,000	% of total value	labour force ⁴	% of labour force ⁴
Agriculture, fishing	118.8	12.3	5,218	18.7
Mining	7.9	0.8	164	0.6
Manufacturing	40.7	4.2	1,933	6.9
Construction	83.2	8.6	2,420	8.7
Public utilities	41.3	4.3	410	1.5
Transportation and communications	105.8	11.0	1,558	5.6
Trade, hotels, restaurants	128.1	13.3	5,120	18.4
Finance, real estate	115.1	11.9	1,144	4.1
Services	13.8	1.4	6,801	24.4
Pub. admin., defense	142.2	14.7	3,097 ⁶	11.1 ⁶
Other	168.0 ⁵	17.4 ⁵		
TOTAL	964.9	100.0 ⁷	27,865	100.0

Land use as % of total land area (2007): in temporary crops 6.7%, in permanent crops 21.3%, in pasture 2.7%, forest area 60.7%.

Population economically active (2001)⁴: total 27,865; activity rate of total population 40.0% (participation rates: ages 15–64, 64.7%; female 38.9%; unemployed [2002] c. 25%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.5	96.0	97.9	100.0	102.4	105.6	111.0

Household income and expenditure. Average household size (2003) 3.0; income per household: n.a.; sources of income (2001)⁸: wages and salaries 68.2%, self-employment 24.4%, other 7.4%; expenditure (2001)⁹: food 32.9%, transportation and communications 19.4%, housing 11.2%, household furnishings 9.4%, clothing and footwear 8.2%, energy 5.9%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 30,000, root crops 26,870 (of which taro 11,200, yams 8,000, yautia 4,550, sweet potatoes 1,850), grapefruit and pomelos 17,000, coconuts 12,000, oranges 7,200, plantains 5,775, sugarcane 4,800; livestock (number of live animals) 13,500 cattle, 9,700 goats, 7,600 sheep; roundwood, n.a.; fisheries production 776 (from aquaculture, negligible). Mining and quarrying: pumice, limestone, and sand and gravel are quarried primarily for local consumption. Manufacturing (value of production in EC\$'000; 2004): toilet and laundry soap 24,588; toothpaste 8,774; crude coconut oil (2001) 1,758; other products include fruit juices, beer, garments, bottled spring water, and cardboard boxes. Energy production (consumption): electricity (kW-hr; 2006) 85,000,000 (85,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (38,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 71; remittances (2008) 30; foreign direct investment (2005–07 avg.) 31; official development assistance (2007) 19. Disbursements for (U.S.\$'000,000): tourism (2007) 10; remittances (2008) negligible.

Foreign trade¹⁰

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	–87.4	–73.8	–87.7	–103.8	–123.5	–125.4
% of total	50.1%	46.8%	52.7%	55.7%	59.6%	60.2%

Imports (2006): U.S.\$166,900,000 (machinery and apparatus 17.1%; food 15.5%; refined petroleum 14.2%; chemicals and chemical products 12.2%; road vehicles 5.9%). **Major import sources:** U.S. 36.1%; Trinidad and Tobago 22.1%; U.K. 5.8%; Japan 4.0%; China 3.9%.

Exports (2006): U.S.\$41,500,000 (food 32.8%, of which bananas 21.2%; soap 25.3%; dental/oral hygiene preparations 13.5%; stone, sand, and gravel 6.7%). **Major export destinations:** U.K. 18.6%; Jamaica 15.2%; Antigua and Barbuda 13.0%; France (including overseas departments) 8.2%; Trinidad and Tobago 7.5%.

Transport and communications

Transport. Railroads: none. Roads (1999): total length 485 mi, 780 km (paved 50%). Vehicles (1998): passenger cars 8,700; trucks and buses 3,400. Air transport (1997): passenger arrivals and departures 74,100; cargo unloaded 575 metric tons, cargo loaded 363 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	16	220	PCs	2004	13	182
Telephones				Dailies	2005	0 ¹¹	0 ¹¹
Cellular	2004	42 ¹²	589 ¹²	Internet users	2005	26	372
Landline	2004	21	295	Broadband	2004	3.3 ¹²	46 ¹²

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: primary education 62%; secondary 31%; vocational/university 7%.

Literacy (1996): total population age 15 and over literate, 94.0%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–11)	517	8,912	17.2	77
Secondary/Voc. (age 12–16)	455	7,475	16.4	81
Tertiary	... ¹³	... ¹³	... ¹³	... (age 17–21)

Health (2004): physicians 38 (1 per 1,824 persons); hospital beds (2002) 270 (1 per 257 persons); infant mortality rate per 1,000 live births (2006) 13.7; undernourished population (2003–05) less than 5% of total population.

Military

Total active duty personnel (2006): none¹⁴.

¹Includes 21 elective seats, 9 appointees of the president, the speaker (elected from outside of the House of Assembly membership as of the 2005 elections), and the attorney general serving ex officio. ²Total area of Dominica per more recent survey is 290 sq mi (751 sq km). ³The total population including institutionalized persons equals 71,474. ⁴Excludes institutionalized population. ⁵Taxes less imputed banking service charges and subsidies. ⁶Includes 3,054 unemployed and 43 unclassified by economic activity. ⁷Detail does not add to total given because of rounding. ⁸For employed labour force only. ⁹Weights of consumer price index components. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³Data not available for Ross University School of Medicine in Dominica. ¹⁴300-member police force includes a coast guard unit.

Internet resource for further information:

• Eastern Caribbean Central Bank
<http://www.eccb-centralbank.org>

Dominican Republic

Official name: República Dominicana (Dominican Republic).

Form of government: multiparty republic with two legislative houses (Senate [32]; Chamber of Deputies [178]).

Head of state and government: President.

Capital: Santo Domingo.

Official language: Spanish.

Official religion: none¹.

Monetary unit: Dominican peso (RD\$); valuation (Sept. 1, 2009) 1 U.S.\$ = RD\$36.03; 1 £ = RD\$58.45.



Area and population

	area	population		area	population
	sq km	2002 census		sq km	2002 census
Provinces			Provinces		
Azuza	2,532	208,857	Pedernales	2,077	21,207
Baoruco	1,283	91,480	Peravia	998	169,865
Barahona	1,739	179,239	Puerto Plata	1,857	312,706
Dajabón	1,021	62,046	Samaná	854	91,875
Duarte	1,605	283,805	San Cristóbal	1,265	532,880
El Seibo (El Seybo)	1,786	89,261	San José de Ocoa	650	62,368
Elias Piña	1,424	63,879	San Juan	3,571	241,105
Espeyallat	838	225,091	San Pedro de Macoris	1,255	301,744
Hato Mayor	1,329	87,631	Sánchez Ramírez	1,196	151,179
Hermanas Mirabal	440	96,356	Santiago	2,836	908,250
Independencia	2,008	50,833	Santiago Rodríguez	1,112	59,629
La Altagracia	3,010	182,020	Santo Domingo	1,296	1,817,754
La Romana	654	219,812	Valverde	823	158,293
La Vega	2,286	385,101			
María Trinidad Sánchez	1,271	135,727	National District		
Monseñor Nouel	992	167,618	Santo Domingo (city)	104	913,540
Monte Cristi	1,925	111,014	TOTAL	48,671.2	8,562,541
Monte Plata	2,633	180,376			

Demography

Population (2009): 9,749,000.

Density (2009): persons per sq mi 518.8, persons per sq km 200.3.

Urban-rural (2005): urban 66.8%; rural 33.2%.

Sex distribution (2005): male 50.18%; female 49.82%.

Age breakdown (2002): under 15, 33.5%; 15–29, 26.6%; 30–44, 20.2%; 45–59, 11.7%; 60–74, 5.9%; 75–84, 1.6%; 85 and over, 0.5%.

Population projection: (2020) 11,055,000; (2030) 12,010,000.

Ethnic composition (2003)⁴: mulatto c. 73%; white c. 16%; black c. 11%.

Religious affiliation (2004): Roman Catholic 64.4%; other Christian 11.4%; nonreligious 22.5%; other 1.7%.

Major urban centres (2002): Santo Domingo 1,887,586⁵; Santiago 507,418; San Pedro de Macoris 193,713; La Romana 191,303; San Cristóbal 137,422.

Vital statistics

Birth rate per 1,000 population (2007): 20.4 (world avg. 20.3).

Death rate per 1,000 population (2007): 3.6 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 2.83.

Marriage/divorce rates per 1,000 population (2007): 4.2/1.8.

Life expectancy at birth (2006): male 71.0 years; female 74.5 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 202.1, of which ischemic heart disease 84.4; HIV/AIDS-related 98.9; malignant neoplasms (cancers) 76.6.

National economy

Budget (2005). Revenue: RD\$157,585,000,000 (tax revenue 94.2%, of which taxes on goods and services 49.0%, import duties 24.0%, income taxes 18.8%; nontax revenue 5.8%). Expenditures: RD\$161,612,000,000 (current expenditures 75.7%; development expenditures 24.3%).

Public debt (external, outstanding; 2006): U.S.\$6,571,000,000.

Gross national income (GNI; 2008): U.S.\$43,207,000,000 (U.S.\$4,390 per capita); purchasing power parity GNI (U.S.\$7,890 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value RD\$'000,000 ⁶	% of total value	labour force	% of labour force
Agriculture	24,250	7.7	477,820	12.0
Mining	2,290	0.7	5,895	0.1
Manufacturing	72,254	23.0	486,728	12.2
Construction	15,018	4.8	213,378	5.3
Public utilities	4,383	1.4	26,194	0.7
Transp. and commun.	59,897	19.0	238,491	6.0
Trade, restaurants	50,317	16.0	899,065	22.5
Pub. admin., defense	3,665	1.2	147,545	3.7
Finance, real estate	27,823	8.8	781,259	19.6
Services	25,124	8.0		
Other	29,571 ⁷	9.4 ⁷	715,837 ⁸	17.9 ⁸
TOTAL	314,593²	100.0	3,992,210⁹	100.0

Household income and expenditure (1997–98). Average household size (2002) 3.9; average annual household income¹⁰ RD\$130,394 (U.S.\$8,745); sources of income: wages and salaries 32.1%, self-employment 31.0%, nonmonetary income 22.8%, transfers 12.0%; expenditure: food, beverages, and tobacco 33.2%, transportation 16.0%, housing 9.3%, clothing/footwear 7.9%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,700,000, rice 710,000, bananas 552,500, plantains 415,000, toma-

toes 292,000, avocados 115,000, coffee 44,000; livestock (number of live animals) 2,210,000 cattle, 47,500,000 chickens; roundwood 903,400 cu m, of which fuelwood 98%; fisheries production 14,689 (from aquaculture 7%). Mining (2007): nickel (metal content) 47,125; marble 6,000 cu m; gold, none¹¹. Manufacturing (2005): cement 2,779,000; refined sugar 139,203; beer 4,541,000 hectolitres; rum 499,000 hectolitres; cigarettes 165,015,000 packets of 20 units. Energy production (consumption): electricity (kW-hr; 2006) 14,150,000,000 (14,150,000,000); coal (metric tons; 2006) none (704,000); crude petroleum (barrels; 2006) none (14,800,000); petroleum products (metric tons; 2006) 1,936,000 (5,190,000); natural gas (cu m; 2006) none (331,400,000).

Population economically active (2007): total 4,204,800; activity rate of total population 45.2% (participation rates: ages 15 and over, 64.3%; female 38.7%; unemployed 10.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	49.7	63.4	96.0	100.0	107.6	114.2	126.3

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,082; remittances (2008) 3,487; foreign direct investment (2005–07 avg.) 1,427; official development assistance (2007) 128. Disbursements for (U.S.\$'000,000): tourism (2007) 326; remittances (2008) 28.

Land use as % of total land area (2007): in temporary crops 17.0%, in permanent crops 10.3%, in pasture 24.8%, forest area 28.5%.

Foreign trade¹²

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	-677	-1,072	+375	+568	-1,221	-2,305
% of total	6.0%	9.4%	3.5%	5.0%	9.0%	16.2%

Imports (2006): U.S.\$8,745,000,000 (consumer goods 50.7%, of which refined petroleum 21.0%, food products 5.8%; capital goods 15.4%; crude petroleum 10.9%). **Major import sources** (2005): U.S. 50.0%; Colombia 6.2%; Mexico 5.8%.

Exports (2006): U.S.\$6,440,000,000 (reexports of free zones 70.0%, of which assembled clothing 24.8%, electronics 10.3%, jewelry 9.8%; ferronickel 11.0%; fuels 5.6%; raw sugar 1.6%). **Major export destinations** (2005): U.S. 78.9%; Netherlands 2.4%; Mexico 1.9%.

Transport and communications

Transport. Railroads (2004)¹³: route length 382 mi, 615 km. Roads (2002): total length 12,244 mi, 19,705 km (paved 51%). Vehicles (2008): passenger cars 630,815; trucks and buses 383,869. Air transport: (1999) passenger-km 4,900,000; (2003) metric ton-km cargo 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,950	209	PCs	2007	331	35
Telephones				Dailies	2007	619 ¹⁴	97 ¹⁴
Cellular	2008	7,211 ¹⁵	728 ¹⁵	Internet users	2008	2,563	259
Landline	2008	986	100	Broadband	2008	226 ¹⁵	23 ¹⁵

Education and health

Educational attainment (2002). Percentage of population age 25 and older having: no formal education 1.7%; incomplete/complete primary education 53.1%; secondary 25.9%; undergraduate 15.9%; graduate 1.0%; unknown/other 2.4%. **Literacy** (2003): total population age 15 and over literate 84.7%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	56,744	1,355,085	23.9	82
Secondary/Voc. (age 12–17)	31,710	920,494	29.0	61
Tertiary ¹⁶	11,367	293,565	25.8	35 (age 18–22)

Health: physicians (2005) 12,966¹⁷ (1 per 730 persons); hospital beds (2005) 9,640 (1 per 982 persons); infant mortality rate (2006) 29.0; undernourished population (2003–05) 2,000,000 (21% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 49,910 (army 81.0%, navy 8.0%, air force 11.0%). **Military expenditure as percentage of GDP** (2008): 0.6%; per capita expenditure U.S.\$30.

¹Roman Catholicism is the state religion per concordat with Vatican City. ²Detail does not add to total given because of rounding. ³Mainland total is 48,512 sq km and offshore islands total is 159 sq km. ⁴Significantly excludes data for Haitians. About 10% of the population of the Dominican Republic is a mix of legally and illegally resident Haitians. ⁵2002 census population for national district region (combined population of Santo Domingo province and the national district) is 2,731,294. ⁶At prices of 1991. ⁷Taxes on products less imputed bank service charges. ⁸Unemployed. ⁹Reported total; summed total equals 3,992,212. ¹⁰Includes nonmonetary income. ¹¹The mining of gold was suspended in 1999 and had not resumed in 2008. ¹²Includes free zones. ¹³Includes 149 mi (240 km) of track that is privately owned and serves the sugar industry only. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶2003–04. ¹⁷Public sector only.

Internet resources for further information:

- Banco Central de la República Dominicana <http://www.bancentral.gov.do>
- Oficina Nacional de Estadística <http://www.one.gov.do>

East Timor (Timor-Leste¹)

Official name: República Democrática de Timor-Leste (Portuguese); República Demokrátika Timor Lorosa'e (Tetum) (Democratic Republic of Timor-Leste [East Timor]).

Form of government: republic with one legislative body (National Parliament [65]).

Chief of state: President.

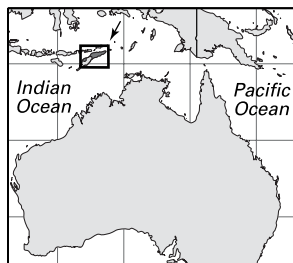
Head of government: Prime Minister.

Capital: Dili.

Official languages: Portuguese; Tetum².

Official religion: none.

Monetary unit: dollar (U.S.\$); valuation (Sept. 1, 2009) 1 U.S.\$ = £0.62.



Area and population		area		population
Districts	Capitals	sq mi	sq km	2004 census ³
Aileu	Aileu	285	737	37,967
Ainaro	Ainaro	310	804	52,480
Ambeno (Ocussu) exclave	Pante Macassar	314	814	57,616
Baucau (Baukau)	Baucau	581	1,506	100,748
Bobonaro	Maliana	531	1,376	83,579
Cova Lima	Suai	464	1,203	53,063
Dili	Dili	142	367	175,730
Ermera	Ermera	297	768	103,322
Lautem	Los Palos	701	1,813	56,293
Liquiça	Liquiça	212	549	54,973
Manatuto	Manatuto	688	1,782	36,897
Manufahi	Same	511	1,323	45,081
Viqueque	Viqueque	725	1,877	65,449
TOTAL		5,760⁴	14,919	923,198

Demography

Population (2009): 1,110,000.

Density (2009): persons per sq mi 192.7, persons per sq km 74.4.

Urban-rural (2005): urban 7.8%; rural 92.2%.

Sex distribution (2008): male 50.79%; female 49.21%.

Age breakdown (2008): under 15, 45.0%; 15–29, 25.3%; 30–44, 15.1%; 45–59, 9.6%; 60–74, 4.0%; 75 and over, 1.0%.

Population projection: (2020) 1,467,000; (2030) 1,800,000.

Doubling time: 23 years.

Ethnic composition (1999): East Timorese c. 80%; other (nearly all Indonesian, and particularly West Timorese) c. 20%.

Religious affiliation (2005): Roman Catholic c. 98%⁵; Protestant c. 1%⁶; Muslim c. 1%⁶.

Major urban areas (2004): Dili 151,026; Los Palos (Lospalos) 12,612; Same 9,966; Pante Macassar 9,754; Maliana 9,721.

Vital statistics

Birth rate per 1,000 population (2008): 40.9 (world avg. 20.3).

Death rate per 1,000 population (2008): 10.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 30.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 6.50.

Marriage/divorce rates per 1,000 population (1997–98): 0.4/0.1.

Life expectancy at birth (2006): male 64.0 years; female 68.7 years.

Major causes of death per 100,000 population (2002): communicable diseases 308; cardiovascular diseases 181; accidents 87; malignant neoplasms (cancers) 59; respiratory diseases 41.

National economy

Budget (2005–06). Revenue: U.S.\$485,000,000 (oil and gas revenue 93.1%, of which taxes 74.8%, royalties 15.5%; domestic revenue 6.9%). Expenditures: U.S.\$93,000,000 (current expenditure 71.3%; capital expenditure 16.9%; previous year spending 11.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 63,430, cassava 49,720, rice 41,386, sweet potatoes 26,000, coffee 14,000, coconuts 14,000, peanuts (groundnuts) 4,000, candlenut (2001) 1,063, cinnamon 75; livestock (number of live animals) 346,000 pigs, 171,000 cattle, 110,000 buffalo, 20,000 beehives, 2,200,000 chickens; roundwood, n.a.; sandalwood exports were formerly more significant; fisheries production 350 (from aquaculture, none). Mining and quarrying (2006): commercial quantities of marble are exported. Manufacturing (2001): principally the production of textiles, garments, handicrafts, bottled water, and processed coffee. Energy production (consumption): electricity (kW-hr; 2006) 320,000,000 (320,000,000); coal, n.a. (n.a.); crude petroleum (barrels; 2006) 1,142,000 (negligible); petroleum products (metric tons; 2006) 6,735,000 (97,000); natural gas, n.a. (n.a.).

Population economically active (2006): total 427,000⁷; activity rate of total population 38%⁷ (participation rates: ages 15–64, 71%⁷; female 40%⁷; unemployed [2000] c. 50%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	89.4	95.8	98.9	100.0	103.9	114.6	125.0

Household income and expenditure. Average household size (2004) 4.7; average annual income per household, n.a.⁸; sources of income, n.a.; expenditure

(2001)⁹: food 56.7%, housing 10.2%, clothing and footwear 8.9%, household furnishings 7.9%, alcohol and tobacco products 4.8%.

Gross national income (GNI; 2008): U.S.\$2,706,000,000 (U.S.\$2,460 per capita); purchasing power parity GNI (U.S.\$4,690).

Structure of gross domestic product and labour force				
	2004		2003	
	in value U.S.\$'000,000 ¹⁰	% of total value ¹⁰	labour force	% of labour force
Agriculture	107.1	31.6	78,000	81.3
Mining	2.8	0.8		
Manufacturing	12.5	3.7		
Public utilities	3.3	1.0		
Construction	31.9	9.4		
Transp. and commun.	31.8	9.4		
Trade, hotels	25.4	7.5		
Finance, insurance	29.4	8.7		
Services	2.1	0.6		
Pub. admin., defense	92.7	27.3		
Other	—	—		
TOTAL	339.0	100.0	418,000	100.0

Public debt (external, outstanding): n.a.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism¹¹, n.a.; remittances, n.a.; foreign direct investment (2005–07 avg.) 1; official development assistance (2007) 278. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 11.4%, in permanent crops 4.6%, in pasture 10.1%, forest area 52.2%.

Foreign trade

Balance of trade (current prices)					
	2004	2005	2006	2007	2008
U.S.\$'000,000	−40.5	−65.7	−40.1	−187.0	−219.4
% of total	16.1%	43.0%	24.8%	83.0%	69.0%

Imports (2008): U.S.\$268,583,000 (mineral fuels 26.5%, motor vehicles 16.3%, cereals 9.5%, electrical equipment 6.5%, machinery and parts 6.5%). **Major import sources:** Indonesia 42.5%; Singapore 17.1%; Australia 13.8%; Vietnam 7.0%; Japan 4.5%.

Exports (2008): U.S.\$49,206,000 (domestic exports 26.2%, of which coffee 25.7%; reexports 73.8%). **Major export destinations**¹²: Germany 26.9%; U.S. 26.8%; Indonesia 16.6%; Singapore 10.0%; Portugal 6.4%; Japan 5.1%.

Transport and communications

Transport. Railroads: none. Roads (2005): total length 3,107 mi, 5,000 km (paved 50%¹³). Vehicles (1998): passenger cars 3,156; trucks and buses 7,140.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002 ¹⁴	...	...	PCs	2005	...	...
Telephones				Dailies	2007	3.0 ¹⁵	4.3 ¹⁵
Cellular	2007	69 ¹⁶	60 ¹⁶	Internet users	2004	1.0	1.1
Landline	2003	2.0	2.4	Broadband	2008	—	—

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal education 54.3%, some primary education 14.4%, complete primary 6.2%, lower secondary 10.4%, upper secondary and higher 14.7%.

Literacy (2005): percentage of population age 15 and over literate 49%; males literate 54%; females literate 45%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	5,640	173,983	30.8	63
Secondary/Voc. (age 12–17)	2,606	74,822 ¹⁷	23.7 ¹⁷	23 ¹⁸
Tertiary ¹⁹	123	6,349	51.6	10 (age 18–22)

Health: physicians (2008) 347 (1 per 3,107 persons); hospital beds (1999) 560 (1 per 1,277 persons); infant mortality rate per 1,000 live births (2008) 83.5; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 1,286 (army 97%, navy 3%); foreign troops restoring peace and stability (March 2009) Australian 650; New Zealander 140. **Military expenditure as percentage of GDP:** n.a.

¹Timor-Leste is the preferred short-form name per the United Nations. ²Indonesian and English are “working” languages. ³Revised final. ⁴Detail does not add to total given because of rounding. ⁵Some vestiges of traditional beliefs are also practiced in conjunction with Roman Catholicism. ⁶Most Protestants and Muslims left East Timor after 1999. ⁷Estimate of the ILO Employment Trends Unit. ⁸Minimum annual wage (1999) U.S.\$276; average public administration wage (2003) U.S.\$1,500. ⁹Weights of consumer price index components for Dili only. ¹⁰Figures do not include value added from petroleum (part of the GNI but not GDP), which in 2004 equaled U.S.\$168,000,000. ¹¹In 1998 there were 580 beds available for tourists. ¹²Excludes reexports. ¹³57% of paved roads were in poor or damaged condition in late 1999; gravel roads were not available for most vehicles. ¹⁴Locally produced television service commenced in May 2002. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷2004–05. ¹⁸2000–01. ¹⁹2001–02.

Internet resources for further information:

• **Banking and Payments Authority of Timor-Leste**

<http://www.bancocentral.tl/en>

• **Direcção Nacional de Estatística**

<http://dne.mopf.gov.tl>

Ecuador

Official name: República del Ecuador
(Republic of Ecuador).

Form of government: unitary multiparty
republic with one acting legislative
body (National Assembly [124]¹).

Head of state and government:

President.

Capital: Quito.

Official language: Spanish².

Official religion: none.

Monetary unit: dollar (U.S.\$);
valuation (Sept. 1, 2009)

1 U.S.\$ = £0.62.



Area and population

		area	population			area	population
Regions	Provinces	sq km	2006 projection	Regions	Provinces	sq km	2006 projection
Amazonica		130,832	644,856	Insular		8,010	22,009
Morona-Santiago		33,930	129,374	Galápagos		8,010	22,009
Napo		25,690	93,336	Sierra		63,268	6,021,236
Orellana		29,774	106,525	Azuay		8,125	666,085
Pastaza		18,327	73,495	Bolívar		3,940	179,358
Sucumbios		23,111	157,497	Cañar		3,122	223,566
Zamora-Chinipe		67,646	84,629	Carchi		3,605	164,507
Costa		5,850	6,634,904	Chimborazo		6,569	438,097
El Oro		15,239	595,262	Cotopaxi		6,072	391,947
Esmeraldas		20,503	430,792	Imbabura		4,559	388,544
Guayas ³		7,175	3,581,579	Loja		11,026	431,077
Los Rios		18,879	728,647	Pichincha ⁴		12,915	2,646,426
Manabí			1,298,624	Tungurahua		3,335	491,629
				NON-DELIMITED AREAS			85,265
				TOTAL			272,045 13,408,270

Demography

Population (2009): 14,005,000.

Density (2009): persons per sq mi 133.3, persons per sq km 51.5.

Urban-rural (2005): urban 62.8%; rural 37.2%.

Sex distribution (2005): male 50.15%; female 49.85%.

Age breakdown (2005): under 15, 32.6%; 15–29, 27.4%; 30–44, 19.5%; 45–59, 12.1%; 60–74, 6.1%; 75–84, 1.8%; 85 and over, 0.5%.

Doubling time: 68 years.

Population projection: (2020) 15,804,000; (2030) 17,144,000.

Ethnic composition (2000): mestizo 42.0%; Amerindian 40.8%; white 10.6%; black 5.0%; other 1.6%.

Religious affiliation (2005): Roman Catholic (practicing) c. 35%; Roman Catholic (non-practicing) c. 50%; other (significantly Evangelical Protestant) c. 15%.

Major cities (2003): Guayaquil 2,387,000⁵; Quito 1,514,000⁵; Cuenca 303,994; Machala 217,266; Santo Domingo de los Colorados 211,689; Portoviejo 194,916.

Vital statistics

Birth rate per 1,000 population (2008): 14.9 (world avg. 20.3).

Death rate per 1,000 population (2008): 4.3 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2005): 2.70.

Marriage/divorce rates per 1,000 population (2008): 5.5/1.2.

Life expectancy at birth (2005): male 71.7 years; female 77.6 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 94.0; malignant neoplasms (cancers) 51.9; accidents and violence 44.6; diabetes mellitus 21.1; pneumonia and influenza 20.8.

National economy

Budget (2006). Revenue: U.S.\$6,895,000,000 (nonpetroleum revenue 75.1%, of which value-added tax 32.3%, income tax 15.5%, customs duties 9.0%; petroleum export revenue 24.9%). Expenditures: U.S.\$7,011,000,000 (current expenditure 76.2%; capital expenditure 23.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 7,300,000, bananas 6,130,000, oil palm fruit 2,100,000, rice 1,300,000, corn (maize) 880,000, plantains 590,000, cocoa beans 87,600, coffee 32,500, pyrethrum and dried flowers (2004) 105; livestock (live animals) 5,050,000 cattle, 1,300,000 pigs, 1,050,000 sheep, 110,000,000 chickens; roundwood 6,082,000 cu m, of which fuelwood 68%; fisheries production 554,745 (from aquaculture 31%). Mining and quarrying (2007): limestone 5,374,000; gold 3,186 kg. Manufacturing (value added in U.S.\$'000,000; 2004): refined petroleum 1,794; food products 870; beverages 845; plastics 341; printing and publishing 233; bricks, cement, and ceramics 213. Energy production (consumption): electricity (kW-hr; 2006) 14,814,000,000 (16,383,000,000); coal, none (none); crude petroleum (barrels; 2007) 187,000,000 ([2006] 55,500,000); petroleum products (metric tons; 2006) 7,453,000 (8,218,000); natural gas (cu m; 2006) 687,000,000 (687,000,000).

Population economically active (2006): total 4,204,800; activity rate of total population 45.2% (participation rates: ages 15–64, 69.6%; female 38.7%; unemployed [March 2006–February 2007] 10.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	88.1	95.0	97.6	100.0	103.0	105.4	114.2

Household income and expenditure (2003)⁶. Average household size 4.2; average annual income per household U.S.\$8,161; sources of income: wages 47.0%, self-employment 25.6%, transfer payments 15.7%, rent 11.7%; expen-

diture: food, beverages, and tobacco 23.8%, housing and energy 19.1%, transportation and communications 12.9%, restaurants and hotels 10.4%.

Public debt (external, outstanding; December 2006): U.S.\$10,108,000,000.

Gross national income (GNI; 2008): U.S.\$49,105,000,000 (U.S.\$3,640 per capita); purchasing power parity GNI (U.S.\$7,760 per capita).

Structure of gross domestic product and labour force

	2006		2005	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	2,777	6.7	324,600	7.7
Crude petroleum, nat. gas	6,455	15.6		
Other mining	102	0.3	10,700	0.3
Manufacturing	3,725 ⁷	9.0 ⁷	537,200	12.7
Construction	3,482	8.4	258,700	6.1
Public utilities	554	1.3	18,800	0.4
Transp. and commun.	4,426	10.7	280,100	6.6
Trade, restaurants, hotels	5,467	13.2	1,289,800	30.5
Finance, real estate	5,898	14.2	251,600	6.0
Pub. admin., defense	2,148	5.2	168,200	4.0
Services	4,459	10.8	752,100	17.8
Other	1,909	4.6	333,600 ⁸	7.9 ⁸
TOTAL	41,402	100.0	4,225,400	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 623; remittances (2008) 3,200; foreign direct investment (2005–07 avg.) 314; official development assistance (2007) 215. Disbursements for (U.S.\$'000,000): tourism (2007) 504; remittances (2008) 83.

Land use as % of total land area (2007): in temporary crops 3.6%, in permanent crops 4.4%, in pasture 18.1%, forest area 37.8%.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–6	+198	+551	+1,462	+1,177	+1,095
% of total	0.05%	1.3%	2.8%	6.1%	4.5%	3.0%

Imports (2006): U.S.\$12,114,000,000 (mineral fuels 21.1%; machinery and apparatus 20.0%; chemicals and chemical products 15.3%; road vehicles/parts 11.5%; iron and steel 6.0%). **Major import sources** (2008): U.S. 19.0%; Colombia 9.6%; Brazil 4.8%; Japan 3.6%; Mexico 3.5%.

Exports (2006): U.S.\$12,728,000,000 (crude petroleum 54.5%; bananas and plantains 9.5%; fish 5.4%; shrimp 4.6%; refined petroleum 3.9%; cut flowers 3.4%). **Major export destinations** (2008): U.S. 45.3%; Peru 9.2%; Chile 8.2%; Colombia 4.2%; Venezuela 3.8%.

Transport and communications

Transport. Railroads (2005): route length 965 km; passenger-km (2006) 4,000,000; metric ton-km cargo (2006) 2,000. Roads (2006): total length 43,670 km (paved 15%). Vehicles (2006): passenger cars 519,041; trucks and buses 357,514. Air transport (2005): passenger-km 867,100,000; metric ton-km cargo 5,400,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	3,298	253	PCs	2005	866	65
Telephones				Dailies	2006	640 ¹⁰	69 ¹⁰
Cellular	2008	11,595 ¹¹	860 ¹¹	Internet users	2008	1,310	97
Landline	2008	1,910	142	Broadband	2008	35 ¹¹	2.6 ¹¹

Education and health

Educational attainment (1995). Percentage of population age 25 and over having: no formal schooling/incomplete primary education 18.8%; complete primary/incomplete secondary 47.2%; complete secondary 16.1%; higher 17.9%. **Literacy** (2003): total population age 15 and over literate 92.5%; males 94.0%; females 91.0%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	89,115	2,006,430	22.5	97
Secondary/Voc. (age 12–17)	76,835	1,103,258	14.4	57
Tertiary	15,271 ¹²	...	...	... (age 18–22)

Health: physicians (2004) 21,625 (1 per 603 persons); hospital beds (2007) 20,523 (1 per 663 persons); infant mortality rate (2008) 16.4; undernourished population (2003–05) 1,900,000 (15% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 57,983 (army 80.2%, navy 12.6%, air force 7.2%). **Military expenditure as percentage of GDP** (2007): 1.8%; per capita expenditure U.S.\$57.

¹Permanent legislature reinstated with April 2009 elections. ²Quechua and Shuar are also official languages for the indigenous peoples. ³Includes Santa Elena province created in October 2007. ⁴Includes Santo Domingo de los Tsáchilas province created in October 2007. ⁵2005 population of urban agglomeration. ⁶Based on a survey of urban households only. ⁷Excludes refined petroleum. ⁸Unemployed. ⁹Import figures are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. ¹⁰Circulation. ¹¹Subscribers. ¹²2000–01.

Internet resources for further information:

- Instituto Nacional de Estadística y Censos <http://www.inec.gov.ec/default.asp>
- Banco Central del Ecuador <http://www.bce.fin.ec>

Egypt

Official name: Jumhūriyah Miṣr al-ʿArabīyah (Arab Republic of Egypt).

Form of government: republic with two legislative houses (Consultative Assembly [264]; People's Assembly [454]).

Chief of state: President.

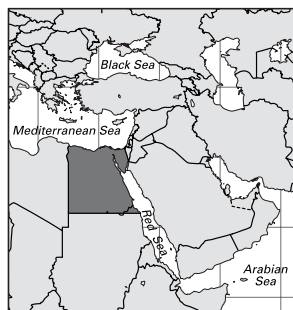
Head of government: Prime Minister.

Capital: Cairo.

Official language: Arabic.

Official religion: Islam.

Monetary unit: Egyptian pound (LE); valuation (Sept. 1, 2009)
1 U.S.\$ = LE 5.53; 1 £ = LE 8.97.



Gross national income (GNI; 2008): U.S.\$146,851,000,000 (U.S.\$1,800 per capita); purchasing power parity GNI (U.S.\$5,460 per capita).

Structure of gross domestic product and labour force

	2005–06		2006	
	in value LE '000,000 ¹¹	% of total value ¹¹	labour force ¹²	% of labour force ¹²
Agriculture	81,766.2	14.1	5,208,253	26.1
Mining	—	—	35,506	0.2
Manufacturing	188,527.3	32.4	2,362,890	11.8
Construction	23,763.0	4.1	1,885,565	9.4
Public utilities	11,037.8	1.9	292,664	1.5
Transp. and commun.	59,891.8 ¹³	10.3 ¹³	1,253,505	6.3
Trade, hotels	82,380.6	14.2	2,890,753	14.5
Finance, real estate	60,350.6	10.4	189,304	0.9
Pub. admin., defense	56,930.1	9.8	1,852,188	9.3
Services	16,497.5	2.8	3,713,597	18.6
Other	—	—	287,869	1.4
TOTAL	581,144.9	100.0	19,972,094	100.0

Public debt (external, outstanding; 2007): U.S.\$26,940,000,000.

Land use as % of total land area (2007): in temporary crops 3.0%, in permanent crops 0.5%, in pasture, n.a., forest area 0.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 9,303; remittances (2008) 9,476; foreign direct investment (FDI; 2005–07 avg.) 8,999; official development assistance (2007) 1,083. Disbursements from (U.S.\$'000,000): tourism (2007) 2,446; remittances (2008) 180; FDI (2005–07 avg.) 302.

Foreign trade¹⁴

Balance of trade (current prices)					
	2004	2005	2006	2007	2008
U.S.\$'000,000	−5,419	−9,168	−6,911	−10,828	−23,545
% of total	25.5%	30.1%	20.1%	25.2%	32.9%

Imports (2007): U.S.\$26,928,000,000 (food products 15.7%, of which wheat 5.8%; machinery and apparatus 14.9%; mineral fuels 14.7%; chemicals and chemical products 9.8%; iron and steel 4.5%). **Major import sources:** free zones 15.2%; U.S. 9.5%; Saudi Arabia 8.3%; Germany 6.6%; China 6.0%; Russia 4.6%.

Exports (2007): U.S.\$16,101,000,000 (refined petroleum 25.4%; LNG 16.6%; food products 7.7%; crude petroleum 6.5%; iron and steel 4.6%). **Major export destinations:** free zones 16.3%; India 11.3%; Italy 9.8%; Spain 6.4%; bunkers and ships' stores 6.0%; U.S. 5.8%.

Transport and communications

Transport. Railroads (2005): length 9,525 km; passenger-km 54,853,000,000; metric ton-km cargo 4,234,000,000. Roads (2004): total length 92,370 km (paved 81%). Vehicles: passenger cars (2004) 1,960,000; trucks and buses (2002) 650,000. Inland water (2007): Suez Canal, number of transits 20,384; metric ton cargo 710,098,000. Air transport (2006): passenger-km 10,332,000,000; metric ton-km cargo 323,160,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	17,500	253	PCs	2007	3,923	49
Telephones				Dailies	2007	2,700 ¹⁵	34 ¹⁵
Cellular	2008	41,272 ¹⁶	506 ¹⁶	Internet users	2008	12,569	154
Landline	2008	12,011	147	Broadband	2008	769 ¹⁶	9.4 ¹⁶

Education and health

Educational attainment (2006). Percentage of population ages 10 and over having: no formal schooling 41.6%; incomplete primary education/incomplete secondary 20.7%; complete secondary/some higher 28.1%; university 9.4%; advanced degree 0.2%. **Literacy** (2001): total population age 15 and over literate 56.1%; males 67.2%; females 44.8%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11) ¹⁷	368,785	9,988,181	27.1	96
Secondary/Voc. (age 12–17)	487,709	8,329,822	17.1	80 ¹⁸
Tertiary	80,658	2,512,399	31.1	35 ¹⁹ (age 18–22)

Health (2006): physicians 161,000 (1 per 451 persons); hospital beds (2007) 185,000 (1 per 393 persons); infant mortality rate (2007–08) 16.0; undernourished population (2002–04) 2,600,000 (4% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (November 2008): 468,500 (army 72.6%, navy 3.9%, air force [including air defense] 23.5%). **Military expenditure as percentage of GDP** (2007): 3.5%; per capita expenditure U.S.\$58.

¹Has limited legislative authority; 88 seats are appointed. ²Area of new or newly delimited governorate unavailable in early 2009. ³Estimated area. ⁴Officially created in April 2008. ⁵Includes total area of undemarcated regions and inland water area. ⁶Excludes an estimated 3,901,396 Egyptians living abroad. ⁷Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁸Nearly all Sunni; Shi'ite make up less than 1% of population. ⁹2007. ¹⁰Urban agglomeration. ¹¹At factor cost. ¹²Employed only. ¹³Transportation includes earnings from traffic on the Suez Canal. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵Circulation. ¹⁶Subscribers. ¹⁷2006–07. ¹⁸2001–02. ¹⁹2004–05.

Internet resources for further information:

- CAPMAS <http://www.capmas.gov.eg>
- Central Bank of Egypt <http://www.cbe.org.eg>

Area and population

	area	population		area	population
Regions	sq km	2006 census	Regions	sq km	2006 census
Governorates			Governorates		
Frontier			Upper Egypt		
Matruh	212,112	323,381	Aswān	679	1,186,482
North Sinai	27,574	343,681	Asyūt	1,553	3,444,967
Red Sea	203,685	288,661	Banī Suwayf	... ²	2,291,618
South Sinai	33,140	150,088	Al-Fayyūm	... ²	2,511,027
Al-Wādī			Al-Jizāh (Giza)	100 ³	3,143,486
al-Jadīd	376,505	187,263	Al-Mīnyā	... ²	4,166,299
Lower Egypt			Qīnā	1,851	3,001,681
Al-Buḥayrah	10,130	4,747,283	Sawḥāj	1,547	3,747,289
Ad-Daqahliyah	3,471	4,989,997	"6 October" ⁴	... ²	2,581,059
Dumyāt	589	1,097,339	Urban		
Al-Gharbiyah	1,942	4,011,320	Alexandria	2,679	4,123,869
Al-Isma'īliyah	1,442	953,006	Cairo	214 ³	6,758,581
Kafr ash-Shaykh	3,437	2,620,208	Hulwān ⁴	7,500 ³	1,713,278
Al-Mīnūfiyah	1,532	3,270,431	Luxor	55	457,286
Al-Qalyūbiyah	1,001	4,251,672	Port Said	72	570,603
Ash-Sharqiya	4,180	5,354,041	Suez	17,840	512,135
			REMAINDER	87,170 ⁵	
			TOTAL	1,002,000	72,798,031⁶

Demography

Population (2009): 82,999,000⁷.

Density (2009): persons per sq mi 214.5, persons per sq km 82.8.

Urban-rural (2006): urban 43.1%; rural 56.9%.

Sex distribution (2006): male 51.11%; female 48.89%.

Age breakdown (2005): under 15, 33.0%; 15–29, 28.0%; 30–44, 19.8%; 45–59, 12.3%; 60–74, 5.7%; 75 and over, 1.2%.

Population projection: (2020) 98,638,000; (2030) 110,907,000.

Doubling time: 38 years.

Ethnic composition (2000): Egyptian Arab 84.1%; Sudanese Arab 5.5%; Arabized Berber 2.0%; Bedouin 2.0%; Rom (Gypsy) 1.6%; other 4.8%.

Religious affiliation (2000): Muslim 84.4%⁸; Christian 15.1%, of which Orthodox 13.6%, Protestant 0.8%, Roman Catholic 0.3%; nonreligious 0.5%.

Major cities ('000; 2006): Cairo 6,759 (11,893⁹); Alexandria 4,085; Al-Jizah 2,891; Shubrā al-Khaymah 1,026; Port Said 571; Suez 512.

Vital statistics

Birth rate per 1,000 population (2008–09): 25.0 (world avg. 20.3).

Death rate per 1,000 population (2008–09): 6.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008–09): 18.7 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2005): 8.0/0.9.

Total fertility rate (avg. births per childbearing woman; 2006): 2.83.

Life expectancy at birth (2007–08): male 71.0 years; female 74.0 years.

National economy

Budget (2006–07). Revenue: LE 205,655,000,000 (nontax revenue 42.6%, taxes on corporations 23.7%, taxes on goods and services 19.2%). Expenditures: LE 239,602,000,000 (social protection 35.8%, general administration 24.4%, education 11.6%, defense 7.5%, health 4.4%).

Population economically active (2005): total 22,310,000; activity rate 31.3% (participation rates: ages 15–64 [2001] 46.9%; female 23.3%; unemployed [2008] 8.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	82.0	85.7	95.4	100.0	107.6	117.7	139.2

Production ('000; metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 16,200, tomatoes 7,550, wheat 7,379, corn (maize) 7,045, rice 6,665, potatoes 2,600, oranges 1,800, grapes 1,250, dates 1,130, eggplants 1,000, seed cotton 560, figs 170; livestock ('000; number of live animals) 5,180 sheep, 4,550 cattle, 3,950 buffalo, 120 camels; roundwood 17,438,000 cu m, of which fuelwood 98%; fisheries production 1,008,007 (from aquaculture 63%). Mining and quarrying (2006): gypsum 3,300; iron ore 2,600; phosphate rock 2,200; salt 1,200; kaolin 416. Manufacturing (value added in U.S.\$'000,000; 2002): chemicals (all forms) 2,823; food products 1,016; textiles and wearing apparel 618; bricks, cement, and ceramics 466; paper products 160. Energy production (consumption): electricity ('000,000 kW-hr; 2008) 128,105 ([2006] 118,058); coal ('000 metric tons; 2006) 25 (1,713); crude petroleum ('000 barrels; 2008) 241,500 ([2006] 205,400); petroleum products ('000 metric tons; 2006) 30,700 (30,977); natural gas ('000,000 cu m; 2007) 47,488 (31,800).

Household income and expenditure. Average household size (2006) 4.2; average annual income per household: n.a.; sources of income: n.a.; expenditure: n.a.

El Salvador

Official name: República de El Salvador (Republic of El Salvador).

Form of government: republic with one legislative house (Legislative Assembly [84]).

Chief of state and government: President.

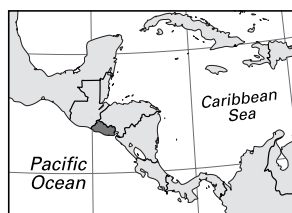
Capital: San Salvador.

Official language: Spanish.

Official religion: none¹.

Monetary unit: dollar (U.S.\$)²; valuation (Sept. 1, 2009)

1 U.S.\$ = £0.62.



Area and population

Departments	Capitals	area		population
		sq mi	sq km	2008 estimate
Ahuachapán	Ahuachapán	479	1,240	315,112
Cabañas	Sensuntepeque	426	1,104	163,308
Chalatenango	Chalatenango	779	2,017	201,702
Cuscatlán	Cojutepeque	292	756	262,506
La Libertad	Santa Tecla	638	1,653	703,934
La Paz	Zacatecoluca	473	1,224	344,296
La Unión	La Unión	801	2,074	266,852
Morazán	San Francisco	559	1,447	181,346
San Miguel	San Miguel	802	2,077	463,750
San Salvador	San Salvador	342	886	1,680,578
San Vicente	San Vicente	457	1,184	176,149
Santa Ana	Santa Ana	781	2,023	537,344
Sonsonate	Sonsonate	473	1,226	460,892
Usulután	Usulután	822	2,130	364,644
TOTAL		8,124	21,041	6,122,413

Demography

Population (2009): 6,192,000.

Density (2009): persons per sq mi 762.2, persons per sq km 294.3.

Urban-rural (2008): urban 64.8%; rural 35.2%.

Sex distribution (2008): male 47.39%; female 52.61%.

Age breakdown (2008): under 15, 32.6%; 15–29, 27.2%; 30–44, 18.3%; 45–59, 11.9%; 60–69, 5.0%; 70 and over, 5.0%.

Population projection: (2020) 6,692,000; (2030) 7,257,000.

Doubling time: 59 years.

Ethnic composition (2000): mestizo 88.3%; Amerindian 9.1%, of which Pipil 4.0%; white 1.6%; other/unknown 1.0%.

Religious affiliation (2005): Roman Catholic c. 71%; independent Christian c. 11%; Protestant c. 10%; Jehovah's Witness c. 2%; other c. 6%.

Major cities (2007): San Salvador 316,090 (urban agglomeration 1,433,000); Santa Ana 245,421; Soyapango 241,403³; San Miguel 218,410; Mejicanos 140,751³.

Vital statistics

Birth rate per 1,000 population (2008): 22.5 (world avg. 20.3); c. 2003 within marriage 27%; outside of marriage 73%.

Death rate per 1,000 population (2008): 5.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 16.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 3.12.

Marriage/divorce rates per 1,000 population (2005): 3.6/0.7.

Life expectancy at birth (2006): male 67.9 years; female 75.3 years.

Major causes of death per 100,000 population (2001): diseases of the circulatory system 88.3; malignant neoplasms (cancers) 49.4; accidents 47.4; diseases of the respiratory system 45.0; homicide and suicide 43.1.

National economy

Budget (2007). Revenue: U.S.\$3,077,600,000 (VAT 53.9%, individual income taxes 31.4%, import duties 6.6%, grants 1.4%, other 6.7%). Expenditures: U.S.\$2,928,900,000 (education 18.4%, defense and public security 18.3%, public health and welfare 9.7%, other 53.6%).

Public debt (external, outstanding; 2007): U.S.\$5,444,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,400,000, corn (maize) 836,695, sorghum 181,694, dry beans 99,305, coffee 94,514, plantains 88,526, papayas 78,900, oranges 66,978, tobacco 1,100; livestock (number of live animals) 1,380,112 cattle, 451,482 pigs, 96,000 horses; roundwood 4,892,100 cu m, of which fuelwood 86%; fisheries production 52,368 (from aquaculture 7%). Mining and quarrying (2006): limestone 1,200,000. Manufacturing (value added in U.S.\$'000,000; 2004): food products 875; textiles and wearing apparel 262; chemicals and chemical products 262; refined petroleum 234; beverages 217; printing and publishing 167. Energy production (consumption): electricity (kW-hr; 2006) 5,293,000,000 (5,204,000,000); coal, none (none); crude petroleum (barrels; 2006) none (6,348,000); petroleum products (metric tons; 2006) 811,000 (1,857,000); natural gas, none (none).

Household income and expenditure. Average household size (2008) 4.0; average income per household (2004) U.S.\$5,016; expenditure (June 2005)⁴: food, beverages, and tobacco 36.4%, housing and energy 16.8%, transportation and communications 10.2%, household furnishings 8.4%.

Land use as % of total land area (2007): in temporary crops 17.4%, in permanent crops 11.4%, in pasture 30.7%, forest area 13.9%.

Population economically active (2008): total 2,495,908; activity rate of total population 40.8% (participation rates: ages 16–64, 62.9%; female 41.3%; unemployed 5.9%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	89.5	91.4	95.5	100.0	104.0	108.8	116.1

Gross national income (GNI; 2008): U.S.\$21,361,000,000 (U.S.\$3,480 per capita); purchasing power parity GNI (U.S.\$6,670 per capita).

Structure of gross domestic product and labour force

	2006		2005	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	1,874.8	10.0	518,016	18.5
Mining	64.4	0.3	2,514	0.1
Manufacturing	3,844.7	20.6	418,875	15.0
Construction	778.8	4.2	146,811	5.3
Public utilities	349.2	1.9	7,315	0.3
Transp. and commun.	1,726.2	9.3	120,868	4.3
Trade	3,702.0	19.8	764,873	27.4
Finance, real estate	2,924.5	15.7	122,790	4.4
Public admin., defense	1,229.4	6.6	100,265	3.6
Services	1,358.4	7.3	388,749	13.9
Other	801.1 ⁵	4.3 ⁵	201,556 ⁶	7.2 ⁶
TOTAL	18,653.5	100.0	2,792,632	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 847; remittances (2008) 3,804; foreign direct investment (FDI; 2005–07 avg.) 752; official development assistance (2006) 157. Disbursements for (U.S.\$'000,000): tourism (2007) 605; remittances (2008) 29; FDI (2005–07 avg.) 62.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-2,626	-2,974	-3,448	-4,114	-4,281	-5,175
% of total	29.6%	31.1%	33.7%	36.9%	37.0%	36.1%

Imports (2006): U.S.\$7,627,000,000 (food, beverages, and tobacco 16.2%, imports for reexport 15.8%, machinery and apparatus 14.4%, petroleum 13.7%). **Major import sources:** U.S. 40.5%; Guatemala 8.0%; Mexico 7.7%; Brazil 4.0%; Costa Rica 2.9%.

Exports (2006): U.S.\$3,513,000,000 (reexports [mostly clothing] 45.6%, fabricated metal products 5.9%, coffee 5.4%, distilled spirits 4.5%, paper and paper products 4.2%). **Major export destinations:** U.S. 57.1%; Guatemala 13.0%; Honduras 8.0%; Nicaragua 4.8%; Costa Rica 3.4%.

Transport and communications

Transport. Railroads (2007)⁸: length 562 km. Roads (2002): total length 11,458 km (paved 23%). Vehicles (2000): passenger cars 148,000; trucks and buses 250,800. Air transport (2005)⁹: passenger-km 8,117,465,000; metric ton-km cargo 37,883,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,560	233	PCs	2007	359	52
Telephones				Dailies	2007	250 ¹⁰	43 ¹⁰
Cellular	2008	6,951 ¹¹	1,000 ¹¹	Internet users	2007	763	111
Landline	2008	1,077	155	Broadband	2008	124 ¹¹	18 ¹¹

Education and health

Educational attainment (2004). Percentage of population over age 25 having: no formal schooling 22.0%; primary education: grades 1–3 19.1%, grades 4–6 19.9%; secondary: grades 7–9 13.9%, grades 10–12 14.6%; higher 10.5%.

Literacy (2008): total population age 10 and over literate 85.9%; males literate 88.5%; females literate 83.6%.

Education (2006–07)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–12)	27,098	1,075,041	39.7	92
Secondary/Voc. (age 13–18)	19,929	538,154	27.0	54
Tertiary ¹²	8,583	124,956	14.6	21 (age 19–23)

Health (2005): physicians 8,670 (1 per 794 persons); hospital beds 4,816 (1 per 1,429 persons); infant mortality rate per 1,000 live births (2004) 10.5; undernourished population (2002–04) 700,000 (11% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 15,500 (army 89.4%, navy 4.5%, air force 6.1%). **Military expenditure as percentage of GDP** (2008): 0.4%; per capita expenditure U.S.\$20.

¹Roman Catholicism, although not official, enjoys special recognition in the constitution. ²The U.S. dollar was legal tender in El Salvador from Jan. 1, 2001 (along with the colón) at a pegged rate of 1 U.S.\$ = ₡8.75; the colón was hardly used by mid-2004.

³Within San Salvador urban agglomeration. ⁴Weights of consumer price index components. ⁵Import duties and VAT less imputed bank service charges. ⁶Unemployed. ⁷Imports c.i.f., exports f.o.b. (including assembled components for reexport). ⁸Rail service was suspended in 2005. ⁹IACA International Airlines only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2005–06.

Internet resources for further information:

- Banco Central de Reserva de El Salvador <http://www.bcr.gob.sv>
- Dirección General de Estadística y Censos <http://www.digestyc.gob.sv>

Equatorial Guinea

Official name: República de Guinea Ecuatorial (Spanish); République du Guinée Équatoriale (French) (Republic of Equatorial Guinea).

Form of government: republic with one legislative house (House of People's Representatives [100]).

Head of state and government: President assisted by the Prime Minister.

Capital: Malabo.

Official languages: Spanish; French.

Official religion: none.

Monetary unit: CFA franc (CFAF);

valuation (Sept. 1, 2009)

1 U.S.\$ = CFAF 458.60;

1 £ = CFAF 744.12¹.



Area and population				
Regions Provinces	Capitals	area		population
		sq mi	sq km	2002 census
Insular		785 ²	2,034	265,470
Annobón	Palé	7	17	5,008
Bioko Norte	Malabo	300	776	231,428
Bioko Sur	Luba	479	1,241	29,034
Continental		10,045 ²	26,017	749,529
Centro-Sur	Evinayong	3,834	9,931	125,856
Kie-Ntem	Ebebiyin	1,522	3,943	167,279
Litoral ³	Bata	2,573	6,665	298,414
Wele-Nzas	Mongomo	2,115	5,478	157,980
TOTAL		10,831 ²	28,051	1,014,999 ⁴

Demography

Population (2009): 633,000⁵.

Density (2009): persons per sq mi 58.4, persons per sq km 22.6.

Urban-rural (2008): urban 60.8%; rural 39.2%.

Sex distribution (2008): male 49.57%; female 50.43%.

Age breakdown (2008): under 15, 42.0%; 15–29, 26.6%; 30–44, 16.6%; 45–59, 8.7%; 60–74, 5.0%; 75–84, 1.0%; 85 and over 0.1%.

Population projection: (2020) 836,000⁵; (2030) 1,037,000⁵.

Doubling time: 26 years.

Ethnic composition (2000): Fang 56.6%; migrant labourers from Nigeria 12.5%, of which Yoruba 8.0%, Igbo 4.0%; Bubi 10.0%; Seke 2.9%; Spaniard 2.8%; other 15.2%.

Religious affiliation (2000): Roman Catholic 79.9%; Sunnī Muslim 4.1%; independent Christian 3.7%; Protestant 3.2%; traditional beliefs 2.1%; nonreligious/atheist 4.9%; other 2.1%.

Major cities (2003): Malabo 92,900; Bata 66,800; Mbini 11,600; Ebebiyin 9,100; Luba 6,800.

Vital statistics

Birth rate per 1,000 population (2008): 37.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 27.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 5.16.

Life expectancy at birth (2008): male 60.4 years; female 62.1 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 812.5, of which HIV/AIDS 274.3, malaria 178.4, diarrheal diseases 94.9, respiratory infections 89.5; diseases of the circulatory system 197.5; accidents, poisoning, and violence 124.3.

Adult population (ages 15–49) living with HIV (2007): 3.4% (world avg. 0.8%).

National economy

Budget (2007). Revenue: CFAF 2,308,500,000,000 (oil revenue 90.9%, of which profit sharing 48.9%, royalties 20.3%; non-oil revenue 9.1%, of which tax revenue 3.3%, nontax revenue 5.8%). Expenditures: CFAF 1,151,900,000,000 (infrastructure 43.3%; social services 18.3%; public administration 17.0%).

Public debt (external, outstanding; 2006): U.S.\$156,800,000.

Gross national income (GNI; 2008): U.S.\$9,875,000,000 (U.S.\$14,980 per capita); purchasing power parity GNI (U.S.\$21,700 per capita).

Structure of gross domestic product and labour force				
	2007		2003	
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	109,000	1.8	63,000	30.9
Forestry	51,100	0.8		
Crude petroleum	4,448,200	73.8		
Manufacturing	702,000	11.6		
Construction	473,500	7.9		
Public utilities	30,900	0.5		
Transportation and communications	7,300	0.1		
Trade, hotels	55,400	0.9		
Finance, real estate	20,500	0.3		
Pub. admin., defense	57,500	1.0		
Services	23,900	0.4	204,000	100.0
Other	47,100 ⁶	0.8 ⁶		
TOTAL	6,026,400	100.0 ²		

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 105,000 (of which cassava 45,000, sweet potatoes 36,000), oil palm fruit 35,000, plantains 31,000, bananas 20,000, coconuts 6,000, coffee 4,500, cacao beans 3,000; livestock (number of live animals) 37,600 sheep,

9,000 goats, 6,100 pigs, 5,050 cattle; roundwood 606,200 cu m, of which fuelwood 31%; fisheries production 3,583 (from aquaculture, none). Mining and quarrying: gold (2007) 200 kg. Manufacturing (2004): methanol 1,027,300; processed timber 31,200 cu m. Energy production (consumption): electricity (kW-hr; 2006) 29,000,000 (29,000,000); coal, none (none); crude petroleum (barrels; 2007) 133,000,000 ([2006] negligible); petroleum products (metric tons; 2006) none (51,000); natural gas (cu m; 2006) 480,000,000 (480,000,000). **Population economically active** (2006): total 193,000⁷; activity rate of total population 38.9%⁷ (participation rates: ages 15–64, 69.5%⁷; female 33.7%⁷; unemployed [1998] 30%).

Price index (2000 = 100)							
	2001	2002	2003	2004	2005	2006	2007
Consumer price index	108.8	117.0	125.6	130.9	139.0	144.5	149.9

Household income and expenditure. Average household size, n.a.; income per household: n.a.; sources of income: n.a.; expenditure (2000)⁸: food and beverages 60.4%, clothing 14.7%, household furnishings 8.6%.

Land use as % of total land area (2007): in temporary crops 4.6%, in permanent crops 3.2%, in pasture 3.7%, forest area 57.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 5; remittances, n.a.; foreign direct investment (2005–07 avg.) 1,752; official development assistance (2007) 31. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	+1,122.0	+909.8	+1,600.1	+2,651.7	+3,346.5	+3,568.1
% of total	61.4%	38.8%	49.2%	54.4%	56.1%	57.4%

Imports (2007): CFAF 1,325,000,000,000 (for petroleum sector 35.6%; for non-petroleum sector 64.4%). **Major import sources** (2005): U.S. 26.8%; Côte d'Ivoire 21.4%; Spain 13.6%; France 8.8%; U.K. 7.8%; Italy 4.4%.

Exports (2007): CFAF 4,893,200,000,000 (crude petroleum 83.1%; methanol 15.9%; timber 0.7%). **Major export destinations** (2005): U.S. 24.6%; China 21.8%; Spain 10.8%; Canada 7.3%; Netherlands 5.2%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 1,790 mi, 2,880 km (paved 13%). Vehicles (2002): passenger cars 8,380; trucks and buses 6,618. Air transport (2006): n.a.⁹.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2002	55	116	PCs	2004	7.0
Telephones				Dailies	2005	0 ¹⁰
Cellular	2008	346 ¹¹	666 ¹¹	Internet users	2008	12
Landline	2005	10	20	Broadband	2007	0.2 ¹¹

Education and health

Educational attainment: n.a. **Literacy** (2006): percentage of total population age 15 and over literate 87.0%; males literate 93.4%; females literate 80.5%.

Education (1999–2000)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–11)	2,307 ¹²	75,809 ¹³	32.0 ¹²	87 ¹²
Secondary/Voc. (age 12–18)	894	20,679	23.1	25 ¹⁴
Tertiary	206	1,003	3.9	3 (age 19–23)

Health: physicians (2004) 101 (1 per 5,020 persons); hospital beds (1998) 907 (1 per 472 persons); infant mortality rate per 1,000 live births (2008) 83.8; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 1,320 (army 83.3%, navy 9.1%, air force 7.6%). **Military expenditure as percentage of GDP:** n.a.

¹Formerly pegged to the French franc and since Jan. 1, 2002, to the euro at the rate of CFAF 655.96 = €1. ²Detail does not add to total given because of rounding. ³Includes three islets in Corisco Bay. ⁴Official government census figures; credible estimates are significantly lower. ⁵Estimate of the U.S. Bureau of the Census International Database (March 2008 update). ⁶Import duties. ⁷Estimate of the ILO Employment Trends Unit. ⁸Weights of consumer price index components. ⁹In March 2006 the EU banned most airlines based in Equatorial Guinea from flying into the EU. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2002–03. ¹³2004–05. ¹⁴2000–01.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosyz/zonefr/zonefr.htm>
- **Ministerio de Planificación, Desarrollo Económico, e Inversiones Públicas**
<http://www.dgecnstat-ge.org>

Eritrea

Official name: State of Eritrea¹.

Form of government: transitional regime² with one interim legislative body ([transitional] National Assembly [150]³).

Head of state and government: President.

Capital: Asmara.

Official language: none⁴.

Official religion: none.

Monetary unit: nakfa (Nfa); valuation (Sept. 1, 2009) 1 U.S.\$ = Nfa 15.00; 1 £ = Nfa 24.34.



Area and population

Regions	Capitals	area ⁵		population
		sq mi	sq km	2002 estimate
Anseba	Keren	8,960	23,200	580,700
Debub	Mendefera	3,090	8,000	1,018,000
Debub-Keih-Bahri (Southern Red Sea)	Assab (Aseb)	10,660	27,600	274,800
Gash-Barka	Barentu	12,820	33,200	747,200
Maekel	Asmara (Asmera)	500	1,300	727,800
Semien-Keih-Bahri (Northern Red Sea)	Massawa	10,730	27,800	569,000
TOTAL		46,760	121,100	3,917,500

Demography

Population (2009): 5,073,000.

Density (2009)⁶: persons per sq mi 130.1, persons per sq km 50.2.

Urban-rural (2006): urban 21.3%; rural 78.7%.

Sex distribution (2006): male 49.84%; female 50.16%.

Age breakdown (2006): under 15, 44.0%; 15–29, 27.9%; 30–44, 14.3%; 45–59, 8.2%; 60–74, 4.5%; 75 and over, 1.1%.

Population projection: (2020) 6,719,000; (2030) 8,086,000.

Doubling time: 28 years.

Ethnolinguistic composition (2004): Tigrinya (Tigray) 50.0%; Tigré 31.4%; Afar 5.0%; Saho 5.0%; Beja 2.5%; Bilen 2.1%; other 4.0%.

Religious affiliation (2004): Muslim (virtually all Sunni) c. 50%; Christian c. 48%, of which Eritrean Orthodox c. 40%, Roman Catholic c. 5%, Protestant c. 2%; traditional beliefs c. 2%.

Major cities (2003): Asmara 435,000; Keren 57,000; Assab 28,000; Afabet 25,000; Massawa 25,000; Mendefera 25,000; Teseney 25,000.

Vital statistics

Birth rate per 1,000 population (2006): 34.3 (world avg. 20.3).

Death rate per 1,000 population (2006): 9.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 24.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.08.

Life expectancy at birth (2006): male 57.4 years; female 60.7 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 459.1, of which HIV/AIDS 168.0, diarrheal diseases 64.8, malaria 61.4; diseases of the circulatory system 104.9; accidents, poisoning, and violence 74.6; malignant neoplasms (cancers) 42.8.

National economy

Budget (2002). Revenue: Nfa 3,409,800,000 (tax revenue 45.1%, of which import duties 18.1%, sales tax 10.8%, corporate tax 9.9%; grants 32.8%; non-tax revenue 21.2%; extraordinary revenue 0.9%). Expenditures: Nfa 6,138,200,000 (defense 34.3%, health 9.6%, humanitarian assistance 7.9%, education 7.6%, debt service 5.7%).

Public debt (external, outstanding; 2007): U.S.\$856,000,000.

Gross national income (GNI; 2008): U.S.\$1,492,000,000 (U.S.\$300 per capita); purchasing power parity GNI (U.S.\$630 per capita).

Structure of gross domestic product

	2007	
	in value U.S.\$'000,000	% of total value
Agriculture, fishing	235.0	17.9
Manufacturing	122.5	9.3
Mining	18.9	1.4
Public utilities		
Construction	169.2	12.9
Transp. and commun.	157.2	11.9
Trade, hotels	245.4	18.6
Finance		
Pub. admin., defense	354.7	27.0
Services		
Other	13.2	1.0
TOTAL	1,316.1	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sorghum 130,000, roots and tubers 101,000, cow's milk 39,200, pulses 35,640, millet 20,000, sesame seeds 19,000, cattle meat 16,650, sheep meat 5,600; livestock (number of live animals) 2,120,000 sheep, 1,960,000 cattle, 1,720,000 goats, 76,000 camels; roundwood 2,527,000 cu m, of which fuelwood 99.9%; fisheries production 1,932 (from aquaculture, none). Mining and quarrying (2007): coral 67,332, basalt 45,335, granite 21,394. Manufacturing (value added in U.S.\$'000,000; 2004): beverages 31; tobacco products 8; furniture 7; bricks, cement, and ceramics 6; food products 4. Energy production (consumption): electricity (kW-hr; 2006) 269,000,000 (269,000,000); coal, none

(none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (173,000); natural gas, none (none).

Household income and expenditure (1996–97). Average household size (2004) 5.0; average annual disposable income per household Nfa 10,967 (U.S. \$1,707); sources of income⁷: wages and salaries 34.0%, transfers 29.3%, rent 19.8%, self-employment 16.9%; expenditure⁷: food 36.2%, housing 30.2%, clothing and footwear 9.3%, energy 6.8%, household furnishings 4.6%, transportation and communications 4.1%.

Population economically active (2006; ILO estimates): 1,881,000; activity rate of total population 40.1% (participation rates: ages 15–64, 71.4%; female 41.3%).

Inflation rate (2005 = 100)

	2003	2004	2005	2006	2007	2008
Inflation rate	71.0	88.9	100.0	115.1	125.8	139.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 60; remittances (2003) 150; foreign direct investment (2005–07 avg.) –2; official development assistance (2007) 155. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 6.4%, in permanent crops 0.02%, in pasture 68.3%, forest area 15.3%.

Foreign trade⁸

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.\$'000,000	–435	–334	–327	–426	–449	–472
% of total	92.8%	89.1%	79.6%	97.0%	95.2%	95.6%

Imports (2003): U.S.\$432,800,000 (food and live animals 40.5%, of which cereals [all forms] 25.5%; machinery and apparatus 14.8%; road vehicles 7.3%; chemicals and chemical products 6.1%). **Major import sources** (2008): Italy 16.9%; U.A.E. 15.7%; China 13.0%; India 9.4%; U.S. 6.7%; Germany 6.0%.

Exports (2003): U.S.\$6,600,000 (food and live animals 36.4%, of which fresh fish 22.7%; leather 10.6%; corals and shells 9.1%). **Major export destinations** (2008): India 31.7%; Italy 18.6%; Kenya 11.9%; China 11.5%; France 5.4%.

Transport and communications

Transport. Railroads (2005): route length 190 mi, 306 km. Roads (2004): total length 2,485 mi, 4,000 km (paved 20%). Vehicles (1996): automobiles 5,940; trucks and buses, n.a. Air transport (2001)⁹: passenger arrivals 39,266, passenger departures 46,448; freight loaded 202 metric tons, freight unloaded 1,548 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	250	58	PCs	2007	38	8
Telephones				Dailies	2008	—	—
Cellular	2008	109 ¹⁰	22 ¹⁰	Internet users	2008	150	30
Landline	2008	40	8.2	Broadband	2008	—	—

Education and health

Educational attainment (2002)¹¹. Percentage of population age 25 and over having: no formal education 66.4%, incomplete primary education 16.6%, complete primary 1.3%, incomplete secondary 5.8%, complete secondary 5.7%, higher 3.0%, unknown 1.2%. **Literacy** (2006): total population age 15 and over literate 61.4%; males 72.3%; females 50.7%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–11)	7,711	364,263	47.2	47
Secondary/Voc. (age 12–18)	4,188	227,786	54.4	25
Tertiary ¹²	429	4,612	10.8	1 (age 19–23)

Health: physicians (2004) 215 (1 per 20,791 persons); hospital beds (2006) 5,500 (1 per 833 persons); infant mortality rate per 1,000 live births (2006) 46.3; undernourished population (2002–04) 3,100,000 (75% of total population based on the consumption of a minimum daily requirement of 1,730 calories).

Military

Total active duty personnel (November 2008): 201,750 (army 99.1%, navy 0.7%, air force 0.2%). Mandate for the UN peacekeeping force along the Eritrean-Ethiopian border was terminated in July 2008. **Military expenditure as percentage of GDP** (2003): 24.1%; per capita expenditure U.S.\$49.

¹The name in Tigrinya, the most widely spoken local language, is Hagere Iertra. ²New constitution ratified in May 1997 was not implemented in August 2009. ³All seats indirectly elected; last elections were held in 1994. ⁴The de facto “working” languages of government are Tigrinya, English, and Arabic. ⁵Approximate figures. The published total area is 46,774 sq mi (121,144 sq km); water area is 7,776 sq mi (20,140 sq km). ⁶Based on land area only. ⁷Data taken from a 1996–97 survey of the 12 largest urban centres in the country. ⁸Imports c.i.f.; exports f.o.b. ⁹Asmara airport only. ¹⁰Subscribers. ¹¹Based on household survey of 14,201 persons. ¹²2003–04.

Internet resources for further information:

- United Nations Development Programme: Eritrea <http://www.undp.org>
- Eritrea Demographic and Health Survey 2002 <http://www.measuredhs.com/pubs>

Estonia

Official name: Eesti Vabariik (Republic of Estonia).

Form of government: unitary multiparty republic with a single legislative body (Riigikogu¹ [101]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Tallinn.

Official language: Estonian.

Official religion: none.

Monetary unit: kroon (EEK); valuation (Sept. 1, 2009) 1 U.S.\$ = EEK 10.94; 1 £ = EEK 17.75.



Area and population		area		population
Counties	Capitals	sq mi	sq km	2007 ² estimate
Harju	Tallinn	1,672	4,332	522,147
Hiiu	Kärdla	395	1,023	10,168
Ida-Viru	Jõhvi	1,299	3,364	171,748
Järva	Paide	1,013	2,623	36,328
Jõgeva	Jõgeva	1,005	2,604	37,108
Lääne	Haapsalu	920	2,383	27,713
Lääne-Viru	Rakvere	1,338	3,465	67,560
Pärnu	Pärnu	1,856	4,806	88,727
Põlva	Põlva	836	2,165	31,387
Rapla	Rapla	1,151	2,980	36,743
Saare	Kuressaare	1,128	2,922	34,978
Tartu	Tartu	1,156	2,993	149,001
Valga	Valga	789	2,044	34,455
Viljandi	Viljandi	1,321	3,422	56,075
Võru	Võru	890	2,305	38,271
TOTAL		16,769^{3,4}	43,431^{3,4}	1,342,409

Demography

Population (2009): 1,340,000.

Density (2009)⁵: persons per sq mi 81.9, persons per sq km 31.6.

Urban-rural (2006²): urban 69.3%; rural 30.7%.

Sex distribution (2009²): male 46.05%; female 53.95%.

Age breakdown (2006²): under 15, 15.1%; 15–29, 22.7%; 30–44, 20.5%; 45–59, 20.2%; 60–74, 14.7%; 75–84, 5.7%; 85 and over, 1.1%.

Population projection: (2020) 1,334,000; (2030) 1,302,000.

Ethnic composition (2006²): Estonian 68.6%; Russian 25.7%; Ukrainian 2.1%; Belarusian 1.2%; Finnish 0.8%; other 1.6%.

Religious affiliation (2000): Christian 63.5%, of which unaffiliated Christian 25.6%, Protestant (mostly Lutheran) 17.2%, Orthodox 16.5%, independent Christian 3.3%; nonreligious 25.1%; atheist 10.9%; other 0.5%.

Major cities (2007²): Tallinn 396,852; Tartu 101,965; Narva 66,712; Kohtla-Järve 45,399; Pärnu 44,074.

Vital statistics

Birth rate per 1,000 population (2008): 12.0 (world avg. 20.3); within marriage 40.9%; outside of marriage 59.1%.

Death rate per 1,000 population (2008): 12.4 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.66.

Marriage/divorce rates per 1,000 population (2008): 4.6/2.6.

Life expectancy at birth (2008): male 67.6 years; female 79.2 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 685.8; malignant neoplasms (cancers) 258.5; accidents, poisoning, and violence 123.2; diseases of the digestive system 51.3.

National economy

Budget (2006). Revenue: EEK 57,735,000,000 (tax revenue 58.7%, of which taxes on goods and services 46.6%, taxes on income and profits 12.1%; social contributions 20.9%; unspecified 20.4%). Expenditures: EEK 53,149,000,000 (social protection 30.2%; general administration 17.8%; economic affairs 11.9%; education 8.5%; health 6.6%; defense 5.3%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 372,800, wheat 322,000, potatoes 173,700, rapeseed 132,400, oats 81,500, strawberries 1,300; livestock (number of live animals) 345,800 pigs, 244,800 cattle; roundwood 5,900,000 cu m, of which fuelwood 21%; fisheries production 98,614 (from aquaculture, negligible). Mining and quarrying (2007): oil shale 13,992,000; peat 900,800. Manufacturing (value added in U.S.\$'000,000; 2006): wood products (excluding furniture) 211; food products 197; printing and publishing 141; fabricated metal products 137; furniture 136; sawn wood 134. Energy production (consumption): electricity (kWh; 2008) 10,524,000,000 ([2006] 8,758,000,000); hard coal (metric tons; 2006) none (70,000); lignite (metric tons; 2008) 16,044,000 ([2006] 14,028,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (858,000); natural gas (cu m; 2007) none ([2006] 963,000,000).

Population economically active (2005): total 659,600; activity rate of total population 48.8% (participation rates: ages 15–64, 69.6%; female 50.1%; unemployed [2008] 5.5%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.0	93.2	96.1	100.0	104.5	111.3	122.9
Monthly earnings index	76.1	83.3	90.3	100.0	116.5	140.4	159.9

Household income and expenditure (2005). Average household size (2004) 2.5; average annual disposable income per household member EEK 41,176 (U.S.\$3,272); sources of income: wages and salaries 66.1%, transfers 25.6%,

self-employment 3.3%; expenditure: food and beverages 28.3%, transportation and communications 16.8%, housing 15.0%, recreation and culture 7.6%. **Public debt** (external, outstanding; 2008): U.S.\$918,000,000. **Gross national income** (GNI; 2008): U.S.\$19,131,000,000 (U.S.\$14,270 per capita); purchasing power parity GNI (U.S.\$19,280 per capita).

Structure of gross domestic product and labour force				
	2006		2005	
	in value EEK '000,000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	5,683	2.8	32,200	4.9
Mining	1,711	0.8	5,900	0.9
Manufacturing	30,044	14.7	139,500	21.1
Public utilities	6,037	3.0	12,500	1.9
Construction	14,305	7.0	48,700	7.4
Trade, restaurants	30,040	14.7	102,700	15.6
Transp. and commun.	21,654	10.6	54,600	8.3
Finance, real estate	41,720	20.4	53,300	8.1
Pub. admin., defense	9,174	4.5	37,200	5.6
Services	18,861	9.2	121,000	18.3
Other	25,327 ⁶	12.4 ⁶	52,200 ⁷	7.9 ⁷
TOTAL	204,556	100.0⁸	659,600⁸	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,036; remittances (2008) 422; foreign direct investment (FDI; 2005–07 avg.) 2,345. Disbursements for (U.S.\$'000,000): tourism (2007) 670; remittances (2008) 113; FDI (2005–07 avg.) 1,088.

Land use as % of total land area (2007): in temporary crops 9.4%, in permanent crops 0.2%, in pasture 9.4%, forest area 54.3%.

Foreign trade⁹

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
EEK '000,000	–26,800	–31,150	–30,770	–45,778	–47,330	–39,709
% of total	17.6%	17.3%	13.7%	16.1%	16.8%	12.6%

Imports (2007): EEK 164,451,000,000 (machinery and apparatus 20.2%, refined petroleum 11.5%, road vehicles 11.1%, chemicals and chemical products 8.6%, food products 5.6%, iron and steel 5.1%). **Major import sources:** Finland 15.9%; Germany 12.8%; Russia 10.2%; Sweden 10.1%; Latvia 7.6%; Lithuania 6.8%.

Exports (2006): EEK 117,121,000,000 (machinery and apparatus 20.1%, manufactured goods 17.4%, refined petroleum 9.8%, road vehicles/parts 7.1%, food products 5.6%, rough/sawn wood 5.3%, furniture/parts 4.3%). **Major export destinations:** Finland 18.0%; Sweden 13.3%; Latvia 11.4%; Russia 8.9%; Lithuania 5.8%; Germany 5.3%.

Transport and communications

Transport. Railroads (2004): route length 958 km; passenger-km (2005) 246,951,000; metric ton-km cargo (2005) 10,629,398,000. Roads (2005): total length 57,016 km (paved 23%). Vehicles (2006²): passenger cars 493,800; trucks and buses 91,400. Air transport (2007): passenger-km 756,000,000; metric ton-km cargo 1,044,000.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2003	686	507	PCs	2007	700
Telephones				Dailies	2007	368 ¹⁰
Cellular	2008	2,524 ¹¹	1,883 ¹¹	Internet users	2007	854
Landline	2008	498	372	Broadband	2008	318 ¹¹
						237 ¹¹

Education and health

Educational attainment (2000). Percentage of population age 10 and over having: no formal schooling/incomplete primary education 6.7%; complete primary/lower secondary 31.6%; complete secondary 29.2%; higher vocational 17.5%; undergraduate 12.3%; advanced degree 0.4%; unknown 2.3%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	7,516	79,589	10.6	94
Secondary/Voc. (age 13–18)	8,311	120,286	14.5	91
Tertiary	6,358	68,286	10.7	65 (age 19–23)

Health: physicians (2008²) 4,504 (1 per 298 persons); hospital beds (2008²) 7,473 (1 per 179 persons); infant mortality rate per 1,000 live births (2008) 5.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 5,300¹² (army 88.7%, navy 5.7%, air force 5.6%). **Military expenditure as a percentage of GDP** (2008): 1.8%; per capita expenditure U.S.\$317.

¹In English, the Parliament of Estonia. ²January 1. ³Total includes 1,596 sq mi (4,133 sq km) of Baltic Sea Islands and the areas of small inland lakes. ⁴The total area of Estonia including the Estonian portion of Lake Peipus (590 sq mi [1,529 sq km]), Lake Võrtsjärv, and Muuga harbour is 17,462 sq mi (45,227 sq km). ⁵Based on land area of 16,367 sq mi (42,390 sq km). ⁶Net taxes. ⁷Unemployed. ⁸Detail does not add to total given because of rounding. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation. ¹¹Subscribers. ¹²Other military/paramilitary include Defence League (10,859), Reserve (16,000), and paramilitary Border Guard (2,100).

Internet resources for further information:

- **Statistical Office of Estonia** <http://www.stat.ee>
- **Bank of Estonia** <http://www.bankofestonia.info>

Ethiopia

Official name: Federal Democratic Republic of Ethiopia.

Form of government: federal republic with two legislative houses (House of the Federation [112]; House of Peoples' Representatives [547]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Addis Ababa.

Official language: none¹.

Official religion: none.

Monetary unit: birr (Br); valuation (Sept. 1, 2009) 1 U.S.\$ = Br 12.57; 1 £ = Br 20.39.



Area and population		area		population
Regional states	Capitals	sq mi	sq km	2007 census
Afar (Afar)	Asayita (Asaita)	37,339	96,708	1,411,092
Amhara (Amara)	Bahir Dar	60,603	156,960	17,214,056
Benishangul				
Gumuz	Asosa (Asossa)	19,401	50,248	670,847
Gambella	Gambella	9,795	25,369	306,916
Harari (Hareri)	Harar (Harer)	144	374	183,344
Oromia (Oromiya)	Addis Ababa	136,538	353,632	27,158,471
Somali (Sumale)	Jijiga	107,820	279,252	4,439,147
Southern Nations, Nationalities and Peoples' (SNNP)	Hawassa (Awasa)	43,524	112,727	15,042,531
Tigray	Mekele	19,415	50,286	4,314,456
Cities				
Addis Ababa	—	211	546	2,738,248
Dire Dawa	—	396	1,025	342,827
TOTAL		435,186	1,127,127	73,918,505²

Demography

Population (2009): 82,825,000³.

Density (2009): persons per sq mi 190.3, persons per sq km 73.5.

Urban-rural (2007): urban 16.2%; rural 83.8%.

Sex distribution (2007): male 50.46%; female 49.54%.

Age breakdown (2007): under 15, 45.0%; 15–29, 28.3%; 30–44, 14.7%; 45–59, 7.2%; 60–74, 3.7%; 75–84, 0.8%; 85 and over, 0.3%.

Population projection: (2020) 107,964,000³; (2030) 131,561,000³.

Ethnic composition (2007): Oromo 34.5%; Amhara 26.9%; Somali 6.2%; Tigray 6.1%; Sidamo 4.0%; Gurage 2.5%; Welaita 2.3%; other 17.5%.

Religious affiliation (2007): Orthodox 43.5%; Muslim 33.9%; Protestant 18.6%; traditional beliefs 2.7%; Roman Catholic 0.7%; other 0.6%.

Major cities (2007): Addis Ababa 2,738,248; Adama (Nazret) 222,035; Dire Dawa 222,000; Mekele 215,546; Gonder 206,987; Bahir Dar 180,094.

Vital statistics

Birth rate per 1,000 population (2008): 44.0 (world avg. 20.3).

Death rate per 1,000 population (2008): 11.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 6.17.

Life expectancy at birth (2008): male 52.5 years; female 57.5 years.

Adult population (ages 15–49) living with HIV (2007): 2.1% (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: Br 30,274,000,000 (tax revenue 57.3%, of which import duties 27.0%, income and profits tax 16.1%, sales tax 9.5%; grants 28.0%; nontax revenue 14.7%). Expenditures: Br 35,564,000,000 (capital expenditure 51.7%, of which economic development 32.0%; current expenditure 48.3%, of which education 13.8%, defense 8.4%).

Public debt (external, outstanding; 2007–08): U.S.\$2,753,600,000.

Gross national income (GNI; 2008): U.S.\$22,742,000,000 (U.S.\$280 per capita); purchasing power parity GNI (U.S.\$870 per capita).

Structure of gross domestic product and labour force				
	2004–05		1995 ⁴	
	in value Br '000,000 ⁵	% of total value	labour force	% of labour force
Agriculture	35,948	47.9	21,605,317	87.8
Mining	408	0.5	16,540	0.1
Manufacturing	3,939	5.2	384,955	1.6
Construction	3,729	5.0	61,232	0.2
Public utilities	1,789	2.4	17,066	0.1
Transp. and commun.	3,973	5.3	103,154	0.4
Trade, hotels	10,208	13.6	935,937	3.8
Finance, real estate	6,679	8.9	19,451	0.1
Pub. admin., defense	3,433	4.6	1,252,224	5.1
Services	4,929	6.6		
Other	—	—	210,184 ⁶	0.9 ⁶
TOTAL	75,035 ⁷	100.0	24,606,060	100.0 ⁸

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 5,600,000, corn (maize) 4,000,000, wheat 3,000,000, teff (2006–07) 2,437,700, sorghum 2,300,000, barley 1,500,000, dry broad beans 600,000, coffee 325,800, maté 260,000, chickpeas 190,000, sesame seeds 164,000; leading producer of beeswax, honey, cut flowers, and khat; livestock (number of live animals) 43,000,000 cattle, 23,700,000 sheep, 18,000,000 goats, (2005) 5,625,000 horses, mules, and asses, 2,300,000 camels, (1998) 3,037 civets; roundwood 100,059,100 cu m, of which fuelwood 97%; fisheries production 13,253 (from aquaculture, none). Mining and quarrying (2007): rock salt 230,000; tantalum 77,000 kg; niobium 12,000 kg; gold 3,400 kg.

Manufacturing (value added in U.S.\$'000,000; 2004): food products 157; beverages 118; bricks, cement, and ceramics 69; textiles 35; tobacco products 29. **Energy production** (consumption): electricity (kW-hr; 2007–08) 3,530,280,000 ([2005] 2,872,000,000); crude petroleum (barrels; 2005) none (5,640,000); petroleum products (metric tons; 2006) n.a. (1,680,000).

Land use as % of total land area (2007): in temporary crops 11.3%, in permanent crops 1.0%, in pasture 21.5%, forest area 12.7%.

Population economically active (2005): total 32,158,392; activity rate of total population 50.9% (participation rates: ages 10 and over, 78.4%; female [1999] 45.5%; unemployed 5.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	73.7	86.8	89.6	100.0	112.3	131.7	190.1

Household income and expenditure (1999–2000). Average household size (2004) 5.3; sources of income⁹: self-employment 70.9% (of which agriculture-based 57.6%), wages and salaries 10.9%, salvaging 6.6%, rent 3.9%, other 7.7%; expenditure⁹: food and beverages 52.8%, housing and energy 14.4%, household operations 13.9%, clothing and footwear 7.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 177; remittances (2008) 358; foreign direct investment (2005–07 avg.) 355; official development assistance (2007) 2,422. Disbursements for (U.S.\$'000,000): tourism (2007) 107; remittances (2008) 15.

Foreign trade¹⁰

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	–1,170	–975	–1,399	–2,090	–2,784	–3,081
% of total	56.2%	50.4%	58.5%	60.6%	60.3%	60.1%

Imports (2006): U.S.\$5,207,000,000 (machinery and apparatus 20.7%, refined petroleum 19.5%, road vehicles 14.1%, chemicals and chemical products 11.0%, food 6.7%). **Major import sources:** Saudi Arabia 17.9%; China 12.3%; Italy 7.7%; U.A.E. 7.6%; India 5.8%.

Exports (2006): U.S.\$1,043,000,000 (coffee/khat 40.8%, sesame seeds 15.4%, gum products/cut flowers/foilage 12.4%, gold 6.2%, leather 4.2%, chickpeas 3.5%). **Major export destinations:** Germany 12.6%; China 9.7%; Japan 8.4%; Switzerland 6.4%; Saudi Arabia 6.3%; Italy 6.1%.

Transport and communications

Transport. Railroads (2003): length 781 km¹¹; (2006–07) passenger-km 28,200,000; (1998–99) metric ton-km cargo 90,000,000¹². Roads (2007–08): total length 44,359 km (paved [2004] 19%). Vehicles (2003): passenger cars 71,311; trucks and buses 65,557. Air transport (2008): passenger-km 9,300,000,000; metric ton-km cargo 227,760,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	547	7.9	PCs	2007	551	7.0
Telephones				Dailies	2007	92 ¹³	2.1 ¹³
Cellular	2008	3,168 ¹⁴	37 ¹⁴	Internet users	2008	360	4.2
Landline	2008	909	11	Broadband	2007	0.3 ¹⁴	— ¹⁴

Education and health

Educational attainment (2000)¹⁵. Percentage of population age 15 and over having: no formal schooling 63.8%; incomplete primary education 21.6%; primary 2.6%; incomplete secondary 8.1%; secondary 2.5%; post-secondary 1.4%. **Literacy** (2007): total population age 15 and over literate 47.5%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	124,202 ¹⁶	12,174,719	66.6 ¹⁶	71
Secondary/Voc. (age 13–18)	...	3,430,129	...	24
Tertiary	8,355	210,456	25.2	3 (age 19–23)

Health (2004–05): physicians 1,077 (1 per 66,236 persons); hospital beds (2007–08) 13,145 (1 per 6,062 persons); infant mortality rate (2008) 82.6; undernourished population (2003–05) 35,200,000 (46% of total population based on the consumption of a minimum daily requirement of 1,680 calories).

Military

Total active duty personnel (November 2008): 138,000 (army 97.8%, air force 2.2%); mandate for the UN peacekeeping force along the Ethiopian-Eritrean border was terminated in July 2008. **Military expenditure as percentage of GDP** (2008): 1.6%; per capita expenditure U.S.\$4.

¹Amharic is the "working" language. ²Unadjusted census total. Includes 3 special enumeration areas with a total population of 96,570. ³Estimate of the United Nations *World Population Prospects: The 2008 Revision*. ⁴For ages 10 and up. ⁵At 1999–2000 factor cost. ⁶First-time job seekers. ⁷Sum total; reported total is Br 74,506,000,000. ⁸Detail does not add to total given because of rounding. ⁹Based on the national Household Income and Expenditure Survey, comprising 17,332 households. ¹⁰Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹¹Length of Ethiopian segment of Addis Ababa–Djibouti railroad, which in 2007 was in poor condition. ¹²Includes Djibouti part of Addis Ababa–Djibouti railroad. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Based on the national Ethiopian Demographic and Health Survey, comprising 14,072 households. ¹⁶2003–04.

Internet resources for further information:

- Central Statistical Agency of Ethiopia <http://www.csa.gov.et>
- National Bank of Ethiopia <http://www.nbe.gov.et>

Faroe Islands¹

Official name: Føroyar (Faroese); Færøerne (Danish) (Faroe Islands).
Political status: self-governing overseas administrative division of Denmark with one legislative house (Løgting, or Parliament [33]).
Chief of state: Danish Monarch.
Heads of government: High Commissioner (for Denmark); Prime Minister (for Faroe Islands).
Capital: Tórshavn (Thorshavn).
Official languages: Faroese; Danish.
Official religion: Faroese Lutheran.²
Monetary unit: Danish krone³ (DKK); valuation (Sept. 1, 2009)
 1 U.S.\$ = DKK 5.20; 1£ = DKK 8.44.



Area and population		area		population
Regions ⁴	Largest municipalities	sq mi	sq km	2009 ⁵ estimate
Eysturoy	Runavík	110	286	10,887
Nordoy (Northern)	Klaksvík	93	241	5,974
Sandoy	Skopun	48	125	1,438
Streymoy	Tórshavn	151	392	22,551
Súðuroy	Tvøroyri	64	167	4,844
Vágar	Sorvágur	73	188	3,084
TOTAL		540⁶	1,399	48,778

Demography

Population (2009): 48,900.
Density (2009): persons per sq mi 90.6, persons per sq km 35.0.
Urban-rural (2009⁵): urban 40.3%; rural 59.7%.
Sex distribution (2007⁵): male 51.99%; female 48.01%.
Age breakdown (2007⁵): under 15, 22.4%; 15–29, 19.3%; 30–44, 20.6%; 45–59, 18.9%; 60–74, 12.2%; 75–84, 4.9%; 85 and over, 1.7%.
Population projection: (2020) 52,000; (2030) 55,000.
Ethnic composition (2000): Faroese 97.0%; Danish 2.5%; other Scandinavian 0.4%; other 0.1%.
Religious affiliation (2005): Protestant c. 91%, of which Lutheran c. 79%, Plymouth Brethren c. 10%; other (mostly nonreligious) c. 9%.
Major municipalities (2009⁵): Tórshavn 19,649; Klaksvík 4,927; Runavík 3,796; Tvøroyri 1,768.

Vital statistics

Birth rate per 1,000 population (2007): 13.9 (world avg. 20.3); (1998) within marriage 62.0%; outside of marriage 38.0%.
Death rate per 1,000 population (2007): 7.9 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 6.0 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2007): 2.50.
Marriage/divorce rates per 1,000 population (2008): 5.3/1.1.
Life expectancy at birth (2006): male 75.9 years; female 82.8 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 316.1; malignant neoplasms (cancers) 245.9; diseases of the respiratory system 82.6; accidents 33.1; diabetes mellitus 31.0.

National economy

Budget (2008). Revenue: DKK 4,332,000,000 (tax revenue 85.4%; transfers from the Danish government 14.6%). Expenditures: DKK 4,315,000,000 (current expenditure 95.2%; development expenditure 4.8%).
Gross national income (at current market prices; 2008): U.S.\$2,360,000,000 (U.S.\$48,436 per capita).

Structure of gross domestic product and labour force				
	2006		2005	
	in value DKK '000,000	% of total value	labour force	% of labour force
Agriculture	2,410 ⁷	20.3 ⁷	53	0.2
Mining	—	—	67	0.3
Fishing/fish processing	7	7	4,845	19.7
Manufacturing (excluding fish-related)	408	3.4	1,649	6.7
Construction	725	6.1	1,676	6.8
Public utilities	137	1.2	145	0.6
Transp. and commun.	958	8.1	1,822	7.4
Trade, hotels	1,111	9.4	3,436	14.0
Finance and real estate	1,614	13.6	1,511	6.2
Pub. admin., defense	539	4.5	8,481	34.6
Services	2,368	19.9	735	3.0
Other	1,608 ⁸	13.5 ⁸	121	0.5
TOTAL	11,878	100.0	24,541	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 1,400, other vegetables, grass, hay, and silage are produced; live-stock (number of live animals) 68,000 sheep, 2,093 cattle; roundwood, n.a.; fisheries production 606,167 (including blue whiting 312,005, pollock 67,044, cod 28,141, and capelin 19,059; from aquaculture 4% [including salmon 18,283]). Mining and quarrying: negligible⁹. Manufacturing: principally fish processing; also handicrafts, woolen textiles and clothing, and small ship repair. Energy production (consumption): electricity (kW-hr; 2008) 275,800,000 ([2006] 295,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (214,000); natural gas, none (none).

Population economically active (2006): total 29,400; activity rate of total population c. 61% (participation rates: ages 16–74, 85.8%; female 44.8%; unemployed [2008] 1.2%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.8	96.1	96.7	100.0	101.4	105.1	111.8

Public debt (external, outstanding; 2007): U.S.\$663,000,000.

Household income and expenditure. Average household size: n.a.; average annual income per household: n.a.; sources of income: n.a.; expenditure (1998)¹⁰: food and beverages 25.1%, transportation and communications 17.7%, housing 12.5%, recreation 11.9%, energy 7.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) c. 25; remittances (2003) 44; foreign direct investment (FDI), n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances (2008) 5; FDI, n.a. **Land use** as % of total land area (2007): in temporary crops 2.1%, in permanent crops, n.a., in pasture, n.a., forest area 0.1%.

Foreign trade¹¹

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
DKK '000,000	−953	−73	−904	−823	−1,466	−690
% of total	10.9%	1.0%	11.2%	9.6%	15.3%	7.4%

Imports (2008): DKK 5,013,000,000 (goods for household consumption 26.9%; fuels, lubricants, and electric current 21.0%; goods for the construction industry 10.9%; machinery and apparatus 10.0%; road vehicles 5.5%). **Major import sources:** Denmark 31.7%; Norway 20.7%; Germany 7.7%; Sweden 5.2%; United Kingdom 4.0%.

Exports (2008): DKK 4,323,000,000 (chilled and frozen fish 63.3%; ships/boats and related products 14.0%; salted fish 10.4%; dried, smoked, canned, and other conserved fish 8.1%). **Major export destinations:** United Kingdom 20.2%; Norway 15.6%; Denmark 12.1%; France 8.0%; Spain 7.5%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 288 mi, 464 km (paved, n.a.). Vehicles (2008⁵): passenger cars 20,225; trucks, vans, and buses 4,740. Air transport (2005): passenger arrivals 89,190, passenger departures 89,101.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	47	1,022	PCs	2007	...	...
Telephones				Dailies	2007	17 ¹²	352 ¹²
Cellular	2008	55 ¹³	1,130 ¹³	Internet users	2008	38	772
Landline	2008	22	449	Broadband	2008	15 ¹³	307 ¹³

Education and health

Educational attainment (2008). Percentage of population age 15–74 having: no formal schooling to complete primary education 30%; incomplete/complete secondary 45%; incomplete/complete higher 25%. **Literacy:** n.a.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age, n.a.)	...	5,567 ¹⁴	...	...
Secondary/Voc. (age, n.a.)	...	3,446 ¹⁴	...	...
Tertiary ¹⁵	22	150	6.8	...

Health: physicians (2006) 88 (1 per 547 persons); hospital beds (2007) 243 (1 per 199 persons); infant mortality rate per 1,000 live births (2007) 4.5; under-nourished population, n.a.

Military

Defense responsibility lies with Denmark.

¹English-language alternative spelling is Faeroe Islands. ²Formally independent of the national Danish Lutheran church from July 2007. ³The local currency, the Faroese króna (plural krónur), is equivalent to the Danish krone. Banknotes used are Faroese or Danish; coins are Danish. ⁴Represents the 5 main islands (with associated islets) and the northeasternmost (Northern) islands. Actual local administration is based on 34 municipalities. ⁵January 1. ⁶Detail does not add to total given because of rounding. ⁷Agriculture includes Fishing/fish processing. ⁸Taxes less subsidies on products. ⁹The maritime boundary demarcation agreement between the Shetland Islands (U.K.) and the Faroes in 1999 has allowed for the still unsuccessful exploration for deep-sea petroleum as of mid-2008. ¹⁰Weights of consumer price index components. ¹¹Imports c.i.f.; exports f.o.b. ¹²Circulation. ¹³Subscribers. ¹⁴2002–03. ¹⁵University of the Faroe Islands.

Internet resources for further information:

- **Faroe Islands in Figures**
<http://www.hagstova.fo>
- **Governmental Bank of the Faroe Islands**
<http://landsbank.fo>
- **Danmarks Statistik**
<http://www.dst.dk/HomeUK.aspx>

Fiji

Official name: Republic of the Fiji Islands^{1, 2}.

Form of government: interim regime^{3, 4}.

Chief of state: President.

Head of government: Prime Minister.

Capital: Suva.

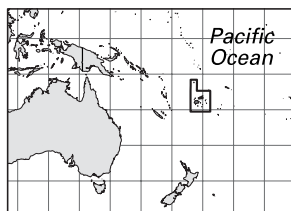
Official languages: 2.

Official religion: none.

Monetary unit: Fiji dollar (F\$);

valuation (Sept. 1, 2009)

1 U.S.\$ = F\$1.99; 1 £ = F\$3.23.



Area and population

Divisions Provinces	area	population	Divisions Provinces	area	population
	sq km	2007 census		sq km	2007 census
Central		342,389	Northern		135,956
Naitasiri	1,666	160,759	Bua	1,379	14,176
Namosi	570	6,898	Cakaudrove	2,816	49,339
Rewa	272	100,791	Macuata	2,004	72,441
Serua	830	18,249	Western		319,613
Tailevu	955	55,692	Ba	2,634	231,762
Eastern		37,311	Nadroga/Navosa	2,385	58,387
Kadavu	478	10,167	Ra	1,341	29,464
Lau	487	10,683	Fijian dependency		
Lomaiviti	411	16,461	Rotuma	46	2,002
			TOTAL	18,272⁵	837,271

Demography

Population (2009): 845,000.

Density (2009): persons per sq mi 119.8, persons per sq km 46.2.

Urban-rural (2007): urban 50.7%; rural 49.3%.

Sex distribution (2007): male 51.02%; female 48.98%.

Age breakdown (2007): under 15, 29.0%; 15–29, 27.9%; 30–44, 21.1%; 45–59, 14.5%; 60–74, 6.1%; 75 and over, 1.4%.

Population projection: (2020) 921,000; (2030) 1,021,000.

Doubling time: 54 years.

Ethnic composition (2007): Fijian 56.8%; Indian 37.5%; other Pacific islanders 3.0%, of which Rotuman (Polynesian/other) 1.2%; European/part-European 1.7%; Chinese 0.6%; other 0.4%.

Religious affiliation (2007): Christian 64.4%, of which Methodist 34.6%, Roman Catholic 9.1%, Assemblies of God 5.7%; Hindu 27.9%; Muslim 6.3%; other 1.4%.

Major urban areas (2007): Nasinu 87,446; Suva 85,691 (urban agglomeration, 241,432); Lautoka 52,220; Nausori 47,604; Nadi 42,284.

Vital statistics

Birth rate per 1,000 population (2007): 20.7 (world avg. 20.3).

Death rate per 1,000 population (2007): 7.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 12.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 2.73.

Marriage/divorce rates per 1,000 population (2004): 8.6/n.a.

Life expectancy at birth (2006): male 67.3 years; female 72.5 years.

Major causes of death per 100,000 population (2001): diseases of the circulatory system 330.0; diseases of the respiratory system 50.2; infectious and parasitic diseases 45.8; malignant neoplasms 38.0; accidents and violence 31.7.

National economy

Budget (2006). Revenue: F\$1,373,000,000 (tax revenue 90.7%, of which taxes on goods and services 40.9%, income taxes 32.5%; other 9.3%). Expenditures: F\$1,530,000,000 (general administration 25.0%; education 22.4%; economic affairs 14.2%; public order 9.4%; health 9.3%; defense 5.4%).

Public debt (external, outstanding; June 2009): U.S.\$273,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 3,200,000, coconuts 140,000, cow's milk 58,000, taro 38,000, cassava 34,500, rice 15,000, cattle meat 8,400, ginger 4,300, yaqona (kava) (2006) 2,259; livestock (number of live animals) 315,000 cattle, 4,300,000 chickens; roundwood 509,000 cu m, of which fuelwood 7%; fisheries production (2006) 47,319 (from aquaculture 1%). Mining and quarrying (2005): gold 3,800 kg; silver 1,500 kg. Manufacturing (value added in U.S.\$'000,000; 2004): food products 63; textiles and clothing 53; beverages 46; sawn wood and wood products including furniture 28. Energy production (consumption): electricity (kW-hr; 2006) 840,000,000 (841,000,000); coal (metric tons; 2006) none (12,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (489,000); natural gas, none (none).

Household income and expenditure. Average household size (2007) 4.7; average annual income per household (2002–03) F\$12,753 (U.S.\$6,176); sources of income (2002–03): wages and salaries 54.0%, self-employment 17.1%; expenditure (2002–03): food, beverages, and tobacco 31.2%, housing and energy 18.5%, transportation and communications 17.9%, education 4.5%.

Population economically active (2007): total 334,787; activity rate of total population 40.0% (participation rates: ages 15–64, 57.0%; female 33.9%; unemployed 8.6%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.2	95.0	97.7	100.0	102.5	107.4	115.7

Gross national income (GNI; 2008): U.S.\$3,300,000,000 (U.S.\$3,930 per capita); purchasing power parity GNI (U.S.\$4,270 per capita).

Structure of gross domestic product and labour force

	2006		2004	
	in value F\$'000,000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture	615.7	11.2	89,523	28.3
Mining	24.1	0.4	3,222	1.0
Manufacturing	656.1	12.0	43,088	13.6
Construction	265.4	4.8	16,950	5.4
Public utilities	122.3	2.2	2,508	0.8
Transp. and commun.	729.8	13.3	22,551	7.1
Trade, hotels	926.9	16.9	66,043	20.9
Finance, real estate	670.7	12.2	10,220	3.2
Pub. admin., defense	926.7	16.9	61,936	19.6
Services	545.8 ⁸	9.9 ⁸	—	—
Other	5,483.3 ⁵	100.0 ⁵	316,041	100.0 ⁵

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 433; remittances (2008) 175; foreign direct investment (2005–07 avg.) 268; official development assistance (2007) 57. Disbursements for (U.S.\$'000,000): tourism (2006) 101; remittances (2008) 32.

Land use as % of total land area (2007): in temporary crops 9.3%, in permanent crops 4.5%, in pasture 9.6%, forest area 54.7%.

Foreign trade^{10, 11}

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
F\$'000,000	–941	–1,029	–1,536	–1,945	–1,680	–2,130
% of total	27.0%	30.8%	39.3%	45.3%	41.0%	42.0%

Imports (2008): F\$3,601,000,000 (mineral fuels 33.9%, machinery and transport equipment 20.2%, food products 14.4%). **Major import sources** (2007): Singapore 34.2%; Australia 22.8%; New Zealand 17.7%; China 3.3%; U.S. 3.2%.

Exports (2008): F\$1,471,000,000 (reexports [mostly petroleum products] 33.2%, sugar 16.9%, fish 9.1%, mineral water [2007] 9.1%, clothing 6.9%, lumber 4.0%). **Major export destinations** (2007): Singapore 18.6%; U.S. 14.7%; U.K. 14.2%; Australia 13.3%; New Zealand 6.9%.

Transport and communications

Transport. Railroads (2003)¹²: length 371 mi, 597 km. Roads (1999): total length 2,140 mi, 3,440 km (paved 49%). Vehicles (2005): passenger cars 76,273; trucks and buses 42,311. Air transport (2004–05)¹³: passenger-km 2,360,000,000; metric ton-km cargo 92,108,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	98	118	PCs	2004	44	52
Telephones	2003	98	118	Dailies	2007	331 ⁴	401 ⁴
Cellular	2007	437 ¹⁵	524 ¹⁵	Internet users	2007	91	110
Landline	2007	108	130	Broadband	2007	12 ¹⁵	14 ¹⁵

Education and health

Educational attainment (1996). Percentage of population age 25 and over having: no formal schooling 4.4%; some education 22.3%; incomplete secondary 47.7%; complete secondary 17.0%; some higher 6.7%; university degree 1.9%. **Literacy** (2003): total population age 15 and over literate 93.7%; males 95.5%; females 91.9%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	3,014	103,641	34.4	87
Secondary/Voc. (age 12–18)	4,327	99,098	22.9	79 ¹⁶
Tertiary	...	12,717 ¹⁷	...	15 ¹⁷ (age 19–23)

Health (2007): physicians 318 (1 per 2,622 persons); hospital beds 1,727 (1 per 483 persons); infant mortality rate per 1,000 live births 18.4; undernourished population (2002–04) 40,000 (5% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2008): 3,500 (army 91.4%, navy 8.6%, air force, none); reserve 6,000. **Military expenditure as percentage of GDP** (2007): 1.6%; per capita expenditure U.S.\$60.

¹Fijian long/short-form names: Matanitu Tu-Vaka-i-koya ko Viti/Viti; Hindustani long-form name: Fiji Ripablik. ²English, Fijian, and Hindustani (Fijian Hindi) had equal status per 1997 constitution. ³Backed by the military from December 2006; the 1997 constitution was not formally abrogated until April 2009. ⁴The people's charter, a precursor to a possible new constitution, was approved by the president in late December 2008. ⁵Detail does not add to total given because of rounding. ⁶Within Suva urban agglomeration. ⁷Data for paid employees only who are 15 and over. ⁸Indirect taxes less imputed bank service charges and subsidies. ⁹Based on a survey of 3,015 urban households. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹All export data include reexports. ¹²Owned by the Fiji Sugar Corporation. ¹³Air Pacific only. ¹⁴Circulation. ¹⁵Subscribers. ¹⁶2005–06. ¹⁷2004–05.

Internet resources for further information:

- Fiji Islands Bureau of Statistics <http://www.statsfiji.gov.fj>
- Reserve Bank of Fiji <http://www.reservebank.gov.fj>

Finland

Official names¹: Suomen Tasavalta (Finnish); Republiken Finland (Swedish) (Republic of Finland).

Form of government: multiparty republic with one legislative house (Parliament [200]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Helsinki.

Official languages: none¹.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population		area		population
Provinces ²	Capitals	sq mi	sq km	2008 ³ estimate
Eastern Finland	Mikkeli	18,734	48,520	573,478
Lapland	Rovaniemi	35,778	92,664	184,390
Oulu	Oulu	21,907	56,739	467,190
Southern Finland	Hämeenlinna	11,654	30,183	2,173,509
Western Finland	Turku	28,664	74,240	1,874,764
Autonomous territory				
Åland (Ahvenanmaa)	Mariehamn (Maarianhamina)	600	1,553	27,153
TOTAL LAND AREA		117,336 ⁴	303,899	
FRESHWATER AREA		13,331	34,526	
TOTAL		130,667	338,425	5,300,484

Demography

Population (2009): 5,339,000.

Density (2009)⁵: persons per sq mi 45.5; persons per sq km 17.6.

Urban-rural (2005³): urban 62.1%; rural 37.9%.

Sex distribution (2009³): male 49.03%; female 50.97%.

Age breakdown (2009³): under 15, 16.7%; 15–29, 18.8%; 30–44, 19.0%; 45–59, 21.7%; 60–74, 15.9%; 75–84, 5.9%; 85 and over, 2.0%.

Population projection: (2020) 5,524,000; (2030) 5,587,000.

Linguistic composition (2009³): Finnish 90.9%; Swedish 5.4%; Russian 0.9%; other 2.8%.

Religious affiliation (2006³): Evangelical Lutheran 83.1%; nonreligious 14.7%; Finnish (Greek) Orthodox 1.1%; Muslim 0.4%; other 0.7%.

Major cities (2009³): Helsinki 576,632 (urban agglomeration [2007] 1,115,000); Espoo 241,565; Tampere 209,552; Vantaa 195,397; Turku 175,582; Oulu 137,061.

Vital statistics

Birth rate per 1,000 population (2008): 11.2 (world avg. 20.3); within marriage 59.3%; outside of marriage 40.7%.

Death rate per 1,000 population (2008): 9.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 2.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.85.

Marriage/divorce rates per 1,000 population (2008): 5.8/2.5.

Life expectancy at birth (2008): male 76.3 years; female 83.0 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 374.7, of which ischemic heart disease 221.0; malignant neoplasms (cancers) 202.0; cerebrovascular diseases 87.3; accidents and violence 71.5; diseases of the respiratory system 47.0.

National economy

Budget (2008). Revenue: €45,522,000,000 (income and property taxes 34.2%, turnover taxes 33.3%, excise duties 11.0%). Expenditures: €45,522,000,000 (social security and health 31.0%, education 15.4%, public debt including interest 9.3%, agriculture and forestry 6.2%, defense 5.3%).

Public debt (2008): U.S.\$74,700,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 1,984,000; oats 1,222,000; wheat 797,000; potatoes 702,000; sugar beets 673,000; livestock (number of live animals) 1,448,000 pigs, 927,000 cattle, 193,000 reindeer; roundwood 56,870,000 cu m, of which fuelwood 9%; fisheries production (2006) 162,341 (from aquaculture 8%). Mining and quarrying (2006): chromite (concentrate) 320,000; zinc (metal content) 66,109; gold 5,292 kg. Manufacturing (value added in €'000,000; 2007): electrical and optical equipment (largely telephone apparatus) 10,291; nonelectrical machinery and apparatus 4,707; chemicals and chemical products 4,129; paper and paper products 3,343; fabricated metal products 2,888; base metals 2,482; food and beverages 2,276; printing and publishing 1,774. Energy production (consumption): electricity (kW-hr; 2008) 74,052,000,000 ([2006] 93,705,000,000); hard coal (metric tons; 2006) none (7,612,000); crude petroleum (barrels; 2008) none ([2006] 76,800,000); petroleum products (metric tons; 2006) 12,849,000 (10,541,000); natural gas (cu m; 2007) none (4,587,000,000).

Population economically active (2008): total 2,725,600; activity rate of total population 51.3% (participation rates: ages 15–64, 76.1%; female 47.8%; unemployed [May 2008–April 2009] 8.0%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	98.1	99.0	99.1	100.0	101.6	104.1	108.3
Hourly earnings index	88.6	92.4	96.2	100.0	102.9	106.6	112.6

Household income and expenditure (2004). Average household size 2.2; disposable income per household €31,706 (U.S.\$39,367); sources of gross income (2003): wages and salaries 74.4%, rent 18.0%, self-employment 7.1%; expen-

diture (2007): housing and energy 24.6%, food and nonalcoholic beverages 12.5%, recreation and culture 11.9%, transportation 11.8%.

Gross national income (GNI; 2008): U.S.\$255,678,000,000 (U.S.\$48,120 per capita); purchasing power parity GNI (U.S.\$35,660 per capita).

Structure of gross domestic product and labour force				
	2007		2006	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	6,021	2.5	114,000	4.3
Manufacturing	49,692	20.3	465,000	17.6
Mining and public utilities	5,436	2.2	...	...
Construction	12,338	5.1	162,000	6.1
Transp. and commun.	22,285	9.1	181,000	6.8
Trade, restaurants	25,671	10.5	381,000	14.4
Finance, real estate	91,093	37.2	336,000	12.7
Pub. admin., defense			801,000	30.2
Services				
Other	32,156	13.1	208,000 ⁸	7.9 ⁸
TOTAL	244,692	100.0	2,648,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 3,127; remittances (2008) 772; foreign direct investment (FDI; 2005–07 avg.) 6,236. Disbursements for (U.S.\$'000,000): tourism (2008) 4,350; remittances (2008) 391; FDI (2005–07 avg.) 5,336.

Land use as % of total land area (2007): in temporary crops 4.5%, in permanent crops 0.03%, in pasture 2.3%, forest area 74.0%.

Foreign trade⁹

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
€'000,000	+9,603	+8,187	+5,426	+6,258	+6,007	+3,466
% of total	11.5%	9.1%	5.5%	5.4%	4.8%	2.7%

Imports (2007): €59,600,000,000 (machinery and apparatus 26.2%; petroleum 10.8%; chemicals and chemical products 10.1%; road vehicles/parts 8.5%; metal ore/scrap metal 7.2%). **Major import sources**: Russia 14.1%; Germany 14.0%; Sweden 9.8%; China 7.5%; U.K. 4.8%.

Exports (2007): €65,607,000,000 (telecommunications equipment/parts 13.6%; paper and cardboard 12.3%; iron and steel 7.8%; specialized machinery 6.7%; refined petroleum 5.1%; general industrial machinery 5.0%; nonferrous base metals 4.7%). **Major export destinations**: Germany 10.9%; Sweden 10.7%; Russia 10.2%; U.S. 6.4%; U.K. 5.8%.

Transport and communications

Transport. Railroads (2008): route length 5,919 km; passenger-km 4,100,000–000; metric ton-km cargo 10,800,000,000. Roads (2009³,¹⁰): total length 78,141 km (paved [2005] 65%). Vehicles (2005): passenger cars 2,430,345; trucks and buses 363,644. Air transport (2007): passenger-km 15,564,000,000; metric ton-km cargo 489,672,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,540	679	PCs	2007	2,644	500
Telephones				Dailies	2007	2,402 ¹¹	454 ¹¹
Cellular	2008	6,830 ¹²	1,285 ¹²	Internet users	2007	4,169	788
Landline	2008	1,650	311	Broadband	2008	1,617 ¹²	304 ¹²

Education and health

Educational attainment (2004³). Percentage of population age 25 and over having: incomplete upper-secondary education 35.6%; complete upper secondary or vocational 35.8%; higher 28.6%. **Literacy**: virtually 100%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	23,955	372,128	15.5	97
Secondary/Voc. (age 13–18)	34,733 ¹³	432,565	12.4 ¹³	96
Tertiary	18,786	308,966	16.4	84 (age 19–23)

Health: physicians (2007) 18,843 (1 per 281 persons); hospital beds (2007) 36,095 (1 per 147 persons); infant mortality rate per 1,000 live births (2008) 2.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 31,900 (army 67.4%, navy 17.9%, air force 14.7%); reserves 237,000. **Military expenditure as percentage of GDP** (2007): 1.3%; per capita expenditure U.S.\$596.

¹Finnish and Swedish are national (not official) languages. ²Provinces may be abolished in 2010 and replaced by 6 “economic planning” regions (excluding Åland). ³January 1. ⁴Detail does not add to total given because of rounding. ⁵Based on land area only. ⁶Within Helsinki urban agglomeration. ⁷From farms of 1 hectare and larger only. ⁸Includes 204,000 unemployed persons not previously employed and 4,000 not adequately defined. ⁹Imports c.i.f., exports f.o.b. ¹⁰Excludes Åland. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2004–05.

Internet resource for further information:

• Statistics Finland http://www.stat.fi/index_en.html

France¹

Official name: République Française (French Republic).

Form of government: republic with two legislative houses (Parliament; Senate [343], National Assembly [577]).

Chief of state: President.

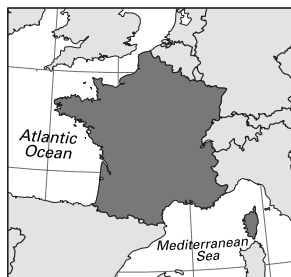
Head of government: Prime Minister.

Capital: Paris.

Official language: French.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

Regions Departments	Capitals	area		population
		sq mi	sq km	2006 ² estimate
Alsace	Strasbourg			1,817,000
Bas-Rhin	Strasbourg	1,836	4,755	1,077,000
Haut-Rhin	Colmar	1,361	3,525	740,000
Aquitaine	Bordeaux			3,099,000
Dordogne	Périgueux	3,498	9,060	402,500
Gironde	Bordeaux	3,861	10,000	1,387,000
Landes	Mont-de-Marsan	3,569	9,243	359,500
Lot-et-Garonne	Agen	2,070	5,361	319,000
Pyrénées-Atlantiques	Pau	2,952	7,645	631,000
Auvergne	Clermont-Ferrand			1,333,000
Allier	Moulins	2,834	7,340	341,500
Cantal	Aurillac	2,211	5,726	150,500
Haute-Loire	Le Puy-en-Velay	1,922	4,977	218,000
Puy-de-Dôme	Clermont-Ferrand	3,077	7,970	623,000
Basse-Normandie (Lower Normandy)	Caen			1,449,000
Calvados	Caen	2,142	5,548	666,500
Manche	Saint-Lô	2,293	5,938	489,500
Orne	Alençon	2,356	6,103	293,000
Bourgogne (Burgundy)	Dijon			1,624,000
Côte-d'Or	Dijon	3,383	8,763	514,000
Nièvre	Nevers	2,632	6,817	221,500
Saône-et-Loire	Mâcon	3,311	8,575	546,000
Yonne	Auxerre	2,868	7,427	342,500
Bretagne (Brittany)	Rennes			3,081,000
Côtes-d'Armor	Saint-Brieuc	2,656	6,878	569,500
Finistère	Quimper	2,600	6,733	879,500
Ille-et-Vilaine	Rennes	2,616	6,775	938,500
Morbihan	Vannes	2,634	6,823	693,500
Centre	Orléans			2,505,000
Cher	Bourges	2,793	7,235	315,000
Eure-et-Loir	Chartres	2,270	5,880	419,000
Indre	Châteauroux	2,622	6,791	232,000
Indre-et-Loire	Tours	2,366	6,127	571,500
Loir-et-Cher	Blois	2,449	6,343	322,500
Loiret	Orléans	2,616	6,775	645,000
Champagne-Ardenne	Châlons-en-Champagne			1,339,000
Ardennes	Charleville-Mézières	2,019	5,229	286,500
Aube	Troyes	2,318	6,004	299,500
Haute-Marne	Chaumont	2,398	6,211	186,500
Marne	Châlons-en-Champagne	3,151	8,162	566,500
Corse (Corsica)	Ajaccio			279,000
Corse-du-Sud	Ajaccio	1,550	4,014	129,000
Haute-Corse	Bastia	1,802	4,666	150,000
Franche-Comté	Besançon			1,146,000
Doubs	Besançon	2,021	5,234	515,500
Haute-Saône	Vesoul	2,070	5,360	235,000
Jura	Lons-le-Saunier	1,930	4,999	255,500
Territoire de Belfort	Belfort	235	609	140,000
Haute-Normandie (Upper Normandy)	Rouen			1,811,000
Eure	Évreux	2,332	6,040	565,500
Seine-Maritime	Rouen	2,424	6,278	1,245,500
Île-de-France	Paris			11,491,000
Essonne	Évry	696	1,804	1,193,500
Hauts-de-Seine	Nanterre	68	176	1,532,000
Paris	Paris	40	105	2,168,000
Seine-et-Marne	Melun	2,284	5,915	1,267,500
Seine-Saint-Denis	Bobigny	91	236	1,485,000
Val-de-Marne	Créteil	95	245	1,293,000
Val-d'Oise	Cergy/Pontoise	481	1,246	1,153,500
Yvelines	Versailles	882	2,284	1,398,500
Languedoc-Roussillon	Montpellier			2,520,000
Aude	Carcassonne	2,370	6,139	339,500
Gard	Nîmes	2,260	5,853	685,000
Hérault	Montpellier	2,356	6,101	992,500
Lozère	Mende	1,995	5,167	77,500
Pyrénées-Orientales	Perpignan	1,589	4,116	425,500
Limousin	Limoges			725,000
Corrèze	Tulle	2,261	5,857	237,500
Creuse	Guéret	2,149	5,565	122,500
Haute-Vienne	Limoges	2,131	5,520	365,000
Lorraine	Metz			2,339,000
Meurthe-et-Moselle	Nancy	2,024	5,241	724,000
Meuse	Bar-le-Duc	2,400	6,216	192,500
Moselle	Metz	2,400	6,216	1,039,500
Vosges	Épinal	2,268	5,874	383,000
Midi-Pyrénées	Toulouse			2,755,000
Ariège	Foix	1,888	4,890	147,000
Aveyron	Rodez	3,373	8,736	271,500
Gers	Auch	2,416	6,257	180,000
Haute-Garonne	Toulouse	2,436	6,309	1,169,500
Haute-Pyrénées	Tarbes	1,724	4,464	230,500
Lot	Cahors	2,014	5,217	168,500
Tarn	Albi	2,223	5,758	365,000
Tarn-et-Garonne	Montauban	1,435	3,718	223,000
Nord-Pas-de-Calais	Lille			4,043,000
Nord	Lille	2,217	5,742	2,583,500
Pas-de-Calais	Arras	2,576	6,671	1,459,500

Area and population (continued)

Regions Departments	Capitals	area		population
		sq mi	sq km	2006 ² estimate
Pays de la Loire	Nantes			3,426,000
Loire-Atlantique	Nantes	2,631	6,815	1,219,500
Maine-et-Loire	Angers	2,767	7,166	759,000
Mayenne	Laval	1,998	5,175	299,500
Sarthe	Le Mans	2,396	6,206	555,000
Vendée	La Roche-sur-Yon	2,595	6,720	593,000
Picardie (Picardy)	Amiens			1,886,000
Aisne	Laon	2,845	7,369	536,500
Oise	Beauvais	2,263	5,860	790,000
Somme	Amiens	2,382	6,170	559,500
Poitou-Charentes	Poitiers			1,713,000
Charente	Angoulême	2,300	5,956	344,500
Charente-Maritime	La Rochelle	2,650	6,864	596,000
Deux-Sèvres	Niort	2,316	5,999	353,500
Vienne	Poitiers	2,699	6,990	419,000
Provence-Alpes-Côte d'Azur	Marseille			4,781,000
Alpes-de-Haute-Provence	Digne	2,674	6,925	154,500
Alpes-Maritimes	Nice	1,660	4,299	1,070,000
Bouches-du-Rhône	Marseille	1,964	5,087	1,916,500
Hautes-Alpes	Gap	2,142	5,549	133,000
Var	Toulon	2,306	5,973	974,000
Vaucluse	Avignon	1,377	3,567	533,000
Rhône-Alpes	Lyon			6,005,000
Ain	Bourg-en-Bresse	2,225	5,762	565,000
Ardèche	Privas	2,135	5,529	304,000
Drôme	Valence	2,521	6,530	466,500
Haute-Savoie	Annecy	1,694	4,388	693,500
Isère	Grenoble	2,869	7,431	1,172,000
Loire	Saint-Étienne	1,846	4,781	733,000
Rhône	Lyon	1,254	3,249	1,667,500
Savoie	Chambéry	2,327	6,028	403,500
TOTAL		210,026 ³	543,965 ³	61,167,000

Demography

Population (2009): 62,596,000⁴.

Density (2009): persons per sq mi 298.0, persons per sq km 115.1.

Urban-rural (2003): urban 76.3%; rural 23.7%.

Sex distribution (2007²): male 48.60%; female 51.40%.

Age breakdown (2006²): under 15, 18.4%; 15–29, 19.1%; 30–44, 21.1%; 45–59, 20.4%; 60–74, 12.7%; 75–84, 6.3%; 85 and over, 2.0%.

Population projection (2020) 65,237,000; (2030) 66,787,000.

Ethnic composition (2000): French 76.9%; Algerian and Moroccan Berber 2.2%; Italian 1.9%; Portuguese 1.5%; Moroccan Arab 1.5%; Flemish 1.4%; Algerian Arab 1.3%; Basque 1.3%; Jewish 1.2%; German 1.2%; Vietnamese 1.0%; Catalan 0.5%; other 8.1%.

Religious affiliation (2004): Roman Catholic 64.3%, of which practicing c. 8%; nonreligious/atheist c. 27%; Muslim 4.3%; Protestant 1.9%; Buddhist c. 1%; Jewish 0.6%; Jehovah's Witness 0.4%; Orthodox 0.2%; other 0.3%.

Major cities/urban agglomerations (2006): Paris 2,181,371/10,142,977; Marseille 839,043/1,418,481; Lyon 472,305/1,417,463; Lille 226,014/1,016,205; Nice 347,060/940,017; Toulouse 437,715/850,873; Bordeaux 232,260/803,117; Nantes 282,853/568,743; Toulon 167,816/543,065; Douai-Lens: Douai (2005) 40,094, Lens (2005) 34,872/512,462; Strasbourg 272,975/440,265; Grenoble 156,107/427,658; Rouen 107,904/388,798; Valenciennes (2005) 41,506/355,660; Nancy 105,468/331,279; Metz 124,435/322,946; Montpellier 251,634/318,225; Tours 136,942/306,974; Saint-Étienne 177,480/286,400; Rennes 209,613/282,550.

Households (2004). Average household size 2.36; 1 person 32.8%, 2 persons 32.5%, 3 persons 15.1%, 4 persons 12.8%, 5 persons or more 6.8%. Individual households 14,320,000 (56.0%); collective households 11,232,000 (44.0%).

Immigration: total immigrant population (2005²) c. 4,850,000; immigrants admitted (2002) 205,707, of which North African 30.7%, EU 20.8%, sub-Saharan African 15.2%, Asian 14.1%, other European 11.8%.

Vital statistics

Birth rate per 1,000 population (2008): 12.9 (world avg. 20.3); (2007) within marriage 48.3%; outside of marriage 51.7%.

Death rate per 1,000 population (2008): 8.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 4.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.00.

Marriage/divorce rates per 1,000 population: (2008) 4.3/(2003) 2.1.

Life expectancy at birth (2008): male 77.6 years; female 84.4 years.

Major causes of death per 100,000 population (2004): malignant neoplasms (cancers) 251.9; diseases of the circulatory system 243.0; accidents and violence 61.7; diseases of the respiratory system 50.0; diseases of the digestive system 37.8; endocrine, metabolic, and nutritional disorders 31.1.

Adult population (ages 15–49) living with HIV (2007): 0.4% (world avg. 0.8%).

Social indicators

Educational attainment (2002). Percentage of population age 25–64 with no formal schooling through lower-secondary education 35%, upper secondary/higher vocational 41%, university 24%.

Quality of working life. Legally worked week for full-time employees (2005) 36.0 hours. Rate of fatal injuries per 100,000 insured workers (2004): 3.7.

Average days lost to labour stoppages per 1,000 workers (2004): 13. Trade union membership (2003): 1,900,000 (c. 8% of labour force).

Access to services (2004). Proportion of principal residences having: electricity 97.4%; indoor toilet 94.6%; indoor kitchen with sink 94.2%; hot water 60.3%; air conditioner 15.4%.

Social participation. Eligible voters participating in last (May 2007) national election: 84.0%. Population over 15 years of age participating in voluntary associations (1997): 28.0%. Percentage of population who “never” or “almost never” attend church services (2000) 60%; percentage of Roman Catholic population who attend Mass weekly (2003) 12%.

Social deviance. Offense rate per 100,000 population (2006) for: murder 1.5, rape 16.0, other assault 269.2; theft (including burglary and housebreaking) 3,403.8. Incidence per 100,000 in general population of: homicide (2001) 0.8; suicide (2001) 16.1.

Leisure. Members of sports federations (2007): 16,254,000, of which football (soccer) 2,321,000. Movie tickets sold (2005): 174,200,000. Average daily hours of television viewing for population age 4 and over (2007): 3.45.

Material well-being (2004). Households possessing: automobile (2007) 82%; colour television 95%; personal computer 45%; washing machine 92%; microwave 74%; dishwasher (2001) 39%.

National economy

Gross national income (2008)⁵: U.S.\$2,702,180,000,000 (U.S.\$42,250 per capita); purchasing power parity GNI (U.S.\$34,400 per capita).

Structure of gross domestic product and labour force				
	2006		2005	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	32,700	1.8	953,100	3.4
Mining	...	...	41,700	0.2
Manufacturing	198,800	11.1	4,129,800	14.9
Construction	101,200	5.6	1,688,100	6.1
Public utilities	32,800	1.8	205,000	0.7
Transp. and commun.	66,400	3.7	1,599,400	5.8
Trade, hotels	197,100	11.0	4,176,200	15.1
Finance, real estate	568,200	31.7	3,256,400	11.8
Pub. admin., defense	126,000	7.0	2,358,800	8.5
Services	403,500	22.5	6,419,200	23.2
Other	65,300	3.6	2,808,100 ⁶	10.2 ⁶
TOTAL	1,792,000	100.0 ⁷	27,635,800	100.0 ⁷

Budget (2007). Revenue: €369,600,000,000 (tax revenue 80.0%, of which taxes on goods and services 43.6%; social contributions 10.9%; grants 4.5%). Expenditures: €411,410,000,000 (social protection 20.0%, education 19.4%, economic affairs 13.8%, debt service 11.1%, defense 8.2%).

Public debt (2007): U.S.\$1,655,000,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) for forage and silage 43,600,000, wheat 36,840,806, sugar beets 31,242,506, corn (maize) 13,107,000, barley 9,472,000, grapes 6,500,000, potatoes 6,271,000, rapeseed 4,554,000, apples 1,800,000, triticale 1,539,000, sunflower seeds 1,376,000, tomatoes 750,000, carrots and turnips 710,000, dry peas 643,000, lettuce and chicory 471,000, oats 443,000, peaches and nectarines 401,000, cauliflower and broccoli 370,000, green peas 355,000, string beans 355,000, leeks 182,910, chicory roots 141,000, mushrooms and truffles 125,000, flax fibre and tow 95,000; livestock (number of live animals) 19,359,000 cattle, 14,736,000 pigs, 8,499,000 sheep, 161,500,000 chickens, 28,105,000 turkeys, 23,190,000 ducks; roundwood 62,759,000 cu m, of which fuelwood 53%; fisheries production 749,903 (from aquaculture 31%); aquatic plants production 76,678 (from aquaculture, negligible). Mining and quarrying (2006): gypsum 3,500,000; crude talc 420,000; kaolin 300,000; gold 1,500 kg. Manufacturing (value added in U.S.\$'000,000; 2003): food products 27,023; pharmaceuticals, soaps, and paints 22,675; motor vehicles, trailers, and motor vehicle parts 20,269; fabricated metal products 14,264; general purpose machinery 10,595; plastic products 8,754; medical, measuring, and testing appliances 7,551; aircraft and spacecraft 7,476; publishing 6,911; special purpose machinery 6,605; bricks, cement, and ceramics 5,922; basic chemicals 5,843; base metals 5,547, of which basic iron and steel 4,117; paper and paper products 5,532; beverages 5,509; furniture 4,218.

Financial aggregates ⁸	2003	2004	2005	2006	2007	2008
Exchange rate, € per:						
U.S. dollar	0.79	0.73	0.85	0.76	0.68	0.72
£	1.41	1.42	1.46	1.49	1.36	1.05
SDR	1.18	1.14	1.21	1.14	1.07	1.07
International reserves (U.S.\$)						
Total (excl. gold; '000,000)	30,186	35,314	27,753	42,652	45,710	33,617
SDRs ('000,000)	761	875	878	948	995	966
Reserve pos. in IMF ('000,000)	6,303	5,363	2,878	1,417	1,127	2,270
Foreign exchange	23,122	29,077	23,996	40,287	43,587	30,382
Gold ('000,000 fine troy oz)	97.25	95.98	90.85	87.44	83.69	80.13
% world reserves	10.7	10.7	10.3	10.1	9.8	9.4
Interest and prices						
Central bank discount (%)	...	...	...	...	...	...
Govt. bond yield (%)	4.13	4.10	3.41	3.80	4.30	4.23
Industrial share prices (2005 = 100) ⁹	72.6	86.0	100.0	120.3	134.4	100.5
Balance of payments (U.S.\$'000,000)						
Balance of visible trade	+3,430	-4,840	-28,490	-37,700	-54,880	-90,150
Imports, f.o.b.	-358,500	-425,950	-468,390	-520,810	-600,920	-691,990
Exports, f.o.b.	361,930	421,110	439,900	483,110	546,040	601,840
Balance of invisibles	+11,330	+15,260	+9,420	+9,390	+23,630	+37,240
Balance of payments, current account	+14,760	+10,420	-19,070	-28,310	-31,250	-52,910

Energy production (consumption): electricity (kW-hr; 2006) 574,473,000,000 (511,138,000,000¹⁰); hard coal (metric tons; 2007) 168,000¹¹ ([2005] 19,069,000); lignite (metric tons; 2006) negligible (36,000¹⁰); crude petroleum (barrels; 2007) 7,430,000 ([2006] 606,000,000¹⁰); petroleum products (metric tons; 2006) 74,659,000¹⁰ (75,921,000¹⁰); natural gas (cu m; 2007) 1,079,000,000 ([2006] 49,155,000,000¹⁰).

Retail trade (value of sales in €'000,000; 2004): large food stores 162,600; large nonfood stores 136,400; auto repair shops 120,400; pharmacies and stores selling orthopedic equipment 32,600; shops selling bread, pastries, or meat 31,800; small food stores and boutiques 15,300.

Population economically active (2005): total 27,635,800; activity rate of total population 45.5% (participation rates: ages 15–64, 69.1%; female 46.4%; unemployed [April 2007] 8.2%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.2	96.2	98.2	100.0	101.9	103.5	106.8

Household income and expenditure. Average household size (2004) 2.4; average disposable income per household (2004) €28,340 (U.S.\$35,187); sources of income (2004): wages and salaries 66%, transfers 23%, self-employment 7%, other 4%; expenditure (2007): housing and energy 25.4%, transportation 14.6%, food and nonalcoholic beverages 13.4%, recreation and culture 9.3%, restaurants and hotels 6.2%, household furnishings 6.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 54,165; remittances (2008) 15,133; foreign direct investment (FDI; 2005–07 avg.) 107,025. Disbursements for (U.S.\$'000,000): tourism (2007) 36,743; remittances (2008) 4,541; FDI (2005–07 avg.) 153,666.

Land use as % of total land area (2007): in temporary crops 25.7%, in permanent crops 2.0%, in pasture 23.8%, forest area 28.5%.

Foreign trade^{10, 12}

Balance of trade (current prices)

	2004	2005	2006	2007
U.S.\$'000,000	-20,534	-41,503	-50,889	-52,000
% of total	2.4%	4.6%	5.0%	5.5%

Imports (2006): U.S.\$529,902,000,000 (machinery and apparatus 22.1%, of which electrical machinery/apparatus/parts 5.4%, general industrial machinery 3.9%, office machines/computers 3.5%; mineral fuels 14.8%, of which crude petroleum 7.5%, refined petroleum 3.5%; chemical products 12.7%, of which medicines and pharmaceuticals 3.5%; road vehicles/parts 10.2%; apparel and clothing accessories 3.5%; iron and steel 3.2%). **Major import sources:** Germany 16.3%; Italy 8.5%; Belgium 8.3%; Spain 6.9%; U.K. 6.1%; U.S. 6.0%; China 5.7%; Netherlands 4.1%; Japan 2.4%; Russia 2.4%.

Exports (2006): U.S.\$479,013,000,000 (machinery and apparatus 22.1%, of which electrical machinery/apparatus/parts 6.2%, general industrial machinery 4.8%, power-generating machinery 3.7%, telecommunications equipment 3.1%; chemicals and chemical products 15.7%, of which medicines and pharmaceuticals 5.1%, perfumery and cosmetics 2.3%; road vehicles/parts 12.1%; food 6.1%; aircraft/parts 6.0%; mineral fuels 4.3%; iron and steel 3.7%; alcoholic beverages [mostly wine] 2.4%). **Major export destinations:** Germany 14.5%; Spain 9.9%; Italy 9.1%; U.K. 8.5%; Belgium 7.4%; U.S. 6.9%; Netherlands 4.1%; Switzerland 2.7%; China 2.1%; Poland 1.8%.

Transport and communications

Transport. Railroads (2004): route length (in operation) 29,085 km; (2006) passenger-km 92,000,000,000; (2006) metric ton-km cargo 41,000,000,000. Roads (2006): total length 951,500 km (paved 100%). Vehicles (2006): passenger cars 30,400,000; trucks and buses 6,262,000. Air transport (2008): passenger-km 131,664,000,000; metric ton-km cargo 5,838,300,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	23,723	391	PCs	2007	40,400	652
Telephones				Dailies	2007	10,213 ¹³	205 ¹³
Cellular	2008	57,972 ¹⁴	936 ¹⁴	Internet users	2007	31,571	512
Landline	2008	35,000	565	Broadband	2008	17,691 ¹⁴	286 ¹⁴

Education and health

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	217,017	4,051,861	18.7	99
Secondary/Voc. (age 11–17)	495,424	5,993,897	12.1	99
Tertiary	135,783 ¹⁵	2,201,201	15.9 ¹⁵	56 (age 18–22)

Health (2007): physicians 212,700 (1 per 291 persons); hospital beds (2004) 457,132 (1 per 132 persons); infant mortality rate per 1,000 live births (2008) 3.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 352,771¹⁶ (army 38.0%, navy 12.5%, air force 16.3%, headquarters staff 1.5%, health services 2.4%, gendarmerie 29.3%). **Military expenditure as percentage of GDP** (2007): 2.4%¹⁷; per capita expenditure U.S.\$980¹⁷.

¹Since 2005 international and country sources are more likely to combine social and economic data for the four French overseas departments (FODs; that is, French Guiana, Guadeloupe, Martinique, and Réunion) with metropolitan France. *Britannica World Data* continues to compile separate pages for the four FODs and acknowledges that some data are without a doubt double-counted. Data for France are footnoted if taken from an international source that clearly cites the inclusion of the FODs. ²January 1. ³Area including four FODs equals 244,310 sq mi (632,759 sq km). ⁴Excludes population of four FODs totaling 1,861,000 people in mid-2009. ⁵Includes the overseas departments of French Guiana, Guadeloupe, Martinique, and Réunion. ⁶Includes 2,717,000 unemployed. ⁷Detail does not add to total given because of rounding. ⁸Data are end of year unless otherwise indicated. ⁹Period average. ¹⁰Includes Monaco. ¹¹Last state-owned coal-producing mine closed in April 2004. ¹²Imports c.i.f.; exports f.o.b. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵2003–04. ¹⁶About 17,400 troops are stationed outside of France, including 2,800 each in Afghanistan, Djibouti, and Germany. ¹⁷Includes military pensions.

Internet resource for further information:

• INSEE <http://www.insee.fr/en>

French Guiana

Official name: Département d'Outre-Mer de la Guyane française (Overseas Department of French Guiana).¹

Political status: overseas department/overseas region of France with two legislative houses (General Council² [19]; Regional Council³ [31]).

Chief of state: President of France.

Heads of government: Prefect (for France); President of the General Council (for French Guiana); President of the Regional Council (for French Guiana).

Capital: Cayenne.

Official language: French.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

Arrondissements	Capitals	area		population
		sq mi	sq km	2006 census ⁴
Cayenne	Cayenne	17,727	45,913	147,817
Saint-Laurent-du-Maroni	Saint-Laurent-du-Maroni	14,526	37,621	58,137
TOTAL		32,253	83,534	205,954

Demography

Population (2009): 231,000.

Density (2009): persons per sq mi 7.2, persons per sq km 2.8.

Urban-rural (2005): urban 75.5%; rural 24.5%.

Sex distribution (2005): male 50.58%; female 49.42%.

Age breakdown (2005): under 15, 29.3%; 15–29, 22.8%; 30–44, 21.1%; 45–59, 17.4%; 60–74, 7.2%; 75 and over, 2.2%.

Population projection: (2020) 299,000; (2030) 363,000.

Doubling time: 26 years.

Ethnic composition (2000): Guianese Mulatto 37.9%; French 8.0%; Haitian 8.0%; Surinamese 6.0%; Antillean 5.0%; Chinese 5.0%; Brazilian 4.9%; East Indian 4.0%; other (other West Indian, Hmong, other South American) 21.2%.

Religious affiliation (2000): Christian 84.6%, of which Roman Catholic 80.0%, Protestant 3.9%; Chinese folk-religionist 3.6%; Spiritist 3.5%; nonreligious/atheist 3.0%; traditional beliefs 1.9%; Hindu 1.6%; Muslim 0.9%; other 0.9%.

Major cities (2006)⁵: Cayenne 58,004 (urban agglomeration 75,740); Saint-Laurent-du-Maroni 33,707; Matoury 24,583; Kourou 23,183; Rémire-Montjoly 17,736⁶.

Vital statistics

Birth rate per 1,000 population (2007): 30.0 (world avg. 20.3); (2005) within marriage 14.0%; outside of marriage 86.0%.

Death rate per 1,000 population (2007): 3.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 26.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.90.

Marriage/divorce rates per 1,000 population: (2007) 3.0/(2005) 1.2.

Life expectancy at birth (2007): male 74.9 years; female 79.8 years.

Major causes of death per 100,000 population (2005): external causes 76.0, of which accidents 50.8; diseases of the circulatory system 75.0, of which cerebrovascular disease 25.7; malignant neoplasms (cancers) 58.2; infectious and parasitic diseases 32.1; certain conditions originating in the perinatal period 15.3.

National economy

Budget (2006)⁷. Revenue: €171,700,000 (grants and subsidies 52.3%, tax revenue 34.7%, loans 12.5%, other 0.5%). Expenditures: €181,800,000 (capital expenditures 68.5%, current expenditures 31.5%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 10,300, rice (2008) 8,968, cabbages 6,300, sugarcane 5,500, bananas 4,500, taro 4,100, tomatoes 3,700, green beans 3,300; livestock (number of live animals) 10,500 pigs, 9,200 cattle; roundwood 176,600 cu m, of which fuelwood 63%; fisheries production 4,874 (from aquaculture, none). Mining and quarrying: clays (2006) 5,000; gold (2008) 1,504 kg⁸. Manufacturing: cement (2006) 62,000; rum (2007) 2,965 hectolitres; other products include finished wood products, leather goods, clothing, rosewood essence, yogurt, and beer. Number of satellites launched from the Kourou Space Centre (2008): 6⁹. Energy production (consumption): electricity (kW-hr; 2008) 763,000,000 (2007) 582,000,000; coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (276,000); natural gas, none (none). **Household income and expenditure.** Average household size (1999) 3.3; income per household (2000) €30,542 (U.S.\$28,139); sources of income (2006): wages and salaries 82.3%, self-employment 5.8%, transfer payments 7.4%; expenditure (2005)¹⁰: food and beverages 21.7%, housing and energy 20.8%, transportation and communications 15.4%, restaurants and hotels 7.9%, household furnishings 7.3%, clothing and footwear 6.4%.

Land use as % of total land area (2007): in temporary crops 0.14%, in permanent crops 0.04%, in pasture 0.08%, forest area 91.5%.

Gross domestic product (at current market prices; 2007): U.S.\$2,970,000,000 (U.S.\$14,100 per capita).

Structure of gross domestic product and labour force

	2005		2002	
	in value €'000,000	% of total value	labour force ¹¹	% of labour force ¹¹
Agriculture, forestry, fishing	107	4.3	1,024	2.1
Mining	278	11.3	409	0.8
Manufacturing	174	7.1	1,053	2.1
Construction	42	1.7	2,583	5.2
Public utilities	102	4.1	644	1.3
Transp. and commun.	250	10.1	2,134	4.3
Trade, restaurants, hotels			4,815	9.8
Finance, real estate			830	1.7
Pub. admin., defense	1,559	63.1	9,758	19.8
Services			14,975	30.4
Other	–42	–1.7	11,095	22.5
TOTAL	2,470	100.0	49,320	100.0

Population economically active (2008): total 63,970; activity rate of total population 28.4% (participation rates: ages 15 and over, 50.9%; female [2005] 44.7%; unemployed 21.8%).

Price and earnings indexes (2005 = 100)¹²

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	96.4	97.3	98.5	100.0	103.3	105.9	109.3
Monthly earnings index ¹³	93.5	93.5	94.0	100.0	103.1	105.1	108.2

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 49; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	–524	–581	–641	–627	–779	–951
% of total	70.2%	76.3%	77.5%	71.8%	70.0%	82.6%

Imports (2008): €1,051,400,000 (machinery and apparatus 16.8%; food and agricultural products 16.4%; road vehicles 15.3%; mineral fuels 11.6%). **Major import sources:** France c. 52%; other EU c. 10%; Latin America c. 5%.

Exports (2008): €99,900,000 (gold 35.7%, motor vehicles/parts 23.5%, electrical machinery and electronics 7.8%, shrimp 7.4%, fish 6.3%, boats and aircraft/spacecraft parts 3.7%). **Major export destinations:** France c. 57%; other EU c. 25%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 808 mi, 1,300 km (paved, n.a.). Vehicles (2001): passenger cars 32,900; trucks and buses 11,900. Air transport (2008): passengers carried 385,142; cargo carried 4,702 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1998	37	202	PCs	2004	33	168
Telephones				Dailies	2007	15 ¹⁴	69 ¹⁴
Cellular	2004	98 ¹⁵	500 ¹⁵	Internet users	2005	42	207
Landline	2004	55	280	Broadband	2008	...	...

Education and health

Educational attainment (1999). Percentage of population age 20 and over having: no formal education through lower secondary education 57.3%; vocational 17.5%; upper secondary 9.3%; incomplete higher 5.6%; completed higher 6.7%; other 3.6%. **Literacy:** n.a.

Education (2008–09)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	2,139 ¹⁶	40,178	...	...
Secondary/Voc. (age 12–18) ¹⁷	2,129 ¹⁶	28,758	...	...
Tertiary	...	...	...	... (age 19–23)

Health (2007): physicians 363 (1 per 599 persons); hospital beds 576 (1 per 378 persons); infant mortality rate per 1,000 live births (2005) 12.1; undernourished population, n.a.

Military

Total active duty personnel (November 2008): French troops 1,650 (army [including the French Foreign Legion] 90.9%, navy 9.1%).

¹French Guiana is simultaneously administered as an overseas region (*région d'outre-mer*). ²Assembly for overseas department. ³Assembly for overseas region. ⁴Total of 22 commune censuses taken between 2004 and 2008. ⁵Commune population. ⁶Within Cayenne urban agglomeration. ⁷Data are for budget managed by French Guiana's Regional Council. ⁸Legal production only. ⁹In 2004 the European Space Agency accounted for 26% of GDP and employed 8,300. ¹⁰Weights of consumer price index components. ¹¹Employed only. ¹²Indices based on end-of-year figures. ¹³Based on minimum-level wage in public administration. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶2004–05. ¹⁷Excludes vocational.

Internet resources for further information:

- IEDOM Guyane: Rapport Annuel
<http://www.iedom.fr>
- INSEE Guyane
<http://www.insee.fr/fr/regions/guyane>

French Polynesia

Official name: Pays d'Outre-Mer de la Polynésie Française (French) (Overseas Country of French Polynesia).¹

Political status: overseas collectivity (France) with one legislative house (Assembly [57]).

Chief of state: President of France.

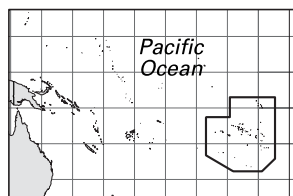
Heads of government: High Commissioner (for France); President of the Government (for French Polynesia).

Capital: Papeete.

Official language: French.

Official religion: none.

Monetary unit: CFP franc (CFPF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFPF 83.37; 1 £ = CFPF 135.28.



Area and population					
Administrative subdivisions/ Principal islands	area	population	Administrative subdivisions/ Principal islands	area	population
	sq km	2007 census		sq km	2007 census
Îles Australes	148	6,304	Îles Sous le Vent	404	33,165
Îles du Vent	1,194	194,683	Bora-Bora		8,930
Moorea		16,208	Raiatea		12,008
Tahiti		178,173	Îles Tuamotu		
Îles Marquises	1,049	8,658	et Gambier	726	16,896
			TOTAL	4,000²	259,706

Demography

Population (2009): 265,000.

Density (2009)³: persons per sq mi 195.0, persons per sq km 75.3.

Urban-rural (2005): urban 51.9%; rural 48.1%.

Sex distribution (2007): male 51.25%; female 48.75%.

Age breakdown (2007): under 15, 26.0%; 15–29, 26.6%; 30–44, 23.4%; 45–59, 15.3%; 60–74, 6.9%; 75 and over, 1.8%.

Population projection: (2020) 300,000; (2030) 324,000.

Ethnic composition (2000): Polynesian 84.4%, of which Tahitian 41.0%, Tuamotuan 8.5%; mixed European-Polynesian 17.0%; Han Chinese 11.3%; French 11.0%; other 2.3%.

Religious affiliation (2005): Protestant c. 36%, of which Māōhi Protestant Church (Presbyterian) c. 33%; Roman Catholic c. 31%; other Christian c. 11%, of which Mormon c. 6%; Chinese folk-religionist, nonreligious, and other c. 22%.

Major communes (2007): Faa'a 29,781⁴; Papeete 26,050 (urban agglomeration 131,695⁵); Punaauia 25,399⁴; Pirae 14,551⁴; Nunue 4,927⁶.

Vital statistics

Birth rate per 1,000 population (2007): 17.2 (world avg. 20.3); (2004) within marriage c. 26%; outside of marriage c. 74%.

Death rate per 1,000 population (2007): 4.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 2.11.

Marriage/divorce rates per 1,000 population (2006): 4.6/n.a.

Life expectancy at birth (2007): male 71.9 years; female 77.1 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 105.3; malignant neoplasms (cancers) 99.2; accidents, suicide, and violence 49.4; respiratory diseases 37.6.

National economy

Budget (2007). Revenue: CFPF 143,113,000,000 (tax revenue 72.6%; state grants 15.5%; loans 7.8%; nontax revenue 4.1%). Expenditures: CFPF 144,492,000,000 (current expenditure 71.6%; capital expenditure 22.0%; debt service 6.4%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 87,000, roots and tubers 10,450 (of which cassava 4,300), copra (2008) 10,423, pineapples 3,400, sugarcane 3,000, *noni* juice and puree (export production; 2008) 1,924, tomatoes 1,100, lettuce 900, cucumbers 870, bananas 800, vanilla 37; livestock (number of live animals) 27,000 pigs, 16,500 goats, 12,000 cattle; roundwood 4,300 cu m, of which fuelwood 100%; fisheries production 13,126 (from aquaculture, negligible); export production of black pearls (2008) 9,349 kg. Mining and quarrying: submerged phosphate deposits at Mataiva Atoll were not mined in 2009. Manufacturing: mostly food and beverages and fabricated metal products; other specific manufactures include *monoï* oil (primarily refined coconut and sandalwood oils), printed cloth, and sandals. Energy production (consumption): electricity (kW-hr; 2006) 667,000,000 (667,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (266,000).

Population economically active (2007): total 107,926; activity rate of total population 41.6% (participation rates: ages 15 and over, 56.2%; female 41.0%; unemployed 11.7%).

Price index (2005 = 100)							
	2003	2004	2005	2006	2007	2008	
Consumer price index	99.2	99.6	100.0	102.7	104.8	108.1	

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 609; remittances (2008) 730; foreign direct investment (FDI; 2005–07 avg.) 19. Disbursements for (U.S.\$'000,000): tourism (2007) 343; remittances (2008) 56; FDI (2005–07 avg.) 13.

Gross domestic product (2007): U.S.\$6,172,000,000 (U.S.\$23,804 per capita).

Structure of gross domestic product and labour force				
	2007		2006	
	in value U.S.\$'000,000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture, fishing	164.3	2.7	2,808	4.1
Mining and quarrying			156	0.2
Public utilities	106.7	1.7	537 ⁸	0.8
Manufacturing	370.0	6.0	4,645 ⁸	6.8
Construction	331.7	5.4	5,961	8.8
Transp. and commun.	427.8	6.9	6,509	9.6
Trade, hotels	1,389.7	22.5	17,578	25.8
Finance, real estate			6,307	9.3
Services	3,013.7	48.8	8,469	12.4
Pub. admin., defense			15,070	22.1
Other	367.7	6.0	—	—
TOTAL	6,171.6	100.0	68,040	100.0⁹

Public debt (external, outstanding): n.a.

Household income and expenditure. Average household size (2007) 3.8; average annual income per household, n.a.; sources of income (1993): salaries 61.9%, self-employment 21.5%, transfer payments 16.6%; expenditure (2000–01): food and beverages 21.9%, housing 19.2%, transportation 16.7%, hotel and café expenditures 7.7%, culture and recreation 6.9%, household furnishings 5.8%.

Land use as % of total land area (2007): in temporary crops 0.8%, in permanent crops 6.0%, in pasture 5.5%, forest area 28.7%.

Foreign trade¹⁰

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
CFPF '000,000	−149,200	−124,300	−143,400	−135,100	−143,900	−159,700
% of total	82.5%	77.8%	78.0%	75.1%	81.2%	83.1%

Imports (2006): CFPF 157,500,000,000 (machinery and apparatus 16.9%; mineral fuels 12.7%; motor vehicles and parts 10.0%; pharmaceutical products 4.1%). **Major import sources:** France 30.6%; Singapore 12.4%; U.S. 10.3%; China 6.6%; New Zealand 6.5%.

Exports (2006): CFPF 22,400,000,000 (pearl products [mostly black cultured pearls] 56.2%; transportation [including aerospace] equipment 8.3%; *noni*¹¹ fruit 5.2%; fish 1.9%; coconut oil 1.1%; vanilla 0.9%; *monoï* oil 0.9%). **Major export destinations:** Hong Kong 26.8%; Japan 23.1%; France 11.0%; U.S. 10.1%; New Caledonia 1.7%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 390 mi, 792 km (paved 33%). Motor vehicles: n.a. Air transport (2007)¹²: passenger-km 4,509,000,000; metric ton-km cargo (2004) 96,492,000.

Communications				units			
Medium	date	number in '000s	per 1,000 persons	Medium	date	number in '000s	per 1,000 persons
Televisions	2004	56	223	PCs	2005	28	109
Telephones				Dailies	2007	22 ¹³	85 ¹³
Cellular	2008	187 ¹⁴	713 ¹⁴	Internet users	2008	90	343
Landline	2008	55	208	Broadband	2008	28 ¹⁴	106 ¹⁴

Education and health

Educational attainment (2007). Percentage of population age 15 and over having: no formal schooling 4.4%; primary education 19.9%; lower secondary 20.8%; vocational 19.8%; upper secondary 18.7%; higher 16.4%. **Literacy** (2000): virtually 100%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	...	26,939	...	...
Secondary/Voc. (age 11–17)	...	33,193	...	...
Tertiary ¹⁵	74	2,649	35.8	... (age 18–22)

Health (2007): physicians 609 (1 per 426 persons); hospital beds 894 (1 per 290 persons); infant mortality rate per 1,000 live births 6.8; undernourished population (2002–04) 10,000 (4% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2008): 1,410 French military personnel (army 49.6%, navy 50.4%). **Military expenditure as percentage of GDP:** n.a.

¹French Polynesia in Tahitian is Polynesia Farani; the Tahitian language provides the fundamental element of cultural identity per article 57 of the Statute of Autonomy.

²Approximate total area including inland water; total land area is 3,521 sq km (1,359 sq mi). ³Based on land area. ⁴Part of Papeete urban agglomeration. ⁵Preliminary census total. ⁶Located on Bora-Bora, Nunue is the largest town not on the island of Tahiti.

⁷Salaried employees only. ⁸The manufacture of energy-generating products is included in Public utilities. ⁹Detail does not add to total given because of rounding. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Fruit known locally as *nono*; also known as Indian mulberry. ¹²Air Tahiti and Air Tahiti Nui only. ¹³Circulation of daily newspapers. ¹⁴Subscribers.

¹⁵University of French Polynesia only.

Internet resources for further information:

- Institut de la Statistique de la Polynésie Française <http://www.ispf.pf>
- IEOM La Polynésie française: Rapport Annuel <http://www.ieom.fr>

Gabon

Official name: République Gabonaise (Gabonese Republic).

Form of government: unitary multiparty republic with a Parliament comprising two legislative houses (Senate [102]; National Assembly [120]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Libreville.

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFAF 458.60; 1 £ = CFAF 744.12.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2002 estimate ¹
Estuaire	Libreville	8,008	20,740	597,200
Haut-Ogooué	Franceville	14,111	36,547	134,500
Moyen-Ogooué	Lambaréné	7,156	18,535	54,600
Ngounié	Mouila	14,575	37,750	100,300
Nyanga	Tchibanga	8,218	21,285	50,800
Ogooué-Ivindo	Makokou	17,790	46,075	63,000
Ogooué-Lolo	Koulamoutou	9,799	25,380	56,600
Ogooué-Maritime	Port-Gentil	8,838	22,890	126,200
Woleu-Ntem	Oyem	14,851	38,465	125,400
TOTAL		103,347²	267,667	1,308,600³

Demography

Population (2009): 1,475,000.

Density (2009): persons per sq mi 14.3; persons per sq km 5.5.

Urban-rural (2006): urban 85.7%; rural 14.3%.

Sex distribution (2006): male 49.67%; female 50.33%.

Age breakdown (2005): under 15, 40.0%; 15–29, 28.3%; 30–44, 16.1%; 45–59, 9.3%; 60–74, 4.6%; 75–84, 1.4%; 85 and over, 0.3%.

Population projection (2020) 1,779,000; (2030) 2,044,000.

Doubling time: 29 years.

Ethnic composition (2000): Fang 28.6%; Punu 10.2%; Nzebi 8.9%; French 6.7%; Mpongwe 4.1%; Teke 4.0%; other 37.5%.

Religious affiliation (2005): Christian c. 73%⁴, of which Roman Catholic c. 45%⁴, Protestant/independent Christian c. 28%⁴; Muslim c. 12%⁵; traditional beliefs c. 10%; nonreligious c. 5%.

Major urban areas (2003): Libreville 661,600; Port-Gentil 116,200; Franceville 41,300; Lambaréné 9,000.

Vital statistics

Birth rate per 1,000 population (2006): 36.2 (world avg. 20.3).

Death rate per 1,000 population (2006): 12.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 23.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 4.74.

Life expectancy at birth (2006): male 53.2 years; female 55.8 years.

Adult population (ages 15–49) *living with HIV* (2007): 5.9%⁶ (world avg. 0.8%).

National economy

Budget (2006). Revenue: CFAF 1,582,600,000,000 (oil revenues 64.0%; taxes on international trade 15.2%; direct taxes 10.0%; indirect taxes 7.2%; other revenues 3.6%). Expenditures: CFAF 1,066,300,000,000 (current expenditure 77.6%, of which transfers 27.3%, wages and salaries 23.7%, debt service 10.9%; capital expenditure 22.4%).

Public debt (external, outstanding; 2007): U.S.\$5,177,000,000.

Gross national income (GNI; 2008): U.S.\$10,490,000,000 (U.S.\$7,240 per capita); purchasing power parity GNI (U.S.\$12,270 per capita).

Structure of gross domestic product and labour force

	2004			
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	214,600	5.6	201,000	32.9
Crude petroleum	1,654,700	43.3		
Other mining	66,300	1.7		
Manufacturing	188,600	4.9		
Construction	81,200	2.1		
Public utilities	51,300	1.4		
Transp. and commun.	206,600	5.4	410,000	67.1
Trade, restaurants	238,300	6.2		
Finance, real estate	62,700	1.7		
Services	475,200	12.5		
Pub. admin., defense	308,600	8.1		
Other	270,000 ²	7.17		
TOTAL	3,818,000²	100.0	611,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): plantains 275,000, cassava 240,000, sugarcane 220,000, yams 158,000, taro 56,000, vegetables 35,000, oil palm fruit 33,500, game meat 21,000, peanuts (groundnuts) 18,000, natural rubber 12,000; livestock (number of live animals) 213,000 pigs, 3,100,000 chickens; roundwood 3,932,000 cu m, of which fuelwood 14%; fisheries production 39,124 (from aquaculture, negligible). Mining and quarrying (2005): manganese ore 2,859,000; gold 300 kg⁸. Manufacturing (value added in CFAF '000,000,000; 2004): agricultural products 48.0; wood products (excluding furniture) 31.3; refined petroleum products 18.1. Energy production (consumption): electricity (kW-hr; 2006)

1,726,000,000 (1,726,000,000); coal, none (none); crude petroleum (barrels; 2007) 83,900,000 ([2006] 5,749,000); petroleum products (metric tons; 2006) 684,000 (497,000); natural gas (cu m; 2006) 126,000,000 (126,000,000).

Population economically active (2003)⁹: total 570,000; activity rate of total population 42.5% (participation rates: ages 15–64, 74.1%; female 43.0%; unemployed c. 21%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	96.3	98.4	98.8	100.0	98.6	103.6	109.0

Household income and expenditure (2004). Average household size 5.0; average annual income per household¹⁰ CFAF 1,730,000 (U.S.\$3,275); sources of income: n.a.; expenditure¹⁰: food 85.3%, transportation and communications 3.6%, clothing 1.8%, housing 1.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 15; remittances (2008) 11; foreign direct investment (FDI; 2005–07 avg.) 199; official development assistance (2006) 31. Disbursements for (U.S.\$'000,000): tourism (2004) 214; remittances (2008) 186; FDI (2005–07 avg.) 76.

Land use as % of total land area (2007): in temporary crops 1.3%, in permanent crops 0.7%, in pasture 18.1%; overall forest area 84.4%.

Foreign trade¹¹

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+1,666	+1,783	+1,815	+3,597	+4,290	+3,750
% of total	52.8%	46.1%	48.5%	55.0%	55.4%	46.0%

Imports (2006): U.S.\$1,725,000,000 (machinery and apparatus 27.6%, of which general industrial machinery 8.8%; food 13.0%; road vehicles/parts 9.9%; chemicals and chemical products 9.2%). **Major import sources:** France 39.9%; Belgium 14.2%; U.S. 7.3%; Cameroon 3.5%; Japan 3.0%.

Exports (2006): U.S.\$6,015,000,000 (crude petroleum 84.4%, rough wood 5.1%, manganese ore and concentrate 3.1%, veneer/plywood 2.0%, refined petroleum 1.2%). **Major export destinations:** U.S. 58.4%; China 10.6%; France 7.1%; Singapore 5.3%; Switzerland 2.6%.

Transport and communications

Transport. Railroads (2005): route length 506 mi, 814 km; (2002) passenger-km 97,500,000; (2002) metric ton-km cargo 1,553,000,000. Roads (2004): total length 5,700 mi, 9,170 km (paved 10%). Vehicles (1997): passenger cars 24,750; trucks and buses 16,490. Air transport (2002): passenger-km 643,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	220	173	PCs	2007	46	36
Telephones				Dailies	2007	20 ¹²	14 ¹²
Cellular	2008	1,300 ¹³	963 ¹³	Internet users	2008	90	68
Landline	2007	27	18	Broadband	2007	2.0 ¹³	1.3 ¹³

Education and health

Educational attainment (2000)¹⁴: no formal schooling 6.2%; incomplete primary and complete primary education 32.7%; lower secondary 41.3%; upper secondary 14.2%; higher 5.6%. **Literacy** (2000): total population age 15 and over literate 71%; males literate 80%; females literate 62%.

Education (2003–04)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	7,807	281,371	36.0	88 ¹⁵
Secondary/Voc. (age 12–18)	3,078 ¹⁶	105,191 ¹⁷	28.1 ¹⁶	...
Tertiary	...	...	...	7 ¹⁶ (age 19–23)

Health (2003–04): physicians 270 (1 per 5,006 persons); hospital beds 4,460 (1 per 303 persons); infant mortality rate per 1,000 live births (2006) 54.5; undernourished population (2002–04) 60,000 (5% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2008): 4,700 (army 68.1%, navy 10.6%, air force 21.3%); French troops (2008) 800. **Military expenditure as percent of GDP** (2007): 1.1%; per capita expenditure U.S.\$86.

¹Unofficial estimate not adjusted per 2003 provisional census results. ²Detail does not add to total given because of rounding. ³December 2003 provisional census results equal 1,269,000. ⁴Many also practice elements of traditional beliefs. ⁵Mostly foreigners. ⁶Statistically derived midpoint within range. ⁷Indirect taxes. ⁸Excludes about 400 kg of illegally mined gold smuggled out of Gabon. Uranium mining ceased in 1999. ⁹Estimates of the ILO Employment Trends Unit. ¹⁰Figures based on a national sample survey of 529 households. ¹¹Imports c.i.f.; exports f.o.b. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Figures based on a national sample survey of people ages 15–59 from 6,203 households. ¹⁵2000–01. ¹⁶1998–99. ¹⁷2001–02; Université Omar Bongo and Université des Sciences et Techniques de Masuku only.

Internet resources for further information:

- Direction Générale de la Statistique et des Études Économiques
<http://www.stat-gabon.ga/Donnees/index-data.htm>
- La Banque de France: La Zone Franc
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Gambia, The

Official name: Republic of The Gambia.

Form of government: multiparty republic with one legislative house (National Assembly [53¹]).

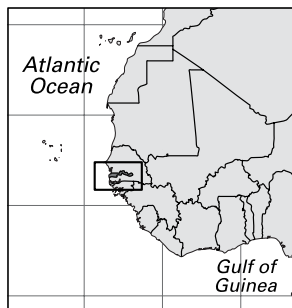
Head of state and government: President.

Capital: Banjul.

Official language: English.

Official religion: none.

Monetary unit: dalasi (D); valuation (Sept. 1, 2009) 1 U.S.\$ = D 26.93; 1 £ = D 43.69.



Area and population					
Divisions	area	population	Municipal Council	area	population
	sq km	2006 estimate		sq km	2006 estimate
Basse	2,048	217,014	Kanifing: ³	76	358,133
Brikama	1,764	453,456			
Janjanbureh (Georgetown)	1,463	113,674	City		
Kerewan	2,199	178,072	Banjul ³	12	33,131
Kuntaur	1,501	82,028	SUBTOTAL	10,624	
Mansakonko	1,561	74,420	REMAINDER	1,008	
			TOTAL	11,632 ⁴	1,509,928

Demography

Population (2009): 1,705,000⁵.

Density (2009): persons per sq mi 379.6, persons per sq km 146.6.

Urban-rural (2006): urban 54.3%; rural 45.7%.

Sex distribution (2007): male 49.92%; female 50.08%.

Age breakdown (2007): under 15, 44.1%; 15–29, 26.9%; 30–44, 15.6%; 45–59, 8.8%; 60–74, 3.8%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 2,227,000; (2030) 2,736,000.

Doubling time: 27 years.

Ethnic composition (2003): Malinke c. 42%; Fulani c. 18%; Wolof c. 16%; Diola c. 10%; Soninke c. 9%; other c. 5%.

Religious affiliation (2005): Muslim c. 90%; Christian (mostly Roman Catholic) c. 9%; traditional beliefs/other c. 1%.

Major cities/urban areas (2006): Serekunda 335,700²; Brikama 80,700; Bakau 45,500²; Banjul 33,131 (Greater Banjul [2003] 523,589³); Farafenni 30,400.

Vital statistics

Birth rate per 1,000 population (2007): 39.0 (world avg. 20.3).

Death rate per 1,000 population (2007): 13.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 26.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 5.20.

Marriage/divorce rates per 1,000 population: n.a.

Life expectancy at birth (2006): male 52.3 years; female 56.0 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases c. 404, of which malaria c. 94; cardiovascular diseases c. 172; lower respiratory infections c. 145; accidents c. 80.

National economy

Budget (2007). Revenue: D 3,663,500,000 (tax revenue 82.9%, of which taxes on goods and services 36.7%, taxes on income and profits 24.1%; nontax revenue 11.8%; grants 5.3%). Expenditures: D 3,635,000,000 (current expenditure 71.1%, of which interest payments 22.4%; capital expenditure 26.8%; net lending 2.1%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): millet 160,000, peanuts (groundnuts) 100,000, sorghum 40,000, corn (maize) 40,000, paddy rice 40,000, oil palm fruit 36,000, fresh vegetables 3,000, cassava 7,800, pulses (mostly beans) 3,300, findo (local cereal; 2005) 600; live-stock (number of live animals) 334,000 cattle, 280,000 goats, 150,000 sheep; roundwood 778,200 cu m, of which fuelwood 86%; fisheries production 43,574 (from aquaculture, negligible). Mining and quarrying: sand, clay ([2007] 14,000), and gravel are excavated for local use. Manufacturing (value added in U.S.\$; 1995): food products and beverages 6,000,000; textiles, clothing, and footwear 750,000; wood products 550,000. Energy production (consumption): electricity (kW-hr; 2007) 213,000,000 ([2006] 166,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (109,000); natural gas, none (none).

Population economically active (2006): total 754,000; activity rate of total population 45.3% (participation rates: ages 15–64, 77.1%; female 45.6%; unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71.4	83.5	95.4	100.0	102.1	107.5	112.3

Household income and expenditure. Average household size (2003) 8.6; income per household: n.a.; sources of income: n.a.; expenditure (1991)⁷: food and beverages 58.0%, clothing and footwear 17.5%, energy and water 5.4%, housing 5.1%, education, health, transportation and communications, recreation, and other 14.0%.

Public debt (external, outstanding; 2007): U.S.\$704,000,000.

Gross national income (GNI; 2008): U.S.\$653,000,000 (U.S.\$390 per capita); purchasing power parity GNI (U.S.\$1,280 per capita).

Structure of gross domestic product and labour force

	2007		1993	
	in value D '000,000	% of total value	labour force ⁸	% of labour force ⁸
Agriculture	5,321	26.7	181,752	52.6
Mining	3	—	398	0.1
Manufacturing	1,209	6.0	21,682	6.3
Construction	1,729	8.7	9,679	2.8
Public utilities	174	0.9	1,858	0.5
Transp. and commun.	4,157	20.8	14,203	4.1
Trade, hotels	5,483	27.5	54,728	15.8
Finance, real estate	2,533	12.7	2,415	0.7
Public administration	428	2.1		
Services	475	2.4	41,254	11.9
Other	–1,559 ⁹	–7.8 ⁹	17,412 ¹⁰	5.0 ¹⁰
TOTAL	19,953 ¹¹	100.0	345,381	100.0 ¹²

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 75; remittances (2008) 64; foreign direct investment (FDI; 2005–07 avg.) 60; official development assistance (2007) 72. Disbursements for (U.S.\$'000,000): tourism (2007) 7; remittances (2008) 12.

Land use as % of total land area (2007): in temporary crops 34.8%, in permanent crops 0.6%, in pasture 45.9%, forest area 47.5%¹³.

Foreign trade¹⁴

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–62.3	–50.0	–106.0	–142.5	–138.2	–171.5
% of total	18.6%	19.1%	35.4%	46.8%	45.1%	48.4%

Imports (2007): U.S.\$262,900,000 (imports for domestic use 70.0%, of which petroleum products 10.8%; imports for reexport [principally to Senegal] 30.0%). **Major import sources:** Denmark c. 14%; U.S. c. 13%; China c. 11%; Germany c. 8%; U.K. c. 8%.

Exports (2007): U.S.\$91,400,000 (reexports 86.3%; peanut [groundnut] oil 3.3%; peanuts [groundnuts] 2.7%; fish 2.0%). **Major export destinations:** reexports (principally to Senegal) 86.3%; domestic exports 13.7%, of which to Senegal 3.5%, to U.K. 2.7%, to France 1.9%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 2,325 mi, 3,742 km (paved 19%). Vehicles (2004): passenger cars 8,109; trucks and buses 2,961. Air transport (2001)¹⁵: passenger arrivals 300,000, passenger departures 300,000; cargo loaded and unloaded 2,700 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	20	13	PCs	2007	53	33
Telephones				Dailies	2007	4 ¹⁶	2.5 ¹⁶
Cellular	2008	1,166 ¹⁷	702 ¹⁷	Internet users	2008	114	69
Landline	2008	49	30	Broadband	2007	0.3 ¹⁷	0.2 ¹⁷

Education and health

Educational attainment: n.a. **Literacy** (2007): total population age 15 and over literate 44.9%; males literate 52.3%; females literate 37.8%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–12)	5,171	181,768	35.2	62
Secondary/Voc. (age 13–18)	3,770	90,442	24.0	38
Tertiary ¹⁸	134	1,530	11.4	1 (age 19–23)

Health: physicians (2003) 156 (1 per 9,769 persons); hospital beds (2005) 1,221 (1 per 1,250 persons); infant mortality rate per 1,000 live births (2007) 72.0; undernourished population (2002–04) 450,000 (29% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2008): 800 (army 100%). **Military expenditure as percentage of GDP** (2007): 0.6%; per capita expenditure U.S.\$2.

¹Includes 5 nonelective seats. ²Kanifing includes the urban areas of Serekunda and Bakau. ³Kanifing and Banjul make up most of Greater Banjul. ⁴Includes national area near the mouth of the Gambia River not allocated by division. ⁵Estimate of the United Nations *World Population Prospects: The 2008 Revision*. ⁶ILO estimates. ⁷Low-income population in Banjul and Kanifing only; weights of consumer price index components. ⁸Based on census data excluding numerous unemployed. ⁹Less imputed bank service charges. ¹⁰Not adequately defined. ¹¹Reexports make up about 1/3 of The Gambia's GDP; goods imported into The Gambia under lower taxes are reexported (sometimes illegally) to nearby countries (particularly Senegal). ¹²Detail does not add to total given because of rounding. ¹³Forest area overlaps with other categories. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵Yumum International Airport at Banjul. ¹⁶Circulation of daily newspapers. ¹⁷Subscribers. ¹⁸2003–04.

Internet resources for further information:

- Central Statistics Department
<http://www.gambia.gm/Statistics/Statistics.htm>
- Central Bank of The Gambia
<http://www.cb.gm>

Germany

Official name: Bundesrepublik Deutschland (Federal Republic of Germany).

Form of government: federal multiparty republic with two legislative houses (Federal Council [69]; Federal Diet [622]).

Chief of state: President.

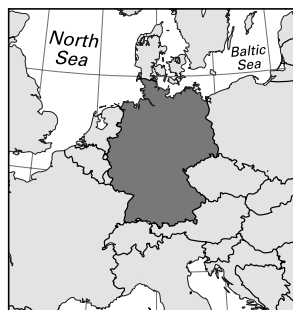
Head of government: Chancellor.

Capital: Berlin².

Official language: German.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

States ³	Capitals	area		population
		sq mi	sq km	2007 ⁴ estimate
Administrative districts				
Baden-Württemberg	Stuttgart	13,804 ⁵	35,751 ⁵	10,738,753
Freiburg	Freiburg im Breisgau	3,613	9,357	2,193,178
Karlsruhe	Karlsruhe	2,671	6,919	2,734,260
Stuttgart	Stuttgart	4,076	10,558	4,005,380
Tübingen	Tübingen	3,443	8,918	1,805,935
Bavaria	Munich	27,240 ⁵	70,552	12,492,658
Mittelfranken	Ansbach	2,797	7,245	1,712,622
Niederbayern	Landshut	3,988	10,330	1,193,820
Oberbayern	Munich	6,768	17,530	4,279,112
Oberfranken	Bayreuth	2,792	7,231	1,094,525
Oberpfalz	Regensburg	3,742	9,691	1,087,939
Schwaben	Augsburg	3,858	9,993	1,786,764
Unterfranken	Würzburg	3,294	8,532	1,337,876
Berlin		344	891	3,404,037
Brandenburg	Potsdam	11,382	29,480	2,547,772
Bremen	Bremen	156	404	663,979
Hamburg	Hamburg	292	755	1,754,182
Hessen	Wiesbaden	8,153	21,115	6,075,359
Darmstadt	Darmstadt	2,875	7,445	3,772,906
Giessen	Giessen	2,078	5,381	1,057,553
Kassel	Kassel	3,200	8,289	1,244,900
Lower Saxony	Hannover	18,394	47,641	7,982,685
Mecklenburg-West Pomerania	Schwerin	8,951	23,182	1,693,754
North Rhine-Westphalia	Düsseldorf	13,161 ⁵	34,086	18,028,745
Arnsberg	Arnsberg	3,090	8,003	3,742,162
Cologne (Köln)	Cologne (Köln)	2,844	7,365	4,384,669
Detmold	Detmold	2,517	6,520	2,065,413
Düsseldorf	Düsseldorf	2,042	5,290	5,217,129
Münster	Münster	2,667	6,908	2,619,372
Rhineland-Palatinate	Mainz	7,665	19,853	4,052,860
Saarland	Saarbrücken	992	2,569	1,043,167
Saxony	Dresden	7,111	18,417 ⁵	4,249,774
Chemnitz	Chemnitz	2,354	6,098	1,520,537
Dresden	Dresden	3,062	7,931	1,657,114
Leipzig	Leipzig	1,695	4,389	1,072,123
Saxony-Anhalt	Magdeburg	7,895	20,447	2,441,787
Schleswig-Holstein	Kiel	6,100	15,799	2,834,254
Thuringia	Erfurt	6,244	16,172	2,311,140
TOTAL		137,882⁵	357,114	82,314,906

Demography

Population (2009): 82,000,000.

Density (2009): persons per sq mi 594.7, persons per sq km 229.6.

Urban-rural (2003): urban 88.1%; rural 11.9%.

Population projection: (2020) 80,242,000; (2030) 77,680,000.

Major cities (2006⁴; urban agglomerations): Dortmund 588,168 (5,746,018⁶); Essen 585,430 (5,746,018⁶); Duisburg 501,564 (5,746,018⁶); Berlin 3,395,189 (4,200,072); Stuttgart 592,569 (2,625,690); Hamburg 1,743,627 (2,549,339); Munich 1,259,677 (1,940,477); Frankfurt am Main 651,899 (1,915,002); Cologne 983,347 (1,846,241); Mannheim 307,900 (1,579,252); Düsseldorf 574,514 (1,318,512); Nuremberg (Nürnberg) 499,237 (1,030,168); Hannover 515,729 (1,001,580); Saarbrücken 178,914 (942,594); Bonn 312,818 (899,753); Bremen 546,852 (858,488); Wuppertal 359,237 (832,685); Wiesbaden 274,611 (795,725); Dresden 495,181 (695,680); Karlsruhe 285,263 (600,161); Aachen 258,208 (599,676); Bielefeld 326,925 (585,145); Leipzig 502,651 (580,050); Darmstadt 140,562 (531,077).

Other principal cities (2006⁴)

	population		population		population
Augsburg	262,676	Herne	170,992	Münster	270,868
Bochum	385,626	Kassel	194,427	Neuss	151,610
Braunschweig	245,273	Kiel	234,433	Oberhausen	218,898
Chemnitz	246,587	Krefeld	237,701	Oldenburg	158,565
Erfurt	202,844	Leverkusen	161,227	Osnabrück	163,814
Freiburg		Lübeck	211,825	Paderborn	143,769
im Breisgau	215,966	Ludwigshafen		Potsdam	147,583
Gelsenkirchen	268,102	am Rhein	163,343	Recklinghausen	121,827
Göttingen	121,884	Magdeburg	229,126	Regensburg	129,859
Hagen	196,934	Mainz	194,372	Rostock	199,288
Halle	237,198	Mönchengladbach	261,444	Solingen	163,581
Hamm	184,239	Mülheim		Würzburg	133,906
Heidelberg	142,993	an der Ruhr	169,917		

Sex distribution (2008⁴): male 48.98%; female 51.02%.

Ethnic composition (by nationality; 2000): German 88.2%; Turkish 3.4% (including Kurdish 0.7%); Italian 1.0%; Greek 0.7%; Serb 0.6%; Russian 0.6%; Polish 0.4%; other 5.1%.

Households (2007). Number of households 39,722,000; average household size 2.1; 1 person 38.7%, 2 persons 34.0%, 3 persons 13.4%, 4 persons 10.3%, 5 or more persons 3.6%.

Age breakdown (2007⁴): under 15, 13.9%; 15–29, 17.6%; 30–44, 22.4%; 45–59, 21.1%; 60–74, 16.7%; 75–84, 6.3%; 85 and over, 2.0%.

Religious affiliation (2005): Protestant 35.0%, of which Lutheran/Reformed churches c. 34%; Roman Catholic 32.5%; Sunni Muslim 4.3%; Orthodox 1.7%; New Apostolic (an independent Christian group) 0.5%; Buddhist 0.3%; Jewish 0.2%; nonreligious 18.0%; atheist 2.0%; other 5.5%.

Resident foreign population (2008⁴): 6,744,900 (8.2% of total population); **region/country of birth:** EU countries 34.7%, of which Italy 7.8%, Poland 5.7%, Greece 4.4%, Austria 2.6%; Turkey 25.4%; other Asian countries 12.1%; combined Serbia and Montenegro 4.9%; African countries 4.0%; Croatia 3.3%; Russia 2.8%; Bosnia and Herzegovina 2.3%; U.S. 1.5%; other 9.0%.

Population with immigrant background (2008): 14,800,000 (18% of total population).

Immigration/emigration trends (2007): foreigners arriving 680,000; Germans departing 165,000.

Vital statistics

Birth rate per 1,000 population (2008): 8.2 (world avg. 20.3); within marriage 68.2%; outside of marriage 31.8%.

Death rate per 1,000 population (2008): 10.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): –2.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.37.

Marriage/divorce rates per 1,000 population (2007): 4.5/2.3.

Life expectancy at birth (2008): male 77.2 years; female 82.5 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 435.7, of which ischemic heart disease 175.0, cerebrovascular disease 79.1, hypertensive diseases 34.6; malignant neoplasms (cancers) 256.8, of which lung cancer 49.5, colon cancer 33.0; diseases of the respiratory system 66.6; diseases of the digestive system 52.2; diabetes mellitus 27.1; accidents 22.7; suicide 11.9.

Social indicators

Educational attainment (2006). Percentage of population age 25–64 having: no formal schooling through primary education 3%; lower secondary 14%; upper secondary 52%; post-secondary non-tertiary 7%; higher vocational 9%; university 14%; advanced degree 1%.

Quality of working life. Average workweek (2007): 38.4 hours. Annual rate per 100,000 workers (2007) for: injuries or accidents at work 2,803; deaths 2.16. Proportion of labour force insured for damages of income loss resulting from: injury, virtually 100%; permanent disability, virtually 100%; death, virtually 100%. Average days lost to labour stoppages per 1,000 workers (2008): 3.7.

Access to services. Proportion of dwellings (2002) having: electricity, virtually 100%; piped water supply, virtually 100%; flush sewage disposal (1993) 98.4%; public fire protection, virtually 100%.

Social participation. Eligible voters participating in last (September 2005) national election 77.7%. Trade union membership in total workforce (2009)⁴: 6,441,045 (15.4%). Population “religious”/“deeply religious” (2007): in western Germany 78%/21%; in eastern Germany 36%/8%; 15% of Roman Catholics “regularly” attend religious services.

Social deviance (2006)⁷. Conviction rate per 100,000 population for: murder⁸ and manslaughter 0.8; sexual abuse of children 3.1; rape 2.7; assault and battery 91.3; theft 195.3; fraud 132.4.

Leisure. Favourite leisure activities include playing football (soccer; registered participants, 2004) 6,272,804, as well as watching television, using the computer, going to the cinema, attending theatrical and musical performances, visiting museums, and taking part in package tours.

Material well-being (2008). Households possessing: automobile (2005) 76.8%; refrigerator 98.6%; freezer 52.4%; dishwasher 62.5%; microwave oven 69.6%; washing machine (2004) 95.5%; clothes dryer 38.5%; television (2004) 95.0%; DVD player (2006) 59%; personal computer (2006) 71.6%; Internet access (2006) 57.9%; MP3 player (2006) 23%.

National economy

Budget (2007)⁹. Revenue: €1,064,730,000,000 (tax revenue 54.5%, of which individual income taxes 21.6%, general taxes on goods and services 15.6%, excise taxes 6.0%; social security contributions 37.6%; nontax revenue 7.5%; other 0.4%). Expenditures: €1,061,590,000,000 (social protection 45.7%; health 14.0%; education 9.1%; economic affairs 7.2%; public debt payments 6.3%; public order 3.5%; defense 2.4%).

Total public debt (May 2009): U.S.\$2,052,000,000,000.

Production (metric tons except as noted; 2007). Agriculture, forestry, fishing: cereal grains 42,294,600 (of which wheat 21,366,800, barley 11,034,200), sugar beets 26,114,000, potatoes 11,604,500, rapeseed 5,320,000, grapes 1,300,000, apples 911,900, cabbages 735,500, gooseberries (2006) 40,000, hops 28,600, currants 8,800; livestock (number of live animals) 26,530,000 pigs, 12,600,800 cattle, 2,444,400 sheep, 108,000,000 chickens; roundwood 76,728,000 cu m, of which fuelwood 11%; fisheries production 293,757 (from aquaculture 15%). Mining and quarrying (metric tons; 2006): potash (potassium oxide content) 3,625,000; bentonite 364,000; feldspar 167,332; barite 85,524.

Manufacturing enterprises (2005)

	no. of employees	wages as a % of avg. of all manufacturing wages	value added at factor values (€'000,000)
Motor vehicles	516,461	144.7	48,724
General purpose machinery	506,461	113.1	41,751
Special purpose machinery	472,082	107.5	35,487
Fabricated metal products	543,629	84.3	35,451
Food products	735,803	55.5	34,285
Paints, soaps, pharmaceuticals	268,827	123.3	30,359
Motor vehicle parts	309,014	118.5	24,568
Components and control apparatus for electricity distribution	269,703	131.7	21,011

Manufacturing enterprises (2005) (continued)

	no. of employees	wages as a % of avg. of all manufacturing wages	value added at factor values (€'000,000)
Medical equipment and instruments	283,349	90.8	20,266
Plastics	301,622	84.8	19,943
Electrical equipment and accessories (not electricity-related)	217,618	102.9	15,991
Iron and steel	126,902	111.3	14,573
Structural metal products, tanks	221,576	82.2	12,884
Publishing	190,104	81.1	12,410
Bricks, cement, ceramics	177,289	87.6	11,848
Paper and paper products	143,919	97.6	11,693
Printing and printing-related services	160,339	87.9	10,766
Aircraft and spacecraft	72,976	162.0	8,934
Furniture	155,271	79.2	8,756
Electronic valves and tubes and related products	72,621	117.6	6,794
Beverages	64,842	100.5	5,942
Sawn wood and wood products (excluding furniture)	109,970	69.2	5,845
Rubber products	75,390	99.7	5,682
Base nonferrous metals	62,754	118.2	5,576
Casting of metals	69,306	99.2	5,307
Office and computing machinery	41,651	136.2	4,708

Energy production (consumption): electricity (kW-hr; 2007) 594,660,000,000 ([2006] 619,784,000,000); hard coal (metric tons; 2008) 17,200,000 ([2006] 65,500,000); lignite (metric tons; 2008) 175,300,000 ([2006] 176,400,000); crude petroleum (barrels; 2008) 34,100,000 ([2006] 817,800,000); petroleum products (metric tons; 2006) 104,605,000 (100,068,000); natural gas (cu m; 2008) 20,337,000,000 ([2006] 94,772,000,000). In 2009 Germany was a world leader in the production of wind and solar power.

Gross national income (GNI; 2008): U.S.\$3,485,674,000,000 (U.S.\$42,440 per capita); purchasing power parity GNI (U.S.\$35,940 per capita).

Structure of gross domestic product and labour force

	2007		2008	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	20,020	0.8	872,000	2.1
Public utilities	52,570	2.2	346,000	0.8
Mining			109,000	0.3
Manufacturing	519,550	21.4	8,516,000	20.3
Construction	87,150	3.6	2,521,000	6.0
Transp. and commun.	382,410	15.8	2,147,000	5.1
Trade, restaurants			6,749,000	16.1
Finance, real estate	634,820	26.2	5,473,000	13.1
Services	474,690	19.6	9,133,000	21.8
Pub. admin., defense			2,836,000	6.8
Other	252,590 ¹⁰	10.4 ¹⁰	3,173,000 ¹¹	7.6 ¹¹
TOTAL	2,423,800	100.0	41,875,000	100.0

Household income and expenditure. Average annual disposable income per household (2003) €33,840 (U.S.\$38,194); sources of take-home income (1997): wages 77.6%, self-employment 12.0%, transfer payments 10.4%; expenditure (2003): housing and energy 32.5%, transportation 14.4%, food, beverages, and tobacco 14.0%, recreation and culture 11.8%, household furnishings 5.7%, clothing and footwear 5.0%, restaurants and hotels 4.3%.

Financial aggregates¹²

	2002	2003	2004	2005	2006	2007	2008
Exchange rate, € per:							
U.S. dollar	0.95	0.79	0.73	0.85	0.76	0.70	0.72
£	1.53	1.41	1.41	1.46	1.49	1.36	1.03
SDR	1.30	1.18	1.14	1.21	1.14	1.07	1.11
International reserves (U.S.\$)							
Total (excl. gold; '000,000)	51,171	50,694	48,823	45,140	41,687	44,327	43,137
SDRs ('000,000)	1,980	1,942	2,061	1,892	2,010	2,162	2,198
Reserve pos. in IMF ('000,000)	6,695	7,656	6,863	3,483	1,958	1,396	2,382
Foreign exchange	42,495	41,095	39,899	39,765	37,719	40,768	38,557
Gold ('000,000 fine troy oz)	110.79	110.58	110.38	110.21	110.04	109.87	109.72
% world reserves	...	...	...	11.15	11.27	11.44	11.49
Interest and prices							
Central bank discount (%)	...	...	...	...	...	...	...
Govt. bond yield (%)	4.8	4.1	4.0	3.4	3.8	4.2	4.0
Share prices (2005 = 100) ¹³	88.7	70.1	86.0	100.0	125.4	155.8	121.3
Balance of payments (U.S.\$'000,000,000)							
Balance of visible trade	+125.75	+144.75	+186.07	+193.17	+197.78	+270.74	+265.76
Imports, f.o.b.	-486.09	-602.62	-721.73	-789.97	-938.01	-1,078.78	-1,232.43
Exports, f.o.b.	611.84	747.37	907.79	983.14	1,135.79	1,349.52	1,498.19
Balance of invisibles	-84.64	-97.80	-58.02	-50.36	-7.56	-7.68	-22.47
Balance of payments, current account	+41.11	+46.95	+128.05	+142.81	+190.22	+263.06	+243.29

Selected service enterprises (2004)

	no. of enter- prises	no. of employees	annual turnover (€'000,000)
Transport, storage, and communication			
Air	409	53,002	11,765
Land, pipelines	58,329	656,597	55,747
Water	2,408	26,678	18,109
Transport support, travel agencies	22,258	501,724	87,973
Postal services, telecommunications	8,137	610,549	101,715
Real estate	175,620	383,122	94,487
Rental of equipment and goods	14,464	80,217	26,984
Computer-related activities	45,205	370,346	58,525
Research and development	4,185	87,840	6,820
Other business activities	323,742	3,057,849	191,162

Population economically active (2008): total 41,875,000; activity rate of total population 51.0% (participation rates: ages 15–64, 76.0%; female 45.4%; unemployed [April 2008–March 2009] 8.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	95.9	96.9	98.5	100.0	101.6	103.9	106.6

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 36,092; remittances (2008) 11,064; foreign direct investment (FDI; 2005–07 avg.) 49,355. Disbursements for (U.S.\$'000,000): tourism (2007) 82,966; remittances (2008) 14,976; FDI (2005–07 avg.) 110,338.

Land use as % of total land area (2007): in temporary crops 26.2%, in permanent crops 0.6%, in pasture 20.0%, forest area 31.8%.

Foreign trade¹⁴**Balance of trade (current prices)**

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+146,770	+193,592	+197,313	+199,750	+269,533	+261,928
% of total	10.9%	11.9%	11.2%	9.8%	11.3%	9.8%

Imports (2007): U.S.\$1,059,308,000,000 (machinery and equipment 23.0%, of which electrical machinery 6.7%, office machines/computers 4.0%; manufactured goods 14.4%, of which iron and steel 3.6%; mineral fuels 10.5%, of which crude petroleum 5.2%; road vehicles/parts 8.2%; food products 5.2%; medicines and pharmaceuticals 3.9%; special transactions 12.8%). Major import sources: France 8.4%; Netherlands 8.3%; China 7.1%; U.S. 5.9%; Italy 5.7%; U.K. 5.6%; Belgium 5.0%; Austria 4.2%; Switzerland 3.9%; Russia 3.7%.

Exports (2007): U.S.\$1,328,841,000,000 (machinery and equipment 28.4%, of which electrical machinery and electronic components 7.3%, general industrial machinery 7.0%; transport equipment 19.0%, of which road vehicles 16.4%; manufactured goods 14.1%, of which iron and steel, non-ferrous metals, and manufactures of metal 8.6%; chemicals and chemical products 13.8%, of which medicines and pharmaceuticals 4.2%; special transactions 9.6%). Major export destinations: France 9.7%; U.S. 7.6%; U.K. 7.3%; Italy 6.7%; Netherlands 6.4%; Austria 5.4%; Belgium 5.3%; Spain 5.0%; Switzerland 3.8%; Poland 3.7%.

Transport and communications

Transport. Railroads (2005): track length 47,518 mi, 76,473 km (route length 23,740 mi, 38,206 km); passenger-km 74,946,000,000; metric ton-km cargo 95,421,000,000. Roads (2005): total length 143,830 mi, 231,480 km (paved [2003] 100%). Vehicles (2006): passenger cars 46,090,300; trucks and buses 2,573,100. Air transport (2007): passenger-km 206,112,000,000; metric ton-km cargo 8,345,976,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	55,758	675	PCs	2007	53,967	656
Telephones				Dailies	2007	20,707 ¹⁵	252 ¹⁵
Cellular	2008	107,245 ¹⁶	1,308 ¹⁶	Internet users	2008	62,500	761
Landline	2008	51,500	627	Broadband	2008	22,600 ¹⁶	275 ¹⁶

Education and health**Education (2005–06)**

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	238,428	3,329,349	14.0	98
Secondary/Voc. (age 10–18)	593,896	8,285,301	14.0	...
Tertiary	287,744	...	...	... (age 19–23)

Health (2006): physicians 311,000 (1 per 265 persons); hospital beds 510,767 (1 per 161 persons); infant mortality rate per 1,000 live births (2008) 4.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 244,324 (army 65.8%, navy 9.4%, air force 24.8%); German peacekeeping troops abroad (November 2008) c. 7,300, including c. 3,300 in Afghanistan; U.S. troops in Germany (November 2008) 40,000; British troops (November 2008) 22,000; French troops (November 2008) 2,800. Military expenditure as percentage of GDP (2007): 1.3%¹⁷; per capita expenditure U.S.\$512¹⁷.

¹Current number of seats; statutory number is 598. ²Some ministries remain in Bonn. The federal supreme court meets in Karlsruhe. ³State names used in this table are English conventional. ⁴January 1. ⁵Detail does not add to total given because of rounding. ⁶Part of the Rhine-Ruhr North urban agglomeration. ⁷Excludes eastern Germany except for the former East Berlin. ⁸Includes attempted murder. ⁹General government budget (combined budgets of central, state, and local governments). ¹⁰Taxes less subsidies and imputed bank service charges. ¹¹Includes 3,141,000 unemployed. ¹²End-of-period figures. ¹³Period averages. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷Includes military pensions.

Internet resource for further information:

- Federal Statistical Office of Germany (in English)
http://www.destatis.de/e_home.htm

Ghana

Official name: Republic of Ghana.
Form of government: unitary multiparty republic with one legislative house (Parliament [230]).

Head of state and government: President.

Capital: Accra.

Official language: English.

Official religion: none.

Monetary unit: Ghana cedi (GHC)¹; valuation (Sept. 1, 2009)

1 U.S.\$ = GHC1.46; 1 £ = GHC2.37.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2000 census
Ashanti	Kumasi	9,417	24,389	3,612,950
Brong-Ahafo	Sunyani	15,273	39,557	1,815,408
Central	Cape Coast	3,794	9,826	1,593,823
Eastern	Koforidua	7,461	19,323	2,106,696
Greater Accra	Accra	1,253	3,245	2,905,726
Northern	Tamale	27,175	70,384	1,820,806
Upper East	Bolgatanga	3,414	8,842	920,089
Upper West	Wa	7,134	18,476	576,583
Volta	Ho	7,942	20,570	1,635,421
Western	Sekondi-Takoradi	9,236	23,921	1,924,577
TOTAL		92,098 ²	238,533	18,912,079

Demography

Population (2009): 23,832,000.

Density (2009): persons per sq mi 258.8, persons per sq km 99.9.

Urban-rural (2008): urban 50.1%; rural 49.9%.

Sex distribution (2008): male 50.02%; female 49.98%.

Age breakdown (2008): under 15, 37.7%; 15–29, 29.4%; 30–44, 18.3%; 45–59, 9.5%; 60–74, 4.1%; 75–84, 0.9%; 85 and over, 0.1%.

Population projection: (2020) 28,567,000; (2030) 32,398,000.

Doubling time: 35 years.

Ethnic composition (2000): Akan 41.6%; Mossi 23.0%; Ewe 10.0%; Ga-Adangme 7.2%; Gurma 3.4%; Nzima 1.8%; Yoruba 1.6%; other 11.4%.

Religious affiliation (2005): Protestant 23.7%; traditional beliefs 21.5%; Sunni Muslim 20.1%; independent Christian 15.9%; Roman Catholic 12.2%; other 6.6%.

Major cities (2002): Accra (2003) 1,847,432; Kumasi 627,600; Tamale 269,200; Tema 237,700; Obuasi 122,600.

Vital statistics

Birth rate per 1,000 population (2008): 29.4 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.3 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 3.78.

Life expectancy at birth (2008): male 58.5 years; female 60.8 years.

Major causes of death per 100,000 population (2002): communicable diseases (excluding HIV/AIDS; significantly malaria) 458; cardiovascular diseases 159; HIV/AIDS 147; accidents and violence 83; malignant neoplasms 61.

Adult population (ages 15–49) *living with HIV* (2007): 1.9%³ (world avg. 0.8%).

National economy

Budget (2006). Revenue: €31,917,680,000,000 (tax revenue 77.2%, of which VAT 18.4%, trade tax 17.0%, petroleum tax 12.8%, income tax 9.7%, corporate tax 9.4%; grants 19.9%; nontax revenue 2.9%). Expenditures: €38,734,730,000,000 (current expenditure 63.9%, of which transfers 14.7%, debt service 10.2%; capital expenditure 36.1%).

Public debt (external, outstanding; December 2008): U.S.\$3,982,600,000.

Household income and expenditure (2006). Average household size 4.0⁴; mean annual household income⁴ GHC1,217 (U.S.\$1,327); sources of income⁴: income from agriculture 34.8%, wages and salaries 28.6%, other self-employment 24.5%, remittances 8.9%; expenditure⁴: food and nonalcoholic beverages 43.2%, housing and energy 9.5%, education 8.9%, clothing 8.7%, transportation 7.3%.

Gross national income (GNI; 2008): U.S.\$15,744,000,000 (U.S.\$670 per capita); purchasing power parity GNI (U.S.\$1,430 per capita).

Structure of gross domestic product and labour force				
	2007		1999	
	in value €'000,000 ⁵	% of total value	labour force ^{6,7}	% of labour force ⁶
Agriculture, forestry, fishing	258,500	34.7	3,778,000	50.5
Mining, quarrying	49,700	6.7	48,000	0.6
Manufacturing	60,000	8.1	798,000	10.7
Construction	66,700	8.9	97,000	1.3
Public utilities	18,400	2.5	14,000	0.2
Transp. and commun.	37,300	5.0	150,000	2.0
Trade, hotels	56,500	7.6	1,257,000	16.8
Finance, real estate	35,600	4.8	52,000	0.7
Pub. admin., defense	78,500	10.5	673,000	9.0
Services	19,400	2.6		
Other	64,400 ⁸	8.6 ⁸	613,000 ⁹	8.2 ⁹
TOTAL	744,800 ²	100.0	7,480,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 9,650,000, yams 3,550,000, plantains 2,930,000, oil palm fruit 1,900,000, taro 1,662,000, corn (maize) 1,100,000, cacao 690,000, oranges 480,000, peanuts (groundnuts) 440,000, sorghum 350,000, coconuts 316,000,

chilies and peppers 279,000, rice 242,000; livestock (number of live animals) 3,704,700 goats, 3,420,000 sheep, 1,427,100 cattle; roundwood 35,492,900 cu m, of which fuelwood 96%; fisheries production 321,875 (from aquaculture, negligible). Mining and quarrying (2007): bauxite 748,000; manganese (metal content) 410,000; gold 77,349 kg¹⁰; gem diamonds 720,000 carats. Manufacturing (value added in U.S.\$'000,000; 2003): wood products 157; chemical products 115; food products 108; petroleum products 55; precious and nonferrous metal products (including gold) 47; plastic products 39. Energy production (consumption): electricity (kW-hr; 2006) 8,435,000,000 (8,309,000,000); coal, none (none); crude petroleum (barrels; 2006) none (12,500,000); petroleum products (metric tons; 2006) 920,000 (1,909,000); natural gas, none (none).

Population economically active (2006): total 10,218,000¹¹; activity rate of total population 44.4%¹¹ (participation rates: ages 15–64, 73.3%¹¹; female 49.4%¹¹; unemployed [2001] 20.3%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	60.9	77.1	86.9	100.0	110.9	122.8	143.1
Daily earnings index ¹²	53.3	68.7	83.0	100.0	118.5	140.7	...

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 908; remittances (2008) 128; foreign direct investment (2005–07 avg.) 545; official development assistance (2007) 1,151. Disbursements for (U.S.\$'000,000): tourism (2007) 558; remittances (2008) 6.

Land use as % of total land area (2007): in temporary crops 18.0%, in permanent crops 10.5%, in pasture 36.7%, forest area 23.2%.

Foreign trade¹³

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	–1,438	...	–886	–2,295	...	–1,715
% of total	29.5%	...	16.0%	39.2%	...	19.2%

Imports (2006): U.S.\$5,329,000,000 (machinery and apparatus 19.1%, road vehicles 14.8%, crude petroleum 12.9%, food 12.2%, chemicals and chemical products 10.8%). **Major import sources:** Nigeria 9.6%; China 9.5%; U.K. 8.9%; U.S. 6.6%; Belgium 5.6%; Germany 5.4%.

Exports (2006): U.S.\$3,614,000,000 (cocoa 34.3%, gold 31.3%, woven cotton fabrics 6.3%, wood products [excl. furniture] 5.5%). **Major export destinations:** South Africa 25.8%; Burkina Faso 12.6%; Netherlands 11.1%; Switzerland 6.8%; France 4.6%.

Transport and communications

Transport. Railroads (2005): route length 592 mi, 953 km; (2002) passenger-km 238,000,000; (2002) metric ton-km cargo 168,000,000. Roads (2005): total length 57,614 km (paved 15%). Vehicles (2006): passenger cars 275,424; trucks and buses 135,819. Air transport (2003)¹⁴: passenger-km 906,000,000; metric ton-km cargo 16,630,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,114	53	PCs	2004	112	5.2
Telephones				Dailies	2007	215 ¹⁵	15 ¹⁵
Cellular	2008	11,570 ¹⁶	483 ¹⁶	Internet users	2008	997	42
Landline	2008	144	6.0	Broadband	2008	17 ¹⁶	0.7 ¹⁶

Education and health

Educational attainment (2003)¹⁷. Percentage of population age 25 and over having: no formal schooling or unknown 41.8%; incomplete primary education 9.6%; primary 3.6%; incomplete secondary 35.0%; secondary 5.4%; higher 4.6%. **Literacy** (2007): total population age 15 and over literate 65.0%; males literate 71.7%; females literate 58.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	95,257	3,365,762	35.3	72
Secondary/Voc. (age 12–17)	84,660	1,580,917	18.7	45
Tertiary	4,011	140,017	34.9	6 (age 18–22)

Health: physicians (2004) 3,240 (1 per 6,631 persons); hospital beds (2001) 18,448 (1 per 1,089 persons); infant mortality rate (2008) 52.5; undernourished population (2003–05) 1,900,000 (9% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 13,500 (of which UN peacekeepers 2,587) (army 74.1%, navy 14.8%, air force 11.1%). **Military expenditure as percentage of GDP** (2007): 0.7%; per capita expenditure U.S.\$5.

¹The Ghana cedi (GHC) replaced the cedi (¢) on July 1, 2007, at a rate of 1 GHC = ¢10,000. ²Detail does not add to total given because of rounding. ³Statistically derived midpoint within range. ⁴Based on the Ghana Living Standards Survey of 8,687 households. ⁵In constant prices of 1993. ⁶Ages 15–64 only. ⁷Derived figures calculated from percentages. ⁸Indirect taxes. ⁹Unemployed. ¹⁰Legal production only. ¹¹Estimate of the ILO Employment Trends Unit. ¹²Minimum daily wage. ¹³Imports c.i.f.; exports f.o.b. ¹⁴Ghana Airways only, which subsequently ceased operations in July 2004. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷Based on the Ghana Demographic and Health Survey of 6,251 households.

Internet resources for further information:

- Bank of Ghana <http://www.bog.gov.gh>
- Ghana Statistical Service <http://www.statsghana.gov.gh>

Greece

Official name: Ellinikí Dhimokratía (Hellenic Republic).

Form of government: unitary multiparty republic with one legislative house (Hellenic Parliament [300]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Athens.

Official language: Greek.

Official religion: 1.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

	area	population		area	population
	sq km	2008 estimate		sq km	2008 estimate
Regions²			Regions²		
Insular			Epirus	9,203	351,786
Aegean Islands	9,122	506,483	Greater Athens	3,808	4,061,326
Crete	8,336	606,274	Macedonia	34,178	2,469,322
Ionian Islands	2,307	228,572	Peloponnese	21,379	1,114,636
Mainland			Thessaly	14,037	736,079
Central Greece and Euboea	21,010	772,766	Thrace	8,578	366,541
			TOTAL	131,957³	11,213,785

Demography

Population (2009): 11,285,000.

Density (2009): persons per sq mi 221.5, persons per sq km 85.5.

Urban-rural (2005): urban 60.4%; rural 39.6%.

Sex distribution (2006): male 49.51%; female 50.49%.

Age breakdown (2006): under 15, 14.3%; 15–29, 19.3%; 30–44, 22.9%; 45–59, 19.7%; 60–74, 15.8%; 75–84, 6.6%; 85 and over, 1.4%.

Population projection: (2020) 11,579,000; (2030) 11,596,000.

Ethnic composition (2000)⁴: Greek 90.4%; Macedonian 1.8%; Albanian 1.5%; Turkish 1.4%; Pomak 0.9%; Rom (Gypsy) 0.9%; other 3.1%.

Religious affiliation (2005)⁵: Orthodox c. 90%; Sunnī Muslim c. 5%; Roman Catholic c. 2%; other c. 3%.

Major cities (2001): Athens 745,514 (urban agglomeration 3,187,734); Thessaloniki 363,987 (urban agglomeration 800,764); Piraeus (Piraiévs) 175,697; Pátrai 161,114; Peristérion 137,918⁶; Irákleio (Iráklion) 133,012.

Vital statistics

Birth rate per 1,000 population (2008): 10.3 (world avg. 20.3); within marriage 93.5%; outside of marriage 6.5%.

Death rate per 1,000 population (2008): 9.5 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.45.

Marriage/divorce rates per 1,000 population: (2008) 4.5/(2007) 1.2.

Life expectancy at birth (2008): male 77.2 years; female 82.2 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 352.4; malignant neoplasms (cancers) 280.2; cerebrovascular diseases 186.1; diseases of the respiratory system 66.7; accidents, poisoning, and violence 38.4.

National economy

Budget (2007). Revenue: €89,100,000,000 (tax revenue 51.0%, of which VAT 28.8%, income taxes 19.2%; social contributions 35.7%; other revenue 13.3%). Expenditures: €95,398,000,000 (social benefits 41.1%; wages and salaries 23.8%; goods and services 10.5%; interest payments 10.4%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): olives 2,600,000, corn (maize) 1,767,500, tomatoes 1,450,000, wheat 1,403,200, seed cotton 1,000,000, oranges 1,000,000, grapes 950,000, sugar beets 862,300, potatoes 830,000, peaches and nectarines 700,000, apples 270,000, barley 264,500, rice 200,700; livestock (number of live animals) 8,803,350 sheep, 5,570,885 goats, 1,315,000 beehives; roundwood 1,742,916 cu m, of which fuelwood 46%; fisheries production 209,356 (from aquaculture 54%). Mining and quarrying (2007): bauxite 2,163,000; nickel (metal content) 18,000; marble 150,000 cu m. Manufacturing (value added in U.S.\$'000,000; 2005): food products and beverages c. 5,300; textiles c. 1,950; chemicals and chemical products c. 1,750; cement, bricks, and ceramics c. 1,600; refined petroleum and coal derivatives c. 1,500; wearing apparel c. 1,500; basic metals c. 1,450. Energy production (consumption): electricity (kW-hr; 2007) 59,776,000,000 ([2006] 64,991,000,000); hard coal (metric tons; 2006) none (463,000); lignite (metric tons; 2007) 63,448,000 ([2006] 64,332,000); crude petroleum (barrels; 2006) 760,000 (136,000,000); petroleum products (metric tons; 2006) 20,627,000 (19,158,000); natural gas (cu m; 2006) 16,000,000 (3,275,000,000).

Population economically active (2007): total 4,917,900; activity rate of total population 44.1% (participation rates: ages 15–64 [2006] 66.9%; female 40.9%; unemployed [April 2007–March 2008] 8.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	90.6	93.8	96.6	100.0	103.2	106.2	110.6
Monthly earnings index	79.9	93.8	98.4	100.0	102.1	105.6	108.1

Household income and expenditure (1998–99). Average household size (2004) 3.1; income per family Dr 6,429,000⁷ (U.S.\$21,390); sources of income: wages and salaries 21.8%, transfer payments 21.7%, income from agriculture, forestry, fishing 15.6%, self-employment 11.9%, other 29.0%; expenditure (2004–05): food 17.1%, transportation 12.6%, housing and energy 10.7%, café/hotel expenditures 9.6%, clothing and footwear 8.4%.

Gross national income (GNI; 2008): U.S.\$321,972,000,000 (U.S.\$28,650 per capita); purchasing power parity GNI (U.S.\$28,470 per capita).

Structure of gross domestic product and labour force

	2006		2007	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	7,061	3.3	522,400	10.6
Mining, quarrying	959	0.4	18,100	0.4
Manufacturing	25,050	11.7	558,900	11.4
Construction	16,317	7.6	394,400	8.0
Public utilities	3,767	1.8	40,000	0.8
Transp. and commun.	15,107	7.0	267,600	5.4
Trade, restaurants	42,129	19.7	1,118,500	22.7
Finance, real estate	34,680	16.2	407,500	8.3
Pub. admin., defense	15,793	7.4		
Services	29,236	13.7	1,192,500	24.3
Other	23,887 ⁸	11.2 ⁸	398,000 ⁹	8.1 ⁹
TOTAL	213,985³	100.0	4,917,900	100.0

Public debt (consolidated, general; 2008): U.S.\$347,416,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 15,550; remittances (2008) 2,687; foreign direct investment (FDI; 2005–07 avg.) 2,629. Disbursements for (U.S.\$'000,000): tourism (2007) 3,423; remittances (2008) 1,912; FDI (2005–07 avg.) 3,652.

Land use as % of total land area (2007): in temporary crops 19.8%, in permanent crops 8.8%, in pasture 35.7%, forest area 29.6%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–31,199	–37,564	–37,460	–42,796	–41,499	–44,049
% of total	53.3%	55.2%	51.8%	50.5%	54.3%	52.6%

Imports (2006): U.S.\$63,739,000,000 (machinery and apparatus 14.4%, crude petroleum 13.1%, food 8.7%, road vehicles/parts 8.5%, medicine and pharmaceuticals 5.8%, ships and tankers 5.3%). **Major import sources:** Germany 12.5%; Italy 11.6%; Russia 7.1%; France 5.9%; Netherlands 5.2%.

Exports (2006): U.S.\$20,943,000,000 (food 14.0%, of which vegetables and fruit 7.2%; refined petroleum 12.4%; machinery and apparatus 10.6%; apparel 7.4%; medicine 5.3%; aluminum 4.4%). **Major export destinations:** Germany 11.3%; Italy 11.2%; Bulgaria 6.3%; U.K. 6.0%; Cyprus 5.3%.

Transport and communications

Transport. Railroads (2006): length 2,509 km; passenger-km 1,811,000,000; metric ton-km cargo 662,000,000. Roads (2005): total length 34,863 km (paved 93%). Vehicles (2007): passenger cars 4,798,530; trucks and buses 1,283,047. Air transport (2008): passenger-km 6,612,000,000; metric ton-km cargo 69,660,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	6,152	558	PCs	2007	1,058	94
Telephones				Dailies	2007	1,515 ¹¹	259 ¹¹
Cellular	2008	13,799 ¹²	1,235 ¹²	Internet users	2008	3,631	325
Landline	2008	5,975	535	Broadband	2008	1,507 ¹²	135 ¹²

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 12.7%; primary education 34.3%; lower secondary 8.5%; upper secondary 25.7%; higher 18.8%. **Literacy** (2007): total population age 15 and over literate 97.1%; males 98.2%; females 96.0%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	61,251	645,324	10.5	99
Secondary/Voc. (age 12–17)	86,024	704,515	8.2	92
Tertiary	28,863	653,003	22.6	95 (age 18–22)

Health (2006): physicians 21,038¹³ (1 per 436 persons); hospital beds 44,307¹³ (1 per 207 persons); infant mortality rate (2008) 3.5; undernourished population (2003–05) less than 5% of total population.

Military

Total active duty personnel (November 2008): 156,600 (army 59.7%, navy 12.8%, air force 20.1%, joint staff 7.4%); Greek troops in Cyprus (November 2008) 1,150. **Military expenditure as percentage of GDP** (2007): 2.8%¹⁴; per capita expenditure U.S.\$773¹⁴.

¹The autocephalous Greek Orthodox Church has special recognition per the constitution. ²Traditional regions; local administration is based on 13 administrative regions and 1 autonomous self-governing monastic region (Mount Athos). ³Detail does not add to total given because of rounding. ⁴Unofficial source; government states there are no ethnic divisions in Greece. ⁵Including non-citizen residents. ⁶Within Athens urban agglomeration. ⁷The drachma (Dr) was the former monetary unit; on Jan. 1, 2002, Dr 340.75 = €1. ⁸Taxes less subsidies. ⁹Unemployed. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³Public health institutions only. ¹⁴Includes military pensions.

Internet resources for further information:

- Bank of Greece <http://eng.bankofgreece.gr/en>
- National Statistical Service of Greece <http://www.statistics.gr>

Greenland

Official name: Kalaallit Nunaat (Greenlandic); Grønland (Danish) (Greenland).

Political status: self-governing overseas administrative division of Denmark with one legislative house (Parliament [31])².

Chief of state: Danish Monarch.

Heads of government: High Commissioner (for Denmark); Prime Minister (for Greenland).

Capital: Nuuk (Godthåb).

Official language: Greenlandic.

Official religion: Evangelical Lutheran (Lutheran Church of Greenland).

Monetary unit: Danish krone (DKK); valuation (Sept. 1, 2009) 1 U.S.\$ = DKK 5.20; 1 £ = DKK 8.44.



Gross national income (2007): U.S.\$1,834,000,000 (U.S.\$32,429 per capita).

Structure of gross domestic product and labour force

	2007		2006	
	in value U.S.\$'000,000	% of total value	labour force ⁹	% of labour force ⁹
Agriculture, fishing, hunting, trapping	92	4.2	1,456	5.0
Mining	57	2.6	160	0.5
Public utilities	170	7.7	420	1.4
Manufacturing	129	5.9	924	3.1
Construction	103	4.7	2,904	9.9
Transp. and commun.	178	8.1	2,582	8.8
Trade, restaurants	1,118	50.9	5,862	19.9
Finance, real estate	350 ¹⁰	15.9 ¹⁰	1,446	4.9
Public administration	2,197	100.0	13,718	46.5
Services				
Other			—	—
TOTAL			29,472	100.0

Population economically active (2004): total 32,119; activity rate of total population 56.5% (participation rates: ages 15–62, 83.5%; female [2006] 48.6%; unemployed¹¹ [2007] 6.8%).

Price index (2005 = 100)

	2003	2004	2005	2006	2007	2008
Consumer price index	96.8	97.8	100.0	102.2	107.7	112.6

Public debt (2008): none¹².

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
DKK '000,000	-668	-746	-987	-1,165	-1,308	-1,311
% of total	12.3%	14.0%	17.8%	19.4%	21.8%	21.9%

Imports (2007): DKK 3,643,000,000 (mineral fuels [mostly refined petroleum] 24.2%; machinery and transport equipment 22.8%; food 16.4%; manufactured products 13.3%). **Major import sources:** Denmark 70.1%; Sweden 22.6%; Norway 1.7%; Canada 0.9%.

Exports (2007): DKK 2,322,000,000 (prawn 48.5%; Greenland halibut 19.0%; gold 9.9%; cod 7.7%; crab 1.6%). **Major export destinations:** Denmark 85.1%; Canada 10.0%; Iceland 1.5%; U.K. 1.2%.

Transport and communications

Transport. Railroads: none. Roads (1998): total length 93 mi, 150 km (paved 60%). Vehicles (2007): passenger cars 4,819; trucks and buses 423. Air transport (2006)¹³: passenger-mi 274,286,000, passenger-km 441,422,000; short ton-mi cargo 31,390,000, metric ton-km cargo 49,485,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	... ¹⁴	... ¹⁴	PCs	2008	...	...
Telephones				Dailies	2007	—15	—15
Cellular	2008	56 ¹⁶	991 ¹⁶	Internet users	2007	52	920
Landline	2008	23	405	Broadband	2008	...	...

Education and health

Educational attainment (2002). Two-thirds of labour force has no formal education. **Literacy (2001):** total population age 15 and over literate: virtually 100%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary	1,189	10,255	8.6	...
Secondary/Voc.	...	...	...	...
Tertiary ¹⁷	29	230	7.9	...

Health: physicians (2005⁴) 91 (1 per 626 persons); hospital beds (2005) 411 (1 per 139 persons); infant mortality rate per 1,000 live births (2007) 8.2; under-nourished population, n.a.

Military

Total active duty personnel. Denmark is responsible for Greenland's defense. Greenlanders are not liable for military service. U.S. air force personnel at Thule Air Base (December 2008): 138.

¹Danish was an official language prior to June 21, 2009. ²A referendum approved in November 2008 endorsed the gradual expansion of Greenland's autonomy from Denmark; the Greenland government assumed greater responsibility for local matters on June 21, 2009. ³New administrative structure from Jan. 1, 2009. ⁴January 1. ⁵Greenlandic and Danish personnel only. ⁶Surveyed ice-free area in 1996 was 158,475 sq mi (410,449 sq km) and permanent ice area was 677,855 sq mi (1,755,637 sq km), making the total surveyed area 836,330 sq mi (2,166,086 sq km). ⁷Includes 77 in unknown municipality. ⁸Population density calculated with reference to ice-free area only. ⁹Employed persons only. ¹⁰Includes taxes and import duties. ¹¹Town residents only. ¹²But government-owned corporations have debt obligations in ships and buildings. ¹³Air Greenland A/S only. ¹⁴In 2002, 97% of households had a television. ¹⁵There are no daily newspapers in Greenland. One paper is published twice a week, one weekly. ¹⁶Subscribers. ¹⁷2006–07; summed total for the University of Greenland and the Teacher Training School.

Internet resources for further information:

- **Statistics Greenland** <http://www.stat.gl/>
- **Danmarks Statistik Yearbook** <http://www.dst.dk/HomeUK/Statistics/ofs/Publications/Yearbook.aspx>

Area and population

	Administrative centre	area		population
		sq mi	sq km	2009 ⁴ estimate
Municipalities³				
Kujalleq	Qaqortoq	19,700	51,000	7,632
Qaasuitsup	Ilulissat	225,900	585,100	17,679
Oeqqata	Sisimiut	37,500	97,000	9,686
Sermersooq	Nuuk	222,100	575,300	20,954
Unincorporated areas				
Northeast Greenland	—	331,100	857,600	—
National Park	—	...	...	166 ⁵
Pituffik (Thule Air Base)	Pituffik	...	...	56,194 ⁷
TOTAL		836,300 ⁶	2,166,000 ⁶	

Demography

Population (2009): 56,100.

Density (2009)⁸: persons per sq mi 0.35, persons per sq km 0.14.

Urban-rural (2009⁴): urban (town) 83.8%; rural (settlement) 16.2%.

Sex distribution (2009⁴): male 53.05%; female 46.95%.

Age breakdown (2008⁴): under 15, 23.7%; 15–29, 22.1%; 30–44, 23.3%; 45–59, 20.4%; 60–74, 8.7%; 75 and over, 1.8%.

Population projection: (2020) 56,000; (2030) 55,000.

Doubling time: 98 years.

Ethnic composition (2009⁴): Inuit (Greenland Eskimo) 89%; Danish and others 11%.

Religious affiliation (2000): Protestant 69.2%, of which Evangelical Lutheran 64.2%, Pentecostal 2.8%; other Christian 27.4%; other/nonreligious 3.4%.

Major towns (2009⁴): Nuuk (Godthåb) 15,105; Sisimiut (Holsteinsborg) 5,458; Ilulissat (Jakobshavn) 4,528; Qaqortoq (Julianehåb) 3,302.

Vital statistics

Birth rate per 1,000 population (2007): 14.9 (world avg. 20.3); (1993) within marriage 29.2%; outside of marriage 70.8%.

Death rate per 1,000 population (2007): 7.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 7.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.28.

Marriage/divorce rates per 1,000 population (1999): 4.5/n.a.

Life expectancy at birth (2006): male 66.4 years; female 73.6 years.

Major causes of death per 100,000 population (2006; 2 categories only): malignant neoplasms (cancers) c. 186; suicide c. 88.

National economy

Budget (general government; 2007). Revenue: DKK 8,625,000,000 (block grant from Danish government 44.8%; taxes on income and wealth 33.9%; import duties 6.5%; other 14.8%). Expenditures: DKK 8,239,000,000 (social welfare 26.0%, education 19.3%, health 12.1%, general administration 11.7%, economic affairs 11.6%, public order 3.7%, defense 2.2%).

Production (metric tons except as noted). Agriculture, fishing, other marine: locally grown broccoli, cauliflower, and cabbage sold commercially for the first time in 2007, potatoes also produced; roundwood, n.a.; fish catch (2006) 213,600 (of which prawn 132,500, Greenland halibut 44,900, Atlantic cod 10,600, lumpfish 10,000, crab 3,600); number of other marine catch (2006): narwhals 411, minke whales 181, beluga whales 137, porpoises 2,923, seals 187,613, walrus 45; livestock (number of live animals; 2007) 21,704 sheep, 2,441 tame reindeer, 216 horses; number of animals killed (2006) reindeer 15,002, musk ox 2,393, polar bear 118. Mining (2007): gold 1,639 kg. Manufacturing: principally fish and prawn processing, handicrafts, hides and skins, and ship repair. Energy production (consumption): electricity (kW-hr; 2006) 344,000,000 (268,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (184,000); natural gas, none (none).

Tourism (2008): number of overnight stays at hotels 236,913, of which visitors from within Greenland 115,289, from Denmark 79,396, from the U.S. 6,532.

Land use as % of total land area (2007): in temporary crops, negligible, in permanent crops, none, in pasture 0.6%, forest area, negligible (2 sq km [1.2 sq mi]).

Household income and expenditure. Average household size (2008⁴) 2.5; average gross income per household (2005) DKK 354,000 (U.S.\$59,030); sources of income: n.a.; expenditure (1994): food, beverages, and tobacco 41.6%, housing and energy 22.4%, transportation and communications 10.2%, recreation 6.4%.

Grenada

Official name: Grenada.

Form of government: constitutional monarchy with two legislative houses (Senate [13]; House of Representatives [15]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: St. George's.

Official language: English.

Official religion: none.

Monetary unit: Eastern Caribbean dollar (EC\$); valuation (Sept. 1, 2009)
1 U.S.\$ = EC\$2.70; 1 £ = EC\$4.38.



Area and population

Parishes ¹	Principal towns	area		population
		sq mi	sq km	2001 census
St. Andrew	Grenville	38	99	24,749
St. David	St. David's	17	44	11,486
St. George	...	25 ²	65 ²	37,057 ²
St. John	Gouyave	14	35	8,591
St. Mark	Victoria	10	25	3,994
St. Patrick	Sauteurs	16	42	10,674
Town				
St. George's	—	2	2	2, 3
Grenadian dependencies¹				
Carriacou	Hillsborough	10	26	6,081
Petite Martinique	...	3	8	
TOTAL		133	344	102,632

Demography

Population (2009): 107,000.

Density (2009): persons per sq mi 804.5, persons per sq km 311.0.

Urban-rural (2008): urban 30.9%; rural 69.1%.

Sex distribution (2008): male 51.96%; female 48.04%.

Age breakdown (2008): under 15, 32.4%; 15–29, 33.7%; 30–44, 21.6%; 45–59, 8.2%; 60–74, 3.1%; 75 and over, 1.0%.

Population projection: (2020) 112,000; (2030) 112,000.

Doubling time: 71 years.

Ethnic composition (2000): black 51.7%; mixed 40.0%; Indo-Pakistani 4.0%; white 0.9%; other 3.4%.

Religious affiliation (2005): Roman Catholic c. 41%; Protestant (of which significantly Anglican and Seventh-day Adventist) c. 30%; Rastafarian c. 5%; nonreligious/other c. 24%.

Major localities (2006): St. George's 4,300 (urban agglomeration [2007] 32,000); Gouyave 3,400; Grenville 2,500; Victoria 2,300.

Vital statistics

Birth rate per 1,000 population (2008): 18.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 9.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.30.

Marriage/divorce rates per 1,000 population (2001): 5.0/1.1.

Life expectancy at birth (2008): male 67.1 years; female 70.5 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 413; malignant neoplasms (cancers) 178; diabetes mellitus 63; diseases of the respiratory system 25.

National economy

Budget (2008). Revenue: EC\$516,100,000 (tax revenue 84.1%, of which tax on international trade 45.5%, corporate taxes 13.8%; grants 10.0%; nontax revenue 5.9%). Expenditures: EC\$627,500,000 (current expenditure 65.9%, of which wages 32.0%, transfers 14.9%, debt service 5.6%; capital expenditure 34.1%).

Public debt (external, outstanding; 2007): U.S.\$249,740,000.

Gross national income (GNI; 2008): U.S.\$603,000,000 (U.S.\$5,710 per capita); purchasing power parity GNI (U.S.\$8,060 per capita).

Structure of gross domestic product and labour force

	2008		1998	
	in value EC\$'000,000	% of total value	labour force	% of labour force
Agriculture	83.1	4.8	4,794	11.7
Quarrying	8.8	0.5	58	0.1
Manufacturing	75.0	4.3	2,579	6.3
Construction	138.6	8.0	5,163	12.6
Public utilities	81.4	4.7	505	1.2
Transp. and commun.	262.5	15.1	2,043	5.0
Trade, restaurants	211.8	12.2	8,298	20.2
Finance, real estate	186.4	10.7	1,312	3.2
Pub. admin., defense	259.1	14.9	1,879	4.6
Services	233.9	13.4	6,837	16.7
Other	198.6 ⁴	11.4 ⁴	7,547 ⁵	18.4 ⁵
TOTAL	1,739.2	100.0	41,015	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 7,200, coconuts 7,000, bananas 4,300⁶, roots and tubers 4,060, nutmeg 2,800⁶, grapefruit 2,100, mangoes 2,000, avocados 1,600, cacao 1,000⁶, oranges 900, plantains 740, cinnamon 50, cloves 20; livestock (number of live animals) 13,200 sheep, 7,200 goats, 2,650 pigs; roundwood, n.a.; fisheries pro-

duction 2,407 (from aquaculture, none). Mining and quarrying: excavation of limestone, sand, and gravel for local use. Manufacturing (value of production in EC\$'000; 1997): wheat flour 13,390; soft drinks 9,798; beer 7,072; animal feed 5,852; rum 5,497; toilet paper 4,237; malt 4,192; stout 3,835; cigarettes 1,053. Energy production (consumption): electricity (kW-hr; 2008) 169,568,000 ([2006] 171,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (78,000); natural gas, none (none).

Household income and expenditure. Average household size (2003) 3.3; income per capita (2000) EC\$8,922 (U.S.\$3,400); sources of income: n.a.; expenditure (2001)⁷: food, beverages, and tobacco 38.6%, transportation and communications 15.7%, housing 10.2%, clothing and footwear 9.8%.

Population economically active (2004): total 37,000; activity rate of total population c. 35% (participation rate: ages 15–64 [1998] c. 78%; female [1998] 43.5%; unemployed [2005] 18.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.5	94.5	96.7	100.0	103.8	108.1	117.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 110; remittances (2008) 64; foreign direct investment (2005–07 avg.) 98; official development assistance (2007) 23. Disbursements for (U.S.\$'000,000): tourism (2007) 10; remittances (2008) 4.

Land use as % of total land area (2007): in temporary crops 5.9%, in permanent crops 29.4%, in pasture 2.9%, forest area 12.1%.

Foreign trade⁸

Balance of trade (current prices)

	2002	2003	2004	2005	2006
U.S.\$'000,000	–138.7	–182.1	–177.9	–247.5	–216.0
% of total	63.9%	68.5%	76.4%	79.0%	79.7%

Imports (2006): U.S.\$298,900,000 (machinery and transportation equipment 22.1%; food and live animals 16.1%; chemicals and chemical products 9.6%; mineral fuels 5.9%). **Major import sources:** U.S. 39.3%; Trinidad and Tobago 19.2%; U.K. 5.6%; China 5.3%; Japan 3.9%.

Exports (2006): U.S.\$25,400,000 (food and live animals 51.6%, of which fish 14.6%, spices [nearly all nutmeg and mace] 11.0%; machinery and transportation equipment 11.8%; chemicals and chemical products 4.7%). **Major export destinations:** U.S. 27.6%; Saint Lucia 13.0%; Dominica 9.4%; St. Kitts and Nevis 7.5%; Trinidad and Tobago 7.1%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 700 mi, 1,127 km (paved 61%). Vehicles (2001): passenger cars 15,800; trucks and buses 4,200. Air transport (2001)⁹: passengers 331,000; cargo 2,747 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	38	375	PCs	2004	16	155
Telephones	2001	38	375	Dailies	2008	—	—
Cellular	2008	60 ¹⁰	580 ¹⁰	Internet users	2008	24	232
Landline	2008	29	276	Broadband	2008	10 ¹⁰	98 ¹⁰

Education and health

Educational attainment (2001). Percentage of population age 18 and over having: no formal schooling or unknown 7.6%; primary education 65.1%; secondary 21.7%; higher 5.6%, of which university 1.5%. **Literacy** (2004): total population age 15 and over literate 98.0%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–11)	871	13,608	15.6	76
Secondary/Voc. (age 12–16)	886 ¹¹	13,060	15.4 ¹¹	79 ¹²
Tertiary	...	...	...	... (age 17–21)

Health (2007): physicians (2006) 96 (1 per 1,111 persons); hospital beds 279 (1 per 385 persons); infant mortality rate per 1,000 live births 11.0; undernourished population (2002–04) 7,000 (7% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (2006): paramilitary and coast guard units only. **Military expenditure as percentage of GDP:** n.a.; per capita expenditure, n.a.

¹Grenada does not have a local government system. ²St. George local council includes St. George's town. ³Preliminary 2001 census figure for St. George's town is 3,908. ⁴Taxes on products less subsidies and less imputed bank service charges. ⁵Includes 1,321 participants in activities not adequately defined and 6,226 unemployed. ⁶Hurricanes Ivan and Emily, which struck Grenada in September 2004 and June 2005, respectively, destroyed much of the nutmeg and cacao fields as well as the banana crop; it is estimated that it will take a decade to regrow the nutmeg groves. ⁷Weights of consumer price index components. ⁸Imports are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. ⁹Point Salines airport. ¹⁰Subscribers. ¹¹2004–05.

Internet resources for further information:

- Eastern Caribbean Central Bank <http://www.eccb-centralbank.org>
- Caricom Statistics <http://www.caricomstats.org>

Guadeloupe^{1, 2}

Official name: Département d'Outre-Mer de la Guadeloupe (Overseas Department of Guadeloupe).³

Political status: overseas department/overseas region (France) with two legislative houses (General Council⁴ [42]; Regional Council⁵ [41]).

Chief of state: President of France.

Heads of government: Prefect (for France); President of the General Council (for Guadeloupe); President of the Regional Council (for Guadeloupe).

Capital: Basse-Terre.

Official language: French.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population ⁶		area		population
Arrondissements	Capitals	sq mi	sq km	mid-2006 estimate ⁷
Basse-Terre ⁸	Basse-Terre	330	855	189,529
Pointe-à-Pitre ⁹	Pointe-à-Pitre	299	775	211,207
TOTAL		629	1,630	400,736

Demography

Population (2009): 408,000⁶.

Density (2009)⁶: persons per sq mi 648.6, persons per sq km 250.3.

Urban-rural (2007): urban 99.8%; rural 0.2%.

Sex distribution (2005): male 49.25%; female 50.75%.

Age breakdown (2005): under 15, 24.0%; 15–29, 22.7%; 30–44, 26.2%; 45–59, 14.6%; 60–74, 8.4%; 75 and over, 4.1%.

Population projection⁶: (2020) 424,000; (2030) 431,000.

Doubling time: 79 years.

Ethnic composition (2000): Creole (mulatto) 76.7%; black 10.0%; Guadeloupe mestizo (French–East Asian) 10.0%; white 2.0%; other 1.3%.

Religious affiliation (2000): Roman Catholic 86.4%; Protestant 4.5%; Jehovah's Witness 3.9%; nonreligious/atheist 3.1%; other 2.1%.

Major communes (2006)⁷: Les Abymes 60,053¹⁰; Baie-Mahault 27,906¹⁰; Le Gosier 27,370¹⁰; Pointe-à-Pitre 17,541 (urban agglomeration 177,336); Basse-Terre 12,834 (urban agglomeration 46,319).

Vital statistics

Birth rate per 1,000 population (2007): 14.8 (world avg. 20.3); (1999) within marriage 34.7%; outside of marriage 65.3%.

Death rate per 1,000 population (2007): 6.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 8.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.10.

Marriage/divorce rates per 1,000 population: (2006) 3.8/(2005) 1.9.

Life expectancy at birth (2007): male 76.0 years; female 82.2 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 207.5, of which cerebrovascular diseases 77.9; malignant neoplasms (cancers) 148.3; accidents, violence, and poisoning 75.6, of which transportation accidents 27.9; infectious and parasitic diseases 42.3; diabetes mellitus 31.5.

National economy

Budget (2006). Revenue: €381,500,000 (transfers from France 48.8%; direct tax revenues 42.8%; loans 6.9%; other 1.5%). Expenditures: €470,200,000 (capital [development] expenditures 59.8%; current expenditures 40.2%).

Public debt: n.a.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 800,000, bananas 75,000, plantains 9,000, melons 7,500, pineapples 5,300, sweet potatoes 4,000, tomatoes 3,000, yams 3,000, oranges 2,200; livestock (number of live animals) 73,000 cattle, 48,000 goats, 30,000 pigs; round-wood 32,200 cu m, of which fuelwood 99%; fisheries production 10,100 (from aquaculture, negligible). Mining and quarrying (2006): pumice 210,000. Manufacturing (value added in €'000,000; 2005): food and agricultural products 55.7; machinery and apparatus 44.0; other products include clothing, wooden furniture and posts, and metalware. Energy production (consumption): electricity (kW-hr; 2006) 1,795,000,000 (1,603,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (660,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 344; remittances, n.a.; foreign direct investment, n.a. Disbursements from (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 12.4%, in permanent crops 1.8%, in pasture 11.8%, forest area 46.9%.

Population economically active (2006): total 219,000; activity rate of total population 48.5% (participation rates: ages 15–59, 74.8%; female 50.5%; unemployed [December 2008] c. 22%).

Price index (2005 = 100)	2000	2001	2002	2003	2004	2005	2006
Consumer price index	89.2	91.5	93.7	95.5	96.9	100.0	102.0

Gross domestic product (at current market prices; 2006): U.S.\$9,962,000,000 (U.S.\$21,750 per capita).

Structure of gross domestic product and labour force

	2005			
	in value €'000,000	% of total value	labour force ¹¹	% of labour force
Agriculture	305	4.1	2,954	1.8
Mining, manufacturing	245	3.3	8,496	5.2
Public utilities	30	0.4	...	...
Construction	595	8.1	6,819	4.2
Transp. and commun.	245	3.3	¹²	¹²
Trade, hotels	919	12.4	16,674	10.2
Finance, real estate	4,681	63.4	80,181 ¹²	48.9 ¹²
Pub. admin., defense				
Services				
Other	368	5.0	48,700 ¹³	29.7 ¹³
TOTAL	7,388	100.0	163,824	100.0

Household income and expenditure (2000). Average household size 2.3; disposable income per household €25,441 (U.S.\$23,439); sources of income: wages and salaries 81.5%, transfer payments 17.2%, property 1.3%; expenditure (2006)¹⁴: food and beverages 20.9%, energy 10.1%, housing 8.9%, clothing 7.8%, health 6.5%, transportation and communications 6.1%.

Foreign trade¹⁵

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	−1,704	−1,715	−1,667	−2,047	−2,061	−2,065
% of total	83.9%	82.7%	84.1%	86.2%	86.3%	88.3%

Imports (2006): €2,225,000,000 (agricultural and food products 17.3%; mineral fuels 14.1%; machinery and apparatus 13.6%; road vehicles 12.8%; medicine, pharmaceuticals, perfume 8.2%). **Major import sources:** France (metropolitan) c. 56%; other EU countries c. 14%; Martinique c. 4%; Trinidad and Tobago c. 3%; Aruba c. 3%.

Exports (2006): €164,000,000 (sugar 20.6%; bananas 12.4%; electrical machinery and electronics 9.2%; rum 7.7%; boats, motorcycles, bicycles 7.4%).

Major export destinations: France (metropolitan) c. 55%; Martinique c. 31%; other EU countries c. 3%; French Guiana c. 3%.

Transport and communications

Transport. Railroads: none. Roads (1998): total length 1,988 mi, 3,415 km (paved, n.a.). Vehicles (2001): passenger cars 117,700; trucks and buses 31,400. Air transport (2007): passenger-km¹⁶ 3,794,000,000; cargo handled (2006) 14,531 metric tons, cargo unloaded 8,412 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	125	289	PCs	2005	90	200
Telephones				Dailies	2005	50 ¹⁷	110 ¹⁷
Cellular	2005	315 ¹⁸	710 ¹⁸	Internet users	2008	103	222
Landline	2008	246	531	Broadband	2008	...	...

Education and health

Educational attainment (1999). Percentage of population age 20 and over having: no formal education through lower secondary education 59.5%; upper secondary 10.1%; vocational 16.6%; incomplete higher 4.8%; complete higher 5.0%; other 4.0%. **Literacy:** n.a.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	3,246 ¹⁹	60,769	19.0 ¹⁹	...
Secondary/Voc. (age 11–17)	4,780 ¹⁹	53,787	11.2 ¹⁹	...
Tertiary ²⁰	267	5,800	21.7	... (age 18–22)

Health (2006²¹): physicians 983 (1 per 466 persons); hospital beds 2,348 (1 per 195 persons); infant mortality rate per 1,000 live births (2005) 8.6; undernourished population, n.a.

Military

Total active duty personnel (November 2008): French troops in West Indies (Guadeloupe and Martinique) 1,450 (army 69.0%, navy 31.0%).

¹Includes Saint-Martin and Saint-Barthélemy unless otherwise footnoted. ²On Feb. 22, 2007, Saint-Martin (the northern half of the island of St. Martin) and Saint-Barthélemy formally separated from Guadeloupe to become overseas collectivities of France.

³Guadeloupe is simultaneously administered as an overseas region (*région d'outre-mer*).

⁴Assembly for overseas department. ⁵Assembly for overseas region.

⁶Excludes Saint-Martin (2008 pop. 29,000) and Saint-Barthélemy (2008 pop. 8,600).

⁷Actually totals for combined/assorted censuses taken over a 5-year span (2004–08).

⁸Comprises Basse-Terre 325 sq mi (842 sq km), pop. 186,661, and Îles des Saintes 5 sq mi (13 sq km), pop. 2,868.

⁹Comprises Grande-Terre 230 sq mi (596 sq km), pop. 197,603; Marie-Galante 61 sq mi (158 sq km), pop. 12,009; La Désirade 8 sq mi (21 sq km), pop. 1,595; and the uninhabited Îles de la Petite-Terre.

¹⁰Within Pointe-à-Pitre urban agglomeration. ¹¹Excludes 19,870 non-salaried workers.

¹²Finance, real estate; Public administration, defense; Services includes Transportation and communications.

¹³Unemployed. ¹⁴Weights of consumer price index components. ¹⁵Imports c.i.f.; exports f.o.b.

¹⁶Air Caribbes only. ¹⁷Circulation of daily newspapers. ¹⁸Subscribers.

¹⁹2004–05. ²⁰University of Antilles–French Guiana, Guadeloupe campus.

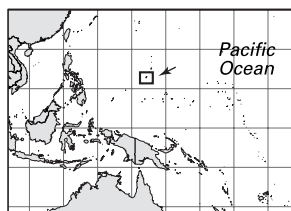
²¹January 1.

Internet resources for further information:

- INSEE Guadeloupe
<http://www.insee.fr/fr/regions/guadeloupe>
- Region Guadeloupe
<http://www.cr-guadeloupe.fr>

Guam

Official name: Guåhan (Chamorro); Territory of Guam (English).
Political status: self-governing, organized, unincorporated territory of the United States with one legislative house (Guam Legislature [15]).
Chief of state: President of the United States.
Head of government: Governor.
Capital: Hagåtña (formerly Agaña).
Official languages: Chamorro; English.
Official religion: none.
Monetary unit: United States dollar (U.S.\$); valuation (Sept. 1, 2009) 1 U.S.\$ = £0.62.



Area and population

Municipalities	land area	population ¹	Municipalities	land area	population ¹
	sq km	2000 census		sq km	2000 census
Agat	29	5,656	Mongmong-Toto-Maite	5	5,845
Asan	16	2,090	Piti	18	1,666
Barrigada	23	8,652	Santa Rita	42	7,500
Chalan Pago-Ordot	16	5,923	Sinajana	3	2,853
Dededo	78	42,980	Talofofo	44	3,215
Hagåtña	3	1,100	Tamuning	16	18,012
Hagåtña Heights	3	3,940	Umatac	16	887
Inarajan	49	3,052	Yigo	91	19,474
Mangilao	26	13,313	Yona	52	6,484
Merizo	16	2,163	TOTAL	541²	154,805

Demography

Population (2009): 184,000.
Density (2009)³: persons per sq mi 880.4, persons per sq km 340.1.
Urban-rural (2003): urban 93.7%; rural 6.3%.
Sex distribution (2007): male 50.35%; female 49.65%.
Age breakdown (2006): under 15, 29.0%; 15–29, 23.0%; 30–44, 22.2%; 45–59, 16.1%; 60–74, 7.4%; 75 and over, 2.3%.
Population projection (2020) 226,000; (2030) 242,000.
Doubling time: 45 years.
Ethnic composition (2007): Chamorro 41.4%; other Micronesian 10.3%; Filipino 29.3%; white 4.0%; other (mostly mixed race) 15.0%.
Religious affiliation (2005): Roman Catholic c. 72%; Protestant c. 12%; non-religious/other c. 16%.
Major populated places (2000): Tamuning 10,833; Mangilao 7,794; Yigo 6,391; Astumbo 5,207; Hagåtña 1,122.

Vital statistics

Birth rate per 1,000 population (2007): 20.2 (world avg. 20.3); (2004) within marriage 42.8%; outside of marriage 57.2%.
Death rate per 1,000 population (2007): 4.5 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 15.7 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2006): 2.58.
Marriage/divorce rates per 1,000 population (2004): 9.4/11.9.
Life expectancy at birth (2007): male 75.7 years; female 82.0 years.
Major causes of death per 100,000 population (2005): ischemic heart disease 130.8; malignant neoplasms (cancers) 57.1; cerebrovascular disease 38.3; accidents 27.7; diabetes mellitus 19.4; suicide 17.1.

National economy

Budget (2007). Revenue: U.S.\$514,400,000 (taxes 82.9%, of which income taxes 48.8%; federal contributions 14.5%; other 2.6%). Expenditures: U.S.\$394,800,000 (education 45.7%; public order 18.4%; general administration 11.1%; interest 3.2%; health 2.5%).
Public debt: n.a.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 53,200, vegetables 2,685, roots and tubers 2,630, watermelons 2,500, eggs 750, fruits 620; roundwood, n.a.; livestock (number of live animals) 5,200 pigs, 210,000 chickens; roundwood, n.a.; fisheries production 804 (from aquaculture 20%). Mining and quarrying: sand and gravel. Manufacturing (value of sales in U.S.\$'000; 2007): cement, bricks, and ceramics 72,811; food processing 23,244; printing and publishing 10,008; other industries include textiles/garments and boat building. Energy production (consumption): electricity (kW-hr; 2006) 1,891,000,000 (1,891,000,000); crude petroleum, none (none); petroleum products (metric tons; 2002) none (1,333,000); natural gas, none (none).
Household income and expenditure. Average household size (2007) 3.8; annual average (median) household income (2006) U.S.\$49,795⁴ (U.S.\$40,373)⁴; sources of income: n.a.; expenditure (2007)⁵: health care 20.4%, household furnishings 15.7%, food and nonalcoholic beverages 14.7%, energy 11.3%, transportation 8.6%, clothing and footwear 6.7%, housing 5.3%.
Population economically active (2007): total 63,600⁸; activity rate of total population c. 36% (participation rates: over age 15 [2005] 61.1%; female 38.1%; unemployed 8.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	85.2	87.6	92.9	100.0	111.5	119.1	...

Gross domestic product (at current market prices; 2005): U.S.\$3,700,000,000 (U.S.\$22,661 per capita).

Structure of gross domestic product and labour force

	1995		2005	
	in value U.S.\$'000,000	% of total value	labour force ⁶	% of labour force ⁶
Agriculture	7	7	170	0.3
Manufacturing	7	7	1,660	2.9
Construction	379.0	12.5	4,460	7.7
Trade	622.9	20.6	14,240	24.6
Transp. and commun.	7	7	4,970	8.6
Finance	7	7	2,540	4.4
Pub. admin. (local)	513.3	16.9	11,540	19.9
Pub. admin., defense (federal)	452.7	14.9	3,230	5.6
Services	486.9	16.1	15,190	26.2
Other	575.4 ⁷	19.0 ⁷	—	—
TOTAL	3,030.2	100.0	58,000	100.0²

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 1,149 (of which significantly from Japanese tourists); remittances, n.a.; foreign direct investment (FDI), n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.

Land use as % of total land area (2007): in temporary crops c. 2%, in permanent crops c. 19%, in pasture c. 15%, forest area c. 48%.

Foreign trade

Balance of trade (current prices) ⁹						
U.S.\$'000,000	2002	2003	2004	2005	2006	2007
% of total	74%	83%	84%	83%	81%	69%

Imports (2008): U.S.\$224,914,000¹⁰ (food products and nonalcoholic beverages 29.7%; motor cars 17.2%; leather luggage and handbags 8.6%; perfumes 3.6%). **Major import sources:** significantly U.S. and Japan.

Exports (2008): U.S.\$104,878,000 (motor cars 45.8%; fish 18.3%; precious metal jewelry 8.1%; perfumes 3.6%; leather luggage and handbags 3.4%; iron and steel 3.3%). **Major export destinations** (2008): U.S. 26.8%; remainder 73.2%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 550 mi, 885 km (paved 76%)¹¹. Vehicles (2005): passenger cars 63,631; trucks and buses 25,615. Air transport (2006)¹²: passenger-km 4,762,000,000; metric ton-km cargo 102,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1997	106	668	PCs	2008	...	...
Telephones				Dailies	2007	2013	114 ¹³
Cellular	2004	98 ¹⁴	594 ¹⁴	Internet users	2008	85	484
Landline	2008	66	373	Broadband	2007	2.7 ¹⁴	15 ¹⁴

Education and health

Educational attainment (2007). Percentage of population age 25 and over having: no formal schooling through incomplete secondary education 21.1%; completed secondary 56.7%; completed university 22.2%. **Literacy:** virtually 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–13) ¹⁵	1,917	28,106 ¹⁶	14.5	...
Secondary/Voc. (age 14–17)	1,108	12,079 ¹⁶	10.9	...
Tertiary	...	7,013 ^{16, 17}	...	... (age 18–22)

Health: physicians (2007) 172¹⁸ (1 per 1,022 persons); hospital beds (2007) 187 (1 per 940 persons); infant mortality rate per 1,000 live births (2007) 10.0; undernourished population, n.a.

Military

Total active duty U.S. personnel (December 2008): 3,133 (army 1.3%; navy 38.1%; air force 60.2%; marine corps 0.4%)¹⁹.

¹Includes active-duty U.S. military personnel, U.S. Department of Defense employees, and dependents of both. ²Detail does not add to total given because of rounding. ³Based on land area; total area per most recent survey including area designated as inland water equals 217 sq mi (561 sq km). ⁴Excludes all military, dependents of military, and non-resident aliens. ⁵Weights of consumer price index components. ⁶Payroll employment only; excludes proprietors, the self-employed, unpaid family workers, and military personnel. ⁷Other includes Agriculture, Manufacturing, Transportation and communications, and Finance. ⁸Civilian labour force only, including unemployed. ⁹Includes (significantly petroleum) imports for transshipment to Micronesia. ¹⁰Excludes some imports for transshipment. ¹¹Public roads only; 426 mi (685 km) of roads are private (including roads on federal government installations). ¹²Continental Micronesia only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Includes kindergarten. ¹⁶2007–08. ¹⁷Combined total of Guam Community College and the University of Guam. ¹⁸Includes military physicians licensed by the Guam public health office. ¹⁹A 2006 agreement to move 8,000 U.S. Marines from Okinawa to Guam by 2014 was ratified by the Japanese Diet in May 2009.

Internet resource for further information:

• Guam Bureau of Statistics and Plans <http://bsp.guam.gov>

Guatemala

Official name: República de Guatemala (Republic of Guatemala).

Form of government: republic with one legislative house (Congress of the Republic [158]).

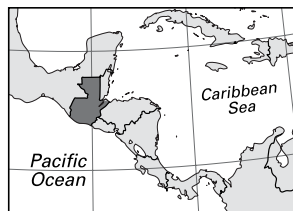
Head of state and government: President.

Capital: Guatemala City.

Official language: Spanish.

Official religion: none.

Monetary unit: quetzal (Q); valuation (Sept. 1, 2009) 1 U.S.\$ = Q 8.24; 1 £ = Q 13.36.



Area and population					
	area	population		area	population
	sq km	2006 estimate		sq km	2006 estimate
Departments			Departments		
Alta Verapaz	9,569	914,414	Petén	33,635	441,799
Baja Verapaz	3,104	245,787	Quetzaltenango	2,098	735,162
Chimaltenango	1,960	519,667	Quiché	10,172	769,364
Chiquimula	2,361	342,681	Retalhuleu	1,844	273,328
El Progreso	1,910	150,826	Sacatepéquez	462	278,064
Escuintla	4,356	610,731	San Marcos	3,802	905,116
Guatemala	2,218	2,975,417	Santa Rosa	2,936	332,724
Huehuetenango	7,285	986,224	Sololá	1,050	361,184
Izabal	8,981	364,924	Suchitepéquez	2,409	464,304
Jalapa	2,050	279,242	Totonicapán	1,043	395,324
Jutiapa	3,199	426,497	Zacapa	2,673	215,050
			TOTAL	109,117	12,987,829

Demography

Population (2009): 14,027,000.

Density (2009): persons per sq mi 332.9, persons per sq km 128.6.

Urban-rural (2005): urban 47.2%; rural 52.8%.

Sex distribution (2008): male 48.79%; female 51.21%.

Age breakdown (2006): under 15, 41.5%; 15–29, 28.6%; 30–44, 14.7%; 45–59, 9.6%; 60–74, 4.4%; 75–84, 1.1%; 85 and over, 0.1%.

Population projection: (2020) 18,091,000; (2030) 21,692,000.

Doubling time: 30 years.

Ethnic composition (2002): mestizo 60.0%; Maya 39.3%, of which Quiché 11.3%, Kekchi 7.6%, Cakchiquel 7.4%, Mam 5.5%; other 0.7%.

Religious affiliation (2005): Roman Catholic c. 57%; Protestant/independent Christian c. 40%¹; traditional Mayan religions c. 1%; other c. 2%.

Major cities (2002)²: Guatemala City 942,348; Mixco 277,400³; Villa Nueva 187,700³; Quetzaltenango 106,700; Escuintla 65,400.

Vital statistics

Birth rate per 1,000 population (2007): 29.1 (world avg. 20.3).

Death rate per 1,000 population (2007): 5.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 23.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.70.

Marriage/divorce rates per 1,000 population (2006): 4.4/0.1.

Life expectancy at birth (2007): male 66.7 years; female 73.8 years.

Major causes of death per 100,000 population (2004): diseases of the respiratory system 91.2, of which pneumonia 77.4; external causes 78.8, of which violence 27.5, accidents 20.6, unclassified 28.7; diseases of the circulatory system 64.6; malignant neoplasms (cancers) 51.2; infectious and parasitic diseases 45.0.

National economy

Budget (2006). Revenue: Q 29,102,000,000 (tax revenue 93.6%, of which taxes on goods and services 55.3%, corporate income taxes 18.0%; nontax revenue 3.1%; other 3.3%). Expenditures: Q 33,600,000,000 (general administration 18.8%; education 18.6%; housing and communities 13.8%; transport 12.8%; public order 9.4%; health 7.7%; defense 2.4%).

Public debt (external, outstanding; 2008): U.S.\$4,382,400,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 18,000,000, corn (maize) 1,100,000, bananas 1,010,000, oil palm fruit 630,000, plantains 275,000, coffee 216,600, cardamom and nutmeg 19,000; livestock (number of live animals) 2,800,000 cattle, 265,000 sheep, 27,000,000 chickens; roundwood 17,414,100 cu m, of which fuelwood 97%; fisheries production 33,987 (from aquaculture 48%). Mining and quarrying (2007): silver 70,000 kg; gold 7,100 kg. Manufacturing (value added in Q '000,000; 2007): food products, beverages, and tobacco products 24,429; textiles, wearing apparel, and footwear 8,340; cement, bricks, and rubber or plastic products 4,284. Energy production (consumption): electricity (kW-hr; 2006) 7,911,000,000 (7,832,000,000); coal (metric tons; 2006) none (428,000); crude petroleum (barrels; 2008) 5,670,000 ([2006] 930,000); petroleum products (metric tons; 2006) 23,000 (2,952,000); natural gas, none (none).

Household income and expenditure. Average household size (2002) 4.4; income per household (1989) Q 4,306 (U.S.\$1,529); sources of income: n.a.; expenditure (2000)⁴: food and beverages 32.9%, household furnishings 14.7%, clothing 11.8%, recreation and culture 9.2%, health 7.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,055; remittances (2008) 4,446; foreign direct investment (FDI; 2005–07 avg.) 608; official development assistance (2007) 450. Disbursements for (U.S.\$'000,000): tourism (2007) 597; remittances (2008) 18; FDI (2005–07 avg.) 54.

Gross national income (GNI; 2008): U.S.\$36,634,000,000 (U.S.\$2,680 per capita); purchasing power parity GNI (U.S.\$4,690 per capita).

Structure of gross domestic product and labour force

	2007		2002	
	in value Q '000,000	% of total value	labour force	% of labour force
Agriculture	29,365	11.2	1,844,265	38.7
Mining	4,121	1.6	11,279	0.2
Manufacturing	47,972	18.4	716,633	15.0
Construction	13,433	5.1	213,007	4.5
Public utilities	6,392	2.5	12,673	0.3
Transp. and commun.	18,270	7.0	103,917	2.2
Trade	39,884	15.3	1,050,499	22.0
Finance, real estate	7,883	3.0	31,513	0.7
Pub. admin., defense	16,971	6.5		
Services	63,731	24.4	601,831	12.6
Other	13,107 ⁵	5.0 ⁵	183,767	3.9
TOTAL	261,129	100.0	4,769,384	100.0⁶

Population economically active (2006): total 5,565,200; activity rate of total population 42.8% (participation rates: ages 15–64, 68.0%; female 38.1%; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	81.4	85.9	92.2	100.0	106.5	113.3	127.6

Land use as % of total land area (2007): in temporary crops 14.7%, in permanent crops 8.8%, in pasture 18.2%, forest area 35.7%.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−4,084	−4,880	−5,119	−6,342	−5,831	−6,785
% of total	43.7%	45.4%	32.9%	49.8%	29.7%	30.5%

Imports (2007): U.S.\$12,731,000,000 (machinery and apparatus 17.3%, refined petroleum 15.8%, chemicals and chemical products 14.8%, food products 9.8%, road vehicles/parts 7.8%). **Major import sources:** U.S. 34.1%; Mexico 8.8%; China 5.7%; El Salvador 4.8%; South Korea 3.6%.

Exports (2007): U.S.\$6,900,000,000 (food products 33.0%, of which coffee 8.4%, raw sugar 5.2%, bananas 4.7%; apparel and clothing accessories 20.1%, of which women's outerwear 13.0%; crude petroleum 3.6%; toiletries and perfumery 3.6%; silver 3.0%). **Major export destinations:** U.S. 42.6%; El Salvador 12.2%; Honduras 8.6%; Mexico 6.7%; Nicaragua 3.9%.

Transport and communications

Transport. Railroads (2004): route length 886 km⁸. Roads (2002): total length 14,044 km (paved 39%). Vehicles (2004): passenger cars 1,328,100; trucks and buses (2000) 53,236. Air transport (1999): passenger-km 341,700,000; metric ton-km cargo (2003) 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,000	167	PCs	2005	262	21
Telephones				Dailies	2007	520 ⁹	39 ⁹
Cellular	2008	14,949 ¹⁰	1,092 ¹⁰	Internet users	2008	1,920	143
Landline	2008	1,449	106	Broadband	2005	27 ¹⁰	2.1 ¹⁰

Education and health

Educational attainment (2002). Percentage of heads of households having: no formal schooling 33.3%; incomplete/complete primary education 46.1%; incomplete/complete secondary 15.0%; higher 5.6%. **Literacy** (2005): total population age 15 and over literate 71.8%; males literate 79.1%; females literate 64.6%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	80,418	2,448,976	30.5	95
Secondary/Voc. (age 13–17)	53,630	864,154	16.1	38 ¹¹
Tertiary ¹¹	3,843	112,215	29.2	9 (age 18–22)

Health: physicians (2006¹²) 12,273 (1 per 1,049 persons); hospital beds (2005) 8,894 (1 per 1,429 persons); infant mortality rate per 1,000 live births (2006) 30.8; undernourished population (2002–04) 2,800,000 (22% of total population based on the consumption of a minimum daily requirement of 1,760 calories).

Military

Total active duty personnel (November 2008): 15,500 (army 86.7%, navy 6.4%, air force 6.9%). **Military expenditure as percentage of GDP** (2008): 0.3%; per capita expenditure U.S.\$13.

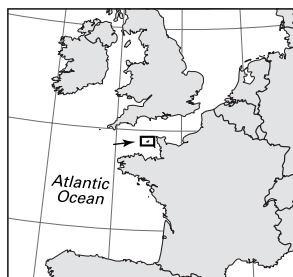
¹Rough estimate; may also incorporate Mayan spiritual ritual. ²Urban populations of *municipios*. ³Within Guatemala department. ⁴Weights of consumer price index components. ⁵Taxes less subsidies and less imputed bank service charges. ⁶Detail does not add to total given because of rounding. ⁷Imports c.i.f.; exports f.o.b. ⁸Last operating rail service was shut down September 2007; no passenger service is available. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹2005–06. ¹²January 1.

Internet resources for further information:

- Banco de Guatemala <http://www.banguat.gob.gt>
- Instituto Nacional de Estadística <http://www.ine.gob.gt>

Guernsey¹

Official name: Bailiwick of Guernsey.
Political status: crown dependency (United Kingdom) with one legislative house (States of Deliberation [502, 3, 4]).
Chief of state: British Monarch represented by Lieutenant Governor.
Head of government: Chief Minister⁵ assisted by the Policy Council.
Capital: St. Peter Port.
Official language: English.
Official religion: none.
Monetary unit: Guernsey pound⁶; valuation (Sept. 1, 2009)
 1 Guernsey pound = U.S.\$1.62.



Area and population	area		population
	sq mi	sq km	2001 census
Parishes of Guernsey			
Castel	3.9	10.2	8,975
Forest	1.6	4.1	1,549
St. Andrew	1.7	4.5	2,409
St. Martin	2.8	7.3	6,267
St. Peter (St. Pierre du Bois)	2.4	6.2	2,188
St. Peter Port	2.5	6.4	16,488
St. Sampson	2.4	6.3	8,592
St. Saviour	2.5	6.4	2,696
Torteval	1.2	3.1	973
Vale	3.4	8.9	9,573
Dependencies of Guernsey			
Alderney	3.07	7.94	2,294
Brechou	0.12	0.30	0
Herm ⁷	0.50	1.29	95
Jethou ⁷	0.07	0.18	2
Lihou ⁷	0.06	0.15	0
Little Sark	0.42	1.09	591
Sark (Great Sark)	1.62	4.19	
TOTAL (ROUNDED)	30.3	78.5	62,692

Demography

Population (2009)⁸: 65,300.
Density (2009)⁸: persons per sq mi 2,155.1, persons per sq km 831.8.
Urban-rural (2005)⁸: urban 30.9%; rural 69.1%.
Sex distribution (2007): male 49.09%; female 50.91%.
Age breakdown (2007): under 20, 20.9%; 20–39, 27.2%; 40–59, 29.4%; 60–79, 17.5%; 80 and over, 5.0%.
Population projection⁸: (2020) 67,000; (2030) 67,000.
Population by place of birth (2001): Guernsey 64.3%; United Kingdom 27.4%; Portugal 1.9%; Jersey 0.7%; Ireland 0.7%; Alderney 0.2%; Sark 0.1%; other Europe 3.2%; other 1.5%.
Religious affiliation (2000)⁸: 9: Protestant 51.0%, of which Anglican 44.1%; unaffiliated Christian 20.1%; Roman Catholic 14.6%; nonreligious 12.4%; other 1.9%.
Major cities (2001)¹⁰: St. Peter Port 16,488; Vale 9,573; Castel 8,975; St. Sampson 8,592; St. Martin 6,267.

Vital statistics

Birth rate per 1,000 population (2007): 10.4 (world avg. 20.3); (2000) within marriage 65.2%, outside of marriage 34.8%.
Death rate per 1,000 population (2007): 8.3 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 2.1 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2008): 1.40.
Marriage/divorce rates per 1,000 population (2000): 5.7/2.9.
Life expectancy at birth (2008): male 77.3 years; female 82.5 years.
Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) c. 202; ischemic heart disease c. 70; other cardiovascular diseases c. 207.

National economy

Budget (2007). Revenue: £365,004,000 (income tax 81.2%, document duties 7.2%, customs duties and excise taxes 5.0%, company fees 1.5%, automobile taxes 1.2%, other 3.9%). Expenditures: £294,085,000 (health 29.5%, education 22.0%, social security and welfare 19.3%, law and order 8.9%, advisers and finance 7.3%, other 13.0%).
Production (metric tons except as noted). Agriculture, forestry, fishing (value of exports in £; 2006): flowers 8,020,000, of which freesia 410,000, roses 360,000, carnations 290,000; other agricultural products, notably tomatoes 41,780,000; livestock (number of live animals; 1999) 3,262 cattle; roundwood, n.a.; fisheries production 1,728 (from aquaculture, n.a.), of which crabs 751, bass 162, black bream 162, scallops 123, lobsters 59. Mining and quarrying: n.a. Manufacturing (value of exports in £'000,000; 2006): plants 35.0; cut and postal flowers 8.7. Energy production (consumption): electricity (kW-hr; 2007) n.a. (340,000,000).
Population economically active (2008¹¹): total 32,396; activity rate of total population 50.4% (participation rates: ages 15–64 [2001] 79.1%; female 45.0%; unemployed [January–December 2008] 0.8%).

Retail price index (June 2000 = 100)						
	2003	2004	2005	2006	2007	2008
Retail price index ¹²	114.3	118.8	123.4	126.8	131.5	137.0

Gross national income (2007): U.S.\$3,406,893,400 (U.S.\$53,483 per capita).

Structure of gross domestic product and labour force

	2006		2008 ¹²	
	in value £'000	% of total value	labour force	% of labour force
Horticulture, fishing	24,198	1.5	1,010	3.1
Mining	—	—	—	—
Manufacturing	39,566	2.4	1,240	3.7
Construction	153,579	9.3	3,124	9.4
Public utilities	14,583	0.9	364	1.1
Transp. and commun.	30,057	1.8	1,952	5.9
Trade, hotels	216,564	13.1	6,566	19.9
Finance, real estate, insurance, international business	717,405	43.4	9,675	29.3
Pub. admin., defense	289,038	17.5	5,310	16.1
Services	167,000 ¹³	10.1 ¹³	3,520	10.6
Other	—	—	305 ¹⁴	0.9 ¹⁴
TOTAL	1,651,990	100.0	33,066	100.0

Public debt (2008): none.

Household income and expenditure. Average household size (2001) 2.6; expenditure (2005–06): housing 33.8%, recreation and culture 13.9%, household furnishings and communications 11.4%, transportation 9.7%, food 9.7%, food away from home 4.8%, alcohol and tobacco products 4.5%, clothing and footwear 3.7%, energy 3.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (1996) 275; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007)⁹: in temporary crops 17.9%, in permanent crops, n.a., in pasture 20.0%, forest area 4.2%.

Foreign trade

Imports (1999): petroleum products are important. **Major import sources** (2005): mostly United Kingdom.

Exports (1998): £93,000,000¹⁵ (light industry 50.5%, flowers 36.6%, vegetables 5.4%, other 7.5%). **Major export destinations** (2005): mostly United Kingdom.

Transport and communications

Transport. Railroads: n.a. Vehicles (2007): passenger cars 40,125; trucks and buses 7,672. Air transport (2008)¹⁶: passenger-km 87,785,000; metric ton-km cargo 56,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2007	...	...	PCs	2007	...	...
Telephones				Dailies	2006	16 ¹⁷	251 ¹⁷
Cellular	2005	43.8 ¹⁸	790 ¹⁸	Internet users	2005	39	613
Landline	2005	45.1	810	Broadband	2005	...	...

Education and health

Educational attainment: n.a. **Literacy** (2002): virtually 100%.

Education (2008)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	...	4,674	...	...
Secondary/Voc. (age 11–16)	...	4,359	...	...
Tertiary	...	922	...	... (age 17–21)

Health (2006): physicians 102 (1 per 625 persons); hospital beds c. 548 (1 per 116 persons); infant mortality rate per 1,000 live births (2008) 4.5; undernourished population, n.a.

Military

Total active duty personnel: n.a.¹⁹.

¹Data exclude Alderney and Sark unless otherwise noted. ²The States of Deliberation was reorganized in 2004. ³Includes 3 ex officio members (2 of whom have no voting rights) and 2 representatives from Alderney. ⁴Alderney and Sark have their own parliaments. The States of Alderney has a president and 10 elected members; Sark's feudal system of government ended with elections to a 28-member assembly in December 2008. ⁵The first Chief Minister was elected by the States of Deliberation in May 2004. ⁶Equivalent in value to pound sterling (£); the Guernsey government issues both paper money and coins. ⁷Islets that are directly administered by Guernsey. ⁸Includes Alderney, Sark, and other dependencies. ⁹Includes Jersey. ¹⁰Populations of parishes. ¹¹January 1. ¹²June. ¹³Less pensions (£35,976,000) and adjustment to profit account (£500,000). ¹⁴Includes 232 unemployed. ¹⁵Excluding administrative and financial services; financial services accounted for 66% of the export economy in 2002. ¹⁶Aurigny Air Services Ltd. ¹⁷Circulation of *Guernsey Press and Star*. ¹⁸Subscribers. ¹⁹The United Kingdom is responsible for defense.

Internet resource for further information:

• The States of Guernsey
<http://www.gov.gg/ccm/portal>

Guinea

Official name: République de Guinée (Republic of Guinea).

Form of government: military regime¹.

Head of state and government:

President assisted by the National Council for Democracy and Development¹.

Capital: Conakry.

Official language: French.

Official religion: none.

Monetary unit: Guinean franc (FG); valuation (Sept. 1, 2009) 1 U.S.\$ = FG 5,000; 1 £ = FG 8,113.



Area and population		area		population
Regions	Capitals	sq mi	sq km	1996 census
Boké	Boké	12,041	31,186	760,119
Faranah	Faranah	13,738	35,581	602,845
Kankan	Kankan	27,855	72,145	1,011,644
Kindia	Kindia	11,148	28,873	928,312
Labé	Labé	8,830	22,869	799,545
Mamou	Mamou	6,592	17,074	612,218
Nzérékoré	Nzérékoré	14,540	37,658	1,348,787
Special zone				
Conakry	Conakry	174	450	1,092,936
TOTAL		94,918	245,836	7,156,406

Demography

Population (2009): 10,069,000.

Density (2009): persons per sq mi 106.1, persons per sq km 41.0.

Urban-rural (2008): urban 28.0%; rural 72.0%.

Sex distribution (2008): male 50.00%; female 50.00%.

Age breakdown (2008): under 15, 42.9%; 15–29, 26.5%; 30–44, 16.0%; 45–59, 9.2%; 60–74, 4.4%; 75 and over, 1.0%.

Population projection: (2020) 13,467,000; (2030) 16,897,000.

Doubling time: 26 years.

Ethnic composition (2000): Fulani 38.3%; Malinke 25.6%; Susu 12.2%; Kpelle 5.2%; Kisi 4.8%; other 13.9%.

Religious affiliation (2005): Muslim (nearly all Sunni) c. 85%²; Christian c. 8%²; traditional beliefs c. 7%.

Major cities (2004): Conakry 1,851,800; Kankan 113,900; Labé (2001) 64,500; Kindia (2001) 56,000; Nzérékoré (2001) 55,000.

Vital statistics

Birth rate per 1,000 population (2008): 37.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 11.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 26.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 5.25.

Marriage/divorce rates per 1,000 population: n.a./n.a.

Life expectancy at birth (2008): male 55.1 years; female 58.1 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 682; cardiovascular diseases 150; injuries and accidents 118; malignant neoplasms (cancers) 62; cerebrovascular diseases 52.

National economy

Budget (2008). Revenue: FG 3,854,400,000,000 (tax revenue 81.9%, of which taxes on domestic production and trade 29.8%, mining sector revenue 22.0%, taxes on international trade 18.5%; nontax revenue 5.4%; grants 12.7%). Expenditures: FG 3,735,600,000,000 (current expenditure 65.2%, of which wages and salaries 23.0%, interest on debt 14.6%; capital expenditure 34.6%; net lending and restructuring 0.2%).

Public debt (external, outstanding; January 2009): U.S.\$3,527,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 1,401,592, cassava 1,122,171, oil palm fruit 883,000, plantains 436,000, peanuts (groundnuts) 315,116, sugarcane 283,000, fonio 243,361, citrus fruits 218,000, sweet potatoes 215,430, mangoes 165,000, bananas 160,000, pineapples 108,000, coffee 18,600, cacao 15,000; livestock (number of live animals) 4,180,965 cattle, 1,590,400 goats, 1,330,600 sheep, 17,830,000 chickens; roundwood 12,442,200 cu m, of which fuelwood 95%; fisheries production 100,000 (from aquaculture, none). Mining and quarrying (2008–09): bauxite 16,865,960; gold 508,980 troy oz; diamonds 459,370 carats. Manufacturing (2008–09): cement 292,130; flour 21,630; paints 1,340. Energy production (consumption): electricity (kW-hr; 2008–09) 683,091,000 ([2006] 836,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (385,000); natural gas (cu m; 2008–09) 84,460 ([2006] none).

Household income and expenditure (1994–95). Average household size (2004) 6.6; average annual household income³ FG 1,905,899 (U.S.\$1,952); sources of income³: agriculture 49.3%, self-employment 22.2%, wages and salaries 15.7%; expenditure³: food 50.0%; housing 14.0%; health 12.3%; transportation and communications 8.4%; clothing 6.3%.

Population economically active (2007): total 4,500,000; activity rate of total population (2003) 49.0% (participation rates: ages 15 and over, 85.0%; female 47.2%; unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	57.4	64.8	76.1	100.0	134.7	165.5	197.4

Gross national income (GNI; 2007): U.S.\$3,722,000,000 (U.S.\$400 per capita); purchasing power parity GNI (U.S.\$1,120 per capita).

Structure of gross domestic product and labour force				
	2008		1996	
	in value FG '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	4,738.6	22.7	2,433,480	74.2
Mining	4,473.0	21.4	34,975	1.1
Manufacturing	1,329.6	6.4	90,885	2.8
Construction	2,054.1	9.8	60,526	1.9
Public utilities	77.0	0.4	4,690	0.1
Transp. and commun.	504.5	2.4	77,070	2.4
Trade, hotels	3,263.1	15.6	373,709	11.4
Finance, real estate	1,175.3	5.6	3,440	0.1
Pub. admin., defense	1,518.7	7.3	63,192	1.9
Services	...	...	132,045	4.0
Other	1,759.1 ⁴	8.4 ⁴	4,822	0.1
TOTAL	20,893.0	100.0	3,278,834	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 0.2; remittances (2008) 151; foreign direct investment (2005–07 avg.) 108; official development assistance (2007) 224. Disbursements for (U.S.\$'000,000): tourism (2007) 29; remittances (2008) 119.

Land use as % of total land area (2007): in temporary crops 9.0%, in permanent crops 2.7%, in pasture 43.5%, forest area 27.1%.

Foreign trade

Balance of trade (current prices)						
	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	+160.9	+161.3	+200.3	+27.3	+86.5	+69.1
% of total	12.5%	12.8%	16.0%	1.9%	5.4%	3.5%

Imports (2006): U.S.\$942,000,000 (machinery and apparatus 33.7%; refined petroleum products 23.7%; food and food products 17.5%). **Major import sources:** China 8.6%; France 8.0%; Belgium 4.4%; Côte d'Ivoire 3.5%; India 3.2%; U.S. 3.2%; U.K. 2.9%.

Exports (2006): U.S.\$1,011,100,000 (bauxite 40.0%; gold 31.6%; alumina 14.0%; diamonds 4.2%; fish 4.2%; coffee 3.1%). **Major export destinations:** Russia 11.6%; Ukraine 9.6%; Spain 9.0%; South Korea 8.8%; U.S. 7.7%; France 7.7%.

Transport and communications

Transport. Railroads (2008): route length (mostly for bauxite transport) 736 mi, 1,185 km; passenger-km, n.a.⁵; metric ton-km cargo (1993) 710,000,000. Roads (2003): total length 44,348 km (paved 10%). Vehicles (2003): passenger cars 47,524; trucks and buses 26,467. Air transport (1999): passenger-km 94,000,000; metric ton-km cargo 10,000,000.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2004	140	16	PCs	2006	47
Telephones				Dailies	2007	25 ⁶
Cellular	2008	2,600 ⁷	264 ⁷	Internet users	2008	90
Landline	2008	50	5.1	Broadband	2008	—

Education and health

Educational attainment of those age 25 and over having attended school (1999)⁸: none or unknown 81.4%; primary 7.8%; secondary 6.8%; higher 4.0%. **Literacy** (2006): percentage of total population age 15 and over literate 29.5%; males literate 42.6%; females literate 18.1%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12) ⁹	29,049	1,317,791	45.4	74
Secondary/Voc. (age 13–19)	10,465 ¹⁰	482,825	32.9 ¹⁰	28
Tertiary	1,439	42,711	29.7	5 (age 20–24)

Health: physicians (2006) 689 (1 per 13,660 persons); hospital beds (2005) 2,766 (1 per 3,333 persons); infant mortality rate per 1,000 live births (2008) 67.4; undernourished population (2002–04) 2,000,000 (24% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): 12,300 (army 69.1%, navy 3.3%, air force 6.5%, gendarmerie 8.1%, republican guard 13.0%). **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$5.

¹Constitution suspended from Dec. 22/23, 2008. ²Significantly influenced by traditional beliefs and rituals. ³Based on the national Enquête Intégrale sur les Conditions de Vie des Ménages avec Module Budget et Consommation, comprising 4,416 households. ⁴Indirect taxes and taxes on products less subsidies. ⁵Passenger service has been limited and irregular since the late 1980s. ⁶Circulation of daily newspapers, which are subject to rigorous government censorship. ⁷Subscribers. ⁸Based on the national Enquête Démographique et de Santé, comprising 5,090 households. ⁹2006–07. ¹⁰2003–04.

Internet resources for further information:

- National Statistics Directorate
<http://www.stat-guinee.org>
- Banque Centrale de la République de Guinée
<http://www.bcr-guinee.org>

Guinea-Bissau

Official name: República da Guiné-Bissau (Republic of Guinea-Bissau).

Form of government: republic¹ with one legislative house (National People's Assembly [102²]).

Head of state and government: President assisted by the Prime Minister.

Capital: Bissau.

Official language: Portuguese.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFAF 458.60; 1 £ = CFAF 744.12.



Area and population		area		population
Regions	Chief towns	sq mi	sq km	2009 census ³
Bafatá	Bafatá	2,309	5,981	225,516
Biombo	Quinhámel	324	840	94,869
Bolama/Bijagós	Bolama	1,013	2,624	33,929
Cacheu	Cacheu	1,998	5,175	199,674
Gabú	Gabú	3,533	9,150	214,520
Oio	Bissorã	2,086	5,403	226,263
Quinara	Fulacunda	1,212	3,138	65,946
Tombali	Catió	1,443	3,736	102,482
Autonomous sector				
Bissau	—	30	78	384,960
TOTAL		13,948⁴	36,125⁴	1,548,159

Demography

Population (2009): 1,534,000⁵.

Density (2009)⁶: persons per sq mi 141.3, persons per sq km 54.5.

Urban-rural (2005): urban 29.6%; rural 70.4%.

Sex distribution (2009): male 48.82%; female 51.18%.

Age breakdown (2005): under 15, 41.6%; 15–29, 28.1%; 30–44, 16.1%; 45–59, 9.4%; 60–74, 4.1%; 75 and over, 0.7%.

Population projection: (2020) 1,893,000; (2030) 2,231,000.

Doubling time: 33 years.

Ethnic composition (2000): Balante 25.0%; Fulani (locally Fulakunda) 17.1%; Mandyako 12.0%; Malinke 10.0%; Guinean mestiço (Portuguese-black) 9.2%; Pepel 6.3%; nonindigenous Cape Verdean mulatto 1.0%; other 19.4%.

Religious affiliation (2005): traditional beliefs c. 49%; Muslim c. 42%; Christian/other c. 9%.

Major cities (2004): Bissau 305,700; Bafatá 15,000; Cacheu 14,000; Gabú 10,000.

Vital statistics

Birth rate per 1,000 population (2005): 37.6 (world avg. 20.3).

Death rate per 1,000 population (2005): 16.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2005): 20.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 4.93.

Marriage/divorce rates per 1,000 population: n.a./n.a.

Life expectancy at birth (2005): male 44.8 years; female 48.5 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 165, HIV/AIDS 126, accidents, poisoning, and violence 114, malignant neoplasms (cancers) 66, chronic respiratory diseases 41.

National economy

Budget (2007). Revenue: CFAF 53,800,000,000 (grants 50.6%; tax revenue 34.9%; nontax revenue 14.5%). Expenditures: CFAF 73,700,000,000 (current expenditures 66.9%; capital expenditures 33.1%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 116,000, rice 88,700, cashew nuts 81,000, oil palm fruit 80,000, millet 50,000, coconuts 45,500, plantains 40,000, peanuts (groundnuts) 21,000, pork 12,200, seed cotton 5,500, cattle meat 5,450; livestock (number of live animals) 549,800 cattle, 390,500 pigs; roundwood 592,000 cu m, of which fuelwood 71%; fisheries production 6,200 (from aquaculture, none). Mining and quarrying: small-scale production of clays, limestone, and granite. Manufacturing (2003): processed wood 11,000; bakery products 7,900; wood products 4,400; dried and smoked fish 3,800; soap 2,400; vegetable oils 37,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2006) 66,000,000 (66,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (91,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 2.8; remittances (2008) 30; foreign direct investment (2005–07 avg.) 11; official development assistance (2007) 123. Disbursements for (U.S.\$'000,000): tourism (2006) 16; remittances (2008) 5.

Population economically active (2006)⁷: total 618,000; activity rate of total population 37.5% (participation rates: ages 15–64, 73.0%; female 38.8%; unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	99.4	95.9	96.8	100.0	102.0	106.7	117.8

Public debt (external, outstanding; 2007): U.S.\$730,000,000.

Household income and expenditure. Average household size (1996) 6.9; income per household: n.a.; sources of income: n.a.; expenditure (2001–02)⁸: 9: food and nonalcoholic beverages 59.7%, housing and energy 13.6%, clothing and

footwear 7.6%, transport and communications 6.5%, household furnishings 4.4%.

Gross national income (GNI; 2008): U.S.\$386,000,000¹⁰ (U.S.\$250 per capita); purchasing power parity GNI (U.S.\$530 per capita).

Structure of gross domestic product and labour force

	2007		1995	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	209.9	58.8	373,000	76.0
Mining				
Manufacturing	31.7	8.9	20,000	4.1
Public utilities				
Construction	10.8	3.0		
Transportation and communications	9.9	2.8	98,000	19.9
Trade	60.1	16.8		
Finance, services	30.7	8.6		
Pub. admin., defense	4.1	1.1		
Other				
TOTAL	357.2	100.0	491,000	100.0

Land use as % of total land area (2007): in temporary crops 10.7%, in permanent crops 8.9%, in pasture 38.4%, forest area 73.0%¹¹.

Foreign trade¹²

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	−4.0	−0.6	−5.1	−5.5	−19.0	−51.0
% of total	3.6%	0.5%	9.3%	4.2%	8.1%	23.1%

Imports (2007): U.S.\$136,000,000 (agricultural products 55.1%, of which refined sugar 12.5%, cereals 11.1%, beverages 7.9%; remainder [significantly machinery and equipment and petroleum products] 44.9%). **Major import sources** (2008): Portugal 25%; Senegal 17%; Pakistan 5%; France 5%; Cuba 4%.

Exports (2007): U.S.\$85,000,000 (cashews 64.3%; refined sugar 11.2%). **Major export destinations** (2008): India 75%; Nigeria 21%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 1,710 mi, 2,755 km (paved 28%). Vehicles (2002): passenger cars, trucks, and buses 1,985. Air transport (2003): passenger arrivals 17,834, passenger departures 18,528; cargo unloaded, n.a.; cargo loaded, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	47	36	PCs	2007	2.9	2.0
Telephones				Dailies	2007	—	—
Cellular	2008	500 ¹³	333 ¹³	Internet users	2008	37	25
Landline	2008	4.6	3.1	Broadband	2008	—	—

Education and health

Educational attainment: n.a. **Literacy** (2007): total population age 15 and over literate 64.6%; males literate 75.1%; females literate 54.4%.

Education (2000–01)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	3,518	155,033	44.1	45
Secondary/Voc. (age 13–17)	1,783 ¹⁴	26,543	14.4 ¹⁴	9
Tertiary	32	473	14.8	¹⁵ (age 18–22)

Health (2005): physicians 188 (1 per 7,522 persons); hospital beds 1,686 (1 per 839 persons); infant mortality rate per 1,000 live births 107.2; undernourished population (2002–04) 600,000 (39% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): c. 6,500 (army c. 62%, navy c. 5%, air force c. 2%, gendarmerie c. 31%). **Military expenditure as percent of GDP** (2007): 4.2%; per capita expenditure U.S.\$10.

¹Legal ambiguity persisted in November 2009. A constitution adopted by the National Assembly in 2001 had been neither promulgated nor vetoed by the President.

²Includes 2 unfilled seats reserved for citizens of Guinea-Bissau residing abroad.

³Preliminary. ⁴Includes water area of about 3,089 sq mi (8,000 sq km). ⁵Per the U.S. Bureau of the Census (July 2007 update). ⁶Based on land area of 10,859 sq mi (28,125 sq km). ⁷ILO estimate. ⁸Bissau only. ⁹Weights of consumer price index components.

¹⁰Formal economy only; in spring 2009 most of Guinea-Bissau's income was derived from trafficking South American cocaine into Europe. ¹¹Forest area overlaps with other categories. ¹²Per FAO. ¹³Subscribers. ¹⁴1999–2000. ¹⁵Less than 0.5%.

Internet resources for further information:

- **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>
- **National Institute of Statistics and Census**
<http://www.stat-guineebissau.com>

Guyana

Official name: Co-operative Republic of Guyana.

Form of government: unitary multiparty republic with one legislative house (National Assembly [65¹]).

Head of state and government: President.

Capital: Georgetown.

Official language: English.

Official religion: none.

Monetary unit: Guyanese dollar (G\$); valuation (Sept. 1, 2009) 1 U.S.\$ = G\$203.49; 1 £ = G\$330.18.



Area and population

		area		population
		sq mi	sq km	2002 census
Administrative regions	Capitals			
Region 1 (Barima-Waini)	Mabaruma	7,853	20,339	24,275
Region 2 (Pomeroon-Supenaam)	Anna Regina	2,392	6,195	49,253
Region 3 (Essequibo Islands-West Demerara)	Vreed en Hoop	1,450	3,755	103,061
Region 4 (Demerara-Mahaica)	Paradise	862	2,232	310,320
Region 5 (Mahaica-Berbice)	Fort Wellington	1,618	4,190	52,428
Region 6 (East Berbice-Corentyne)	New Amsterdam	13,990	36,234	123,695
Region 7 (Cuyuni-Mazaruni)	Bartica	18,229	47,213	17,597
Region 8 (Potaro-Siparuni)	Mahdia	7,742	20,051	10,095
Region 9 (Upper Takutu-Upper Essequibo)	Lethem	22,297	57,750	19,387
Region 10 (Upper Demerara-Berbice)	Linden	6,579	17,040	41,112
TOTAL		83,012²	214,999²	751,223

Demography

Population (2009): 769,000.

Density (2009)³: persons per sq mi 10.1, persons per sq km 3.9.

Urban-rural (2005): urban 38.5%; rural 61.5%.

Sex distribution (2008): male 50.06%; female 49.94%.

Age breakdown (2005): under 15, 26.5%; 15–29, 29.7%; 30–44, 23.0%; 45–59, 13.3%; 60–74, 5.6%; 75 and over, 1.9%.

Population projection: (2020) 768,000; (2030) 734,000.

Doubling time: 67 years.

Ethnic composition (2002): East Indian 43.5%; black 30.2%; mixed race 16.7%; Amerindian 9.2%; other 0.4%.

Religious affiliation (2002): Christian 57.3%, of which Protestant/independent Christian 48.2% (including Anglican 6.9%), Roman Catholic 8.0%, Jehovah's Witness 1.1%; Hindu 28.4%; Muslim 7.2%; Rastafarian 0.5%; nonreligious 4.3%; other/unknown 2.3%.

Major urban areas (2006): Georgetown 236,900; Linden 44,900; New Amsterdam 35,700; Corriverton 12,700; Bartica 11,300.

Vital statistics

Birth rate per 1,000 population (2008): 18.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 10.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.60.

Marriage/divorce rates per 1,000 population (2006): 6.1/n.a.

Life expectancy at birth (2005): male 62.9 years; female 68.3 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 194.2; homicide/violence/suicide 59.6; diabetes mellitus 58.0; malignant neoplasms (cancers) 48.6; accidents 39.6; HIV/AIDS-related 39.2.

Adult population (ages 15–49) **living with HIV** (2007): 2.5%⁴ (world avg. 0.8%).

National economy

Budget (2008): Revenue: G\$99,513,000,000 (current revenue 82.9%, of which VAT 24.1%, company income tax 18.7%, excise tax 13.2%, personal income tax 12.7%; grants 13.7%; other 3.4%). Expenditures: G\$105,838,000,000 (current expenditure 59.5%; development expenditure 40.5%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 3,250,000, rice 475,000, coconuts 45,000, cassava (manioc) 29,000, plantains 17,000, bananas 17,000, mangoes 12,000, oranges 6,000, pineapples 4,500; livestock (number of live animals) 130,000 sheep, 110,000 cattle, 21,500,000 chickens; roundwood 1,381,900 cu m, of which fuelwood 62%; fisheries production 48,100 (from aquaculture 1%), of which shrimp or prawns (2006) 19,860. Mining and quarrying (2008): bauxite 1,995,000; gold 8,131 kg; diamonds 169,000 carats. Manufacturing (2008): flour 35,700; margarine 1,528; rum 142,000 hectolitres; beer and stout 84,000 hectolitres; soft drinks 3,966,000 cases; pharmaceuticals 20,400,000 tablets. Energy production (consumption): electricity (kW-hr; 2006) 867,000,000 (867,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (491,000); natural gas, none (none).

Population economically active (2006): total 279,100; activity rate of total population c. 37% (participation rates: ages 15–65, c. 60%; female [2002] 34.1%; unemployed [2002] 11.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	84.3	89.4	93.5	100.0	106.6	119.7	129.4

Gross national income (GNI; 2008): U.S.\$1,081,000,000 (U.S.\$1,420 per capita); purchasing power parity GNI (U.S.\$2,510 per capita).

Structure of gross domestic product and labour force

	2006		2002	
	in value G\$'000,000	% of total value	labour force	% of labour force
Sugar	20,457	11.3	51,200	18.8
Other agriculture	18,636	10.3		
Fishing, forestry	13,744	7.6		
Mining	14,133	7.8	9,500	3.5
Manufacturing	5,467	3.0	30,600	11.3
Public utilities			2,300	0.8
Construction	9,677	5.4	16,200	6.0
Transp. and commun.	17,237	9.6	17,000	6.3
Trade	7,961	4.4	43,500	16.0
Finance, real estate	13,327	7.4	10,500	3.9
Pub. admin., defense	27,341	15.2	15,100	5.6
Services	3,219	1.8	34,600	12.7
Other	29,084 ⁵	16.1 ⁵	41,300 ⁶	15.2 ⁶
TOTAL	180,282⁷	100.0⁷	271,800	100.0⁷

Public debt (external, outstanding; 2008): U.S.\$833,000,000.

Household income and expenditure. Average household size (2002) 4.1.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 50; remittances (2008) 278; foreign direct investment (2005–07 avg.) 110; official development assistance (2007) 124. Disbursements for (U.S.\$'000,000): tourism (2007) 58; remittances (2008) 61.

Land use as % of total land area (2007): in temporary crops 2.1%, in permanent crops 0.2%, in pasture 6.2%, forest area 76.7%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007
U.S.\$'000,000	–84.7	–92.8	–239.4	–325.5	–244.1
% of total	9.1%	7.9%	18.2%	24.7%	13.5%

Imports (2007): U.S.\$1,028,800,000 (refined petroleum 22.9%, machinery and apparatus 20.2%, food 11.3%, chemicals and chemical products 9.8%). **Major import sources:** Trinidad and Tobago 25.1%; U.S. 25.1%; China 8.5%; U.K. 6.1%; Netherlands Antilles 3.9%.

Exports (2007): U.S.\$784,700,000 (gold 20.2%, raw sugar 19.2%, bauxite 12.2%, rice 9.6%, sawn wood 5.0%, shrimp 4.7%, diamonds 4.2%). **Major export destinations:** Canada 21.6%; U.K. 15.9%; U.S. 14.4%; Barbados 5.9%; Netherlands 5.6%.

Transport and communications

Transport. Railroads (2008): none. Roads (2000): total length 4,952 mi, 7,970 km (paved 7%). Vehicles (2001): passenger cars 61,300; trucks and buses 15,500. Air transport (2001)⁹: passenger-mi 109,000,000, passenger-km 174,800,000; short ton-mi cargo 1,015,000, metric ton-km cargo 1,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	125	169	PCs	2005	29	39
Telephones				Dailies	2007	32 ¹⁰	42 ¹⁰
Cellular	2005	281 ¹¹	375 ¹¹	Internet users	2008	205	269
Landline	2008	125	164	Broadband	2005	2.0 ¹¹	2.6 ¹¹

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal schooling 3.0%; primary education 26.0%; secondary 62.1%; post-secondary 3.7%; higher 4.8%; other 0.4%. **Literacy** (2005): total population age 15 and over literate 99.0%; males literate 99.2%; females literate 98.7%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	4,164 ¹²	110,503	28.0 ¹²	...
Secondary/Voc. (age 12–16)	3,927	70,848	18.0	...
Tertiary	512	7,370	14.4	12 (age 17–21)

Health: physicians (2005) 323 (1 per 2,325 persons); hospital beds (2004–05) 1,887 (1 per 401 persons); infant mortality rate per 1,000 live births (2005) 33.3; undernourished population (2002–04) 60,000 (8% of total population based on the consumption of a minimum daily requirement of 1,880 calories).

Military

Total active duty personnel (November 2008): 1,100 (army 81.8%, navy 9.1%, air force 9.1%). **Military expenditure as percentage of GDP** (2004): 1.8%; per capita expenditure U.S.\$19.

¹Excludes 3 nonelected ministers, one nonelected parliamentary secretary, and the speaker. ²Includes inland water area equaling c. 7,000 sq mi (c. 18,000 sq km). ³Based on land area only. ⁴Statistically derived midpoint within range. ⁵Indirect taxes less subsidies. ⁶Includes 32,100 unemployed. ⁷Detail does not add to total given because of rounding. ⁸Imports are c.i.f.; exports f.o.b. ⁹Scheduled traffic only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2004–05.

Internet resources for further information:

- Bank of Guyana <http://www.bankofguyana.org.gy>
- Bureau of Statistics <http://www.statisticsguyana.gov.gy>

Haiti

Official name: Repiblik d' Ayiti (Haitian Creole); République d'Haïti (French) (Republic of Haiti).

Form of government: republic with two legislative houses (Senate [30]; Chamber of Deputies [99]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Port-au-Prince.

Official languages: Haitian Creole; French.

Official religions: 1.

Monetary unit: gourde (G); valuation (Sept. 1, 2009) 1 U.S.\$ = G 39.75; 1 £ = G 64.50.



Area and population

Departements	Capitals	area		population
		sq mi	sq km	2006 estimate
Artibonite	Gonaïves	1,924	4,984	1,410,385
Centre	Hinche	1,419	3,675	622,420
Grand'Anse	Jérémie	807	2,091	356,900
Nippes ²	Miragoâne	471	1,219	281,410
Nord	Cap-Haïtien	813	2,106	868,755
Nord-Est	Fort-Liberté	697	1,805	330,609
Nord-Ouest	Port-de-Paix	840	2,176	578,583
Ouest	Port-au-Prince	1,864	4,827	3,418,666
Sud	Les Cayes	1,079	2,794	640,838
Sud-Est	Jacmel	781	2,023	504,163
TOTAL		10,695³	27,700³	9,012,729

Demography

Population (2009): 9,521,000.

Density (2009): persons per sq mi 890.2, persons per sq km 343.7.

Urban-rural (2007): urban 40.1%; rural 59.9%.

Sex distribution (2005): male 49.29%; female 50.71%.

Age breakdown (2005): under 15, 42.6%; 15–29, 30.5%; 30–44, 14.2%; 45–59, 7.5%; 60–74, 4.2%; 75 and over, 1.0%.

Population projection: (2020) 11,601,000; (2030) 13,570,000.

Ethnic composition (2000): black 94.2%; mulatto 5.4%; other 0.4%.

Religious affiliation (2003): Roman Catholic 54.7%⁴; Protestant/independent Christian 28.5%, of which Baptist 15.4%, Pentecostal 7.9%; voodoo 2.1%; nonreligious 10.2%; other/unknown 4.5%.

Major cities (2003): Port-au-Prince 703,023 (metropolitan area 1,977,036); Carrefour (1999) 336,222⁵; Delmas (1999) 284,079⁵; Cap-Haïtien 111,094; Gonaïves 104,825.

Vital statistics

Birth rate per 1,000 population (2007): 27.9 (world avg. 20.3).

Death rate per 1,000 population (2007): 9.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 18.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.50.

Life expectancy at birth (2007): male 59.1 years; female 62.8 years.

Major causes of death per 100,000 population (2002): communicable diseases 351.2, diseases of the circulatory system 227.9, accidents and violence 59.3, malignant neoplasms (cancers) 55.3, diabetes mellitus 31.1.

Adult population (ages 15–49) living with HIV (2007): 2.2%⁶ (world avg. 0.8%).

National economy

Budget (2007). Revenue: G 25,323,750,000 (customs duties 53.1%; sales tax 27.5%; individual taxes on income and profits 17.8%). Expenditures: G 29,534,070,000 (current expenditure 77.1%, of which wages 33.9%, transfers 4.2%, interest on public debt 2.3%; capital expenditure 22.9%).

Gross national income (GNI; 2008): U.S.\$6,464,000,000 (U.S.\$660 per capita); purchasing power parity GNI (U.S.\$1,180 per capita).

Structure of gross domestic product and labour force

	2007–08		1990	
	in value G '000,000 ⁷	% of total value	labour force ⁸	% of labour force ⁸
Agriculture, forestry	3,204	23.4	1,535,444	57.3
Mining	16	0.1	24,012	0.9
Manufacturing	1,029	7.5	151,387	5.6
Construction	1,085	7.9	28,001	1.0
Public utilities	52	0.4	2,577	0.1
Transp. and commun.	967	7.1	20,691	0.8
Trade, restaurants	3,868	28.2	352,970	13.2
Finance, real estate	1,653	12.1	5,057	0.2
Services	1,514	11.0	155,347	5.8
Pub. admin., defense	313 ⁹	2.3 ⁹	403,654 ¹⁰	15.1 ¹⁰
Other	13,701	100.0	2,679,140	100.0
TOTAL				

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,000,000, cassava (manioc) 330,000, bananas 293,000, plantains 280,000, mangoes 260,000, yams 198,000, corn (maize) 190,000, sweet potatoes 172,000, rice 100,000, avocados 43,000, coffee 22,000, cacao 4,500; livestock (number of live animals) 1,900,000 goats, 1,450,000 cattle, 1,000,000 pigs, 500,000 horses; roundwood 2,255,100 cu m, of which fuelwood 89%; fisheries production 10,000 (from aquaculture, none). Mining and quarrying (2007): sand 2,000,000 cu m. Manufacturing (value added in G '000,000; 2002): food and beverages 484.5; textiles, wearing apparel, and footwear 195.7; chemical and rubber products 63.8; tobacco products 38.2. Energy pro-

duction (consumption): electricity (kW-hr; 2007) 241,990,000 (215,380,000¹¹); crude petroleum, none (none); petroleum products (metric tons; 2006) none (541,000).

Population economically active (2006): total 3,539,000¹²; activity rate of total population 37.5%¹² (participation rates: ages 15–64, 60.4%¹²; female 33.3%¹²; unemployed [2003] 32.7%¹³).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	50.5	70.4	86.4	100.0	113.1	122.7	141.8
Daily earnings index ¹⁴	51.4	100.0	100.0	100.0	100.0	...	...

Public debt (external, outstanding; December 2007): U.S.\$1,478,000,000.

Household income and expenditure. Average household size (2003) 4.6; sources of income (2001): self-employment 37%, transfers 25%, wages 20%, self-consumption 11%; expenditure (1996)¹⁵: food, beverages, and tobacco 49.4%, housing and energy 9.1%, transportation 8.7%, clothing and footwear 8.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 140; remittances (2008) 1,300; foreign direct investment (2005–07 avg.) 87; official development assistance (2007) 701. Disbursements for (U.S.\$'000,000): tourism (2007) 55; remittances (2008) 96.

Land use as % of total land area (2007): in temporary crops 32.7%, in permanent crops 10.9%, in pasture 17.8%, forest area 3.8%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–783.6	–832.8	–849.6	–1,112.1	–1,096.0	–1,617.6
% of total	54.1%	52.4%	48.1%	52.1%	51.2%	62.3%

Imports (2008): U.S.\$2,107,750,000 (food 27.2%, mineral fuels 26.6%, machinery and transport equipment 8.2%, chemicals and chemical products 3.5%).

Major import sources (2004): U.S. 52.9%; Dominican Republic 6.0%; Japan 2.9%.

Exports (2008): U.S.\$490,200,000 (reexports to U.S. 86.7%, of which apparel or clothing accessories 85.5%; essential oils 3.7%; mangoes 2.0%; cacao 1.5%; rock lobster 1.1%). **Major export destinations** (2004): U.S. 81.8%; Dominican Republic 7.2%; Canada 4.2%.

Transport and communications

Transport. Railroad: none. Roads (2000): total length 2,585 mi, 4,160 km (paved 24%). Vehicles (1999): passenger cars 93,000; trucks and buses 61,600. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	60	7.2	PCs	2007	499	52
Telephones				Dailies	2007	23 ¹⁶	4.6 ¹⁶
Cellular	2008	3,200 ¹⁷	328 ¹⁷	Internet users	2007	1,000	104
Landline	2006	150	17	Broadband	2007	...	...

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling or unknown 46.1%; incomplete primary education 28.9%; primary 5.3%; incomplete secondary 15.6%; secondary 1.8%; higher 2.3%. **Literacy** (2007): total population age 15 and over literate 62.1%; males literate 60.1%; females literate 64.0%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	...	...	...
Secondary/Voc. (age 12–18)	...	...	...	...
Tertiary	920 ¹⁸	12,482 ¹⁸	13.6 ¹⁸	... (age 19–23)

Health: physicians (1999) 1,910 (1 per 4,000 persons); hospital beds (2000) 6,431 (1 per 1,234 persons); infant mortality rate per 1,000 live births (2007) 71.0; undernourished population (2003–05) 5,300,000 (58% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel: 19, 20.

¹Roman Catholicism has special recognition per concordat with the Vatican; Vodou (Voodoo) became officially sanctioned per governmental decree of April 2003. ²Formally created from eastern Grand'Anse in late 2003. ³Approximate figure. Includes four offshore islands totaling about 382 sq mi (989 sq km) in area; excludes the 2.1 sq mi (5.4 sq km) Navassa (Navase) Island, which is administered by the U.S. but also claimed by Haiti. ⁴About 80% of all Roman Catholics also practice voodoo. ⁵Within Port-au-Prince metropolitan area. ⁶Statistically derived midpoint within range. ⁷At prices of 1986–87. ⁸The 2004 labour force equaled 3,710,000, of which agriculture sector equaled 2,232,000. ⁹Import duties less imputed bank service charges. ¹⁰Includes 63,975 not adequately defined and 339,679 officially unemployed. ¹¹Excluding December. ¹²Estimate of the ILO Employment Trends Unit. ¹³Census figure; unofficial estimate is c. 70%. ¹⁴Standard minimum wage rate. ¹⁵Weights of consumer price index components. ¹⁶Circulation of daily newspapers. ¹⁷Subscribers. ¹⁸Combined figures for the State University and Quisqueya University. ¹⁹The Haitian army was disbanded in 1995. The national police force had 2,000 personnel in late 2008. ²⁰UN peacekeepers (March 2009): 7,044 troops, 2,011 police.

Internet resources for further information:

- Embassy of Haiti (Washington, D.C.) <http://www.haiti.org>
- Banque de la République d'Haïti <http://www.brh.net>

Honduras

Official name: República de Honduras (Republic of Honduras).

Form of government: multiparty republic¹ with one legislative house (National Congress [128]).

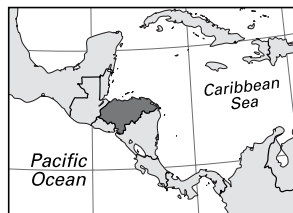
Head of state and government: President.

Capital: Tegucigalpa.

Official language: Spanish.

Official religion: none.

Monetary unit: lempira (L); valuation (Sept. 1, 2009) 1 U.S.\$ = L 18.90; 1 £ = L 30.66.



Area and population		area		population
Departments	Administrative centres	sq mi	sq km	2001 census
Atlántida	La Ceiba	1,688	4,372	344,099
Choluteca	Choluteca	1,515	3,923	390,805
Colón	Trujillo	1,683	4,360	246,708
Comayagua	Comayagua	3,185	8,249	352,881
Copán	Santa Rosa de Copán	1,978	5,124	288,766
Cortés	San Pedro Sula	1,252	3,242	1,202,510
El Paraíso	Yuscarán	2,892	7,489	350,054
Francisco Morazán	Tegucigalpa	3,328	8,619	1,180,676
Gracias a Dios	Puerto Lempira	6,563	16,997	67,384
Intibucá	La Esperanza	1,206	3,123	179,862
Islas de la Bahía	Roatán	91	236	38,073
La Paz	La Paz	975	2,525	156,560
Lempira	Gracias	1,632	4,228	250,067
Ocatepeque	Nueva Ocatepeque	629	1,630	108,029
Olancho	Juticalpa	9,230	23,905	419,561
Santa Bárbara	Santa Bárbara	1,940	5,024	342,054
Valle	Nacaome	643	1,665	151,841
Yoro	Yoro	3,004	7,781	465,414
TOTAL		43,433²	112,492	6,535,344

Demography

Population (2009): 7,466,000.

Density (2009): persons per sq mi 171.9, persons per sq km 66.4.

Urban-rural (2008): urban 47.9%; rural 52.1%.

Sex distribution (2008): male 49.95%; female 50.05%.

Age breakdown (2005): under 15, 40.5%; 15–29, 29.2%; 30–44, 16.7%; 45–59, 8.6%; 60–74, 3.9%; 75 and over, 1.1%.

Population projection: (2020) 9,136,000; (2030) 10,492,000.

Ethnic composition (2000): mestizo 86.6%; Amerindian 5.5%; black (including Black Carib) 4.3%; white 2.3%; other 1.3%.

Religious affiliation (2002): Roman Catholic c. 63%; Evangelical Protestant c. 23%; other c. 14%.

Major cities (2008): Tegucigalpa 967,200; San Pedro Sula 623,100; Choloma 212,400; La Ceiba 167,300; El Progreso 118,200.

Vital statistics

Birth rate per 1,000 population (2008): 27.4 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.6 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 3.20.

Marriage/divorce rates per 1,000 population (2000–02): 1.0/n.a.

Life expectancy at birth (2008): male 67.2 years; female 73.9 years.

Major causes of death (percent of total; 2000–02): diseases of the circulatory system 23.6%; accidents and violence 21.3%; malignant neoplasms (cancers) 12.2%; diseases of the respiratory system 10.9%.

National economy

Budget (2008). Revenue: L 52,343,000,000 (tax revenue 80.5%; nontax revenue 8.5%; grants 11.0%). Expenditures: L 58,650,000,000 (current expenditure 78.7%, of which wages and salaries 41.8%; capital expenditure 21.3%).

Public debt (external, outstanding; January 2009): U.S.\$2,900,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,000,000, oil palm fruit 1,250,000, bananas 910,000, corn (maize) 555,000, plantains 290,000, oranges 290,000, coffee 200,000, cantaloupes 195,000, pineapples 154,000; livestock (number of live animals) 2,510,000 cattle, 490,000 pigs, 19,000,000 chickens; roundwood 9,463,200 cu m, of which fuelwood 91%; fisheries production 67,567 (from aquaculture 81%). Mining and quarrying (2007): gypsum (2005) 60,000; zinc (metal content) 38,000; silver 50,000 kg; gold 4,100 kg. Manufacturing (value added in L '000,000; 2008): food, beverages, and tobacco 21,997; textiles and wearing apparel 15,624; fabricated metal products 4,905. Energy production (consumption): electricity (kW-hr; 2008) 6,589,300,000 (6,589,300,000); coal (metric tons; 2006) none (190,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (2,256,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 557; remittances (2008) 2,824; foreign direct investment (FDI; 2005–07 avg.) 697; official development assistance (2007) 464. Disbursements for (U.S.\$'000,000): tourism (2007) 306; remittances (2008) 2.0; FDI (2005–07 avg.) 1.0.

Population economically active (2006): total 2,811,800; activity rate of total population 40.0% (participation rates: ages 15 and over, 60.0%; female 34.7%; officially unemployed [2008] 3.5%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	78.9	85.0	91.9	100.0	105.5	112.9	125.8
Earnings index ³	86.3	93.7	94.5	100.0	105.1	108.0	108.2

Gross national income (GNI; 2008): U.S.\$13,026,000,000 (U.S.\$1,800 per capita); purchasing power parity GNI (U.S.\$3,870 per capita).

Structure of gross domestic product and labour force

	2008			
	in value L '000,000	% of total value	labour force	% of labour force
Agriculture	32,823	12.1	1,048,700	35.5
Mining, quarrying	2,981	1.1	7,500	0.2
Manufacturing	52,586	19.4	425,200	14.4
Construction	16,330	6.0	190,800	6.5
Public utilities	3,064	1.1	11,900	0.4
Transp. and commun.	18,493	6.8	101,100	3.4
Trade, hotels	45,078	16.7	642,900	21.8
Finance, real estate	43,560	16.1	96,900	3.3
Public admin., defense	15,330	5.7		
Services	33,231	12.3	427,700 ⁵	14.5 ⁵
Other	7,122 ⁴	2.6 ⁴		
TOTAL	270,597²	100.0²	2,952,700	100.0

Household income and expenditure (2004). Average household size (2006) 4.8; average annual income per household L 85,860 (U.S.\$4,716); sources of income: wages and salaries c. 51%, self-employment c. 34%, remittances c. 8%, other c. 7%; expenditure (December 1999)⁶: food and nonalcoholic beverages 32%, housing and energy 19%, transportation 9%, clothing 8%.

Land use as % of total land area (2007): in temporary crops 9.5%, in permanent crops 3.2%, in pasture 15.2%, forest area 38.7%.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−1,655	−2,073	−2,422	−2,610	−3,830	−5,104
% of total	37.5%	39.3%	40.7%	20.1%	25.6%	29.9%

Imports (2008): U.S.\$11,088,100,000 (mineral fuels and lubricants 18.0%; textiles and wearing apparel 17.5%; machinery and electrical equipment 15.4%; food products and live animals 11.9%; chemicals and chemical products 10.8%; fabricated metal products 7.1%; transportation equipment 5.9%). **Major import sources**⁸: U.S. 40.4%; Guatemala 8.6%; Mexico 5.5%; El Salvador 5.4%; Costa Rica 3.9%.

Exports (2008): U.S.\$5,984,200,000 (textiles and wearing apparel 49.3%; coffee 10.4%; bananas 6.4%; shrimp 2.4%; tobacco and tobacco products 2.3%).

Major export destinations⁸: U.S. 40.5%; El Salvador 9.3%; Guatemala 6.9%; Mexico 6.1%; Belgium 5.9%; Germany 5.8%.

Transport and communications

Transport. Railroads (2008): serviceable lines 47 mi (75 km); most tracks are out of use but not dismantled. Roads (2008): total length 8,848 mi, 14,239 km (paved 22%). Vehicles (2003): passenger cars 386,468; trucks and buses 113,744. Air transport (1995): passenger-km 341,000,000; metric ton-km cargo 33,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,000	143	PCs	2007	143	20
Telephones				Dailies	2007	200 ⁹	28 ⁹
Cellular	2008	6,211 ¹⁰	849 ¹⁰	Internet users	2008	659	90
Landline	2008	826	113	Broadband	2006	...	...

Education and health

Educational attainment (2005–06)¹¹. Percentage of population age 25 and over having: no formal schooling/unknown 16.7%; incomplete primary education 37.0%; complete primary 22.7%; secondary 17.6%; higher 6.0%. **Literacy** (2007): total population age 15 and over literate 83.1%; males literate 82.4%; females literate 83.7%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	46,308 ¹²	1,279,389 ¹³	27.9 ¹²	96 ¹³
Secondary/Voc. (age 12–16)	16,667	531,242 ¹³	33.3	...
Tertiary	7,170	122,874	17.1	17 (age 17–21)

Health: physicians (2006) 5,977 (1 per 1,176 persons); hospital beds (2008) 6,929 (1 per 1,056 persons); infant mortality rate (2007) 20.0; undernourished population (2002–04) 1,600,000 (23% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (November 2008): 12,000 (army 69.2%, navy 11.7%, air force 19.1%); U.S. troops (December 2008) 418. **Military expenditure as percentage of GDP** (2008): 0.7%; per capita expenditure U.S.\$13.

¹In actuality an interim regime supported by the military from June 28, 2009; presidential elections were planned for November 2009. ²Detail does not add to total given because of rounding. ³Minimum wage. ⁴Taxes and import duties less imputed bank service charges. ⁵Includes official unemployment figures; unofficial estimates of unemployment are significantly higher. ⁶Weights of consumer price index components. ⁷Import figures are f.o.b. in balance of trade for the years 2003–05 and c.i.f. in commodities and trading partners. ⁸Trading partners data exclude commodities in the maquiladora segment. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹Based on the Encuesta Nacional de Demografía y Salud 2005–06. ¹²2005–06. ¹³2006–07.

Internet resources for further information:

- Banco Central de Honduras <http://www.bch.hn>
- Instituto Nacional de Estadística <http://www.ine-hn.org>

Hong Kong

Official name: Xianggang Tebie Xingzhengqu (Chinese); Hong Kong Special Administrative Region (English).

Political status: special administrative region of China with one legislative house (Legislative Council [60]).

Chief of state: President of China.

Head of government: Chief Executive.

Government offices: Central & Western District (overlaps with the historic capital area of Victoria), Hong Kong Island.

Official languages: Chinese; English.

Official religion: none.

Monetary unit: Hong Kong dollar

(HK\$); valuation (Sept. 1, 2009)

1 U.S.\$ = HK\$7.75;

1 £ = HK\$12.58.



Area and population

	area		population
	sq mi	sq km	2006 by-census
Geographic areas²			
Hong Kong Island	31	81	1,268,112
Kowloon	18	47	2,019,533
New Territories (mainland)	289	748	3,436,513
New Territories (islands ³)	88	228	137,122
marine	—	—	3,066
TOTAL	426	1,104	6,864,346

Demography

Population (2009): 7,038,000.

Density (2009): persons per sq mi 16,521, persons per sq km 6,375.

Urban-rural (2003): urban 100.0%.

Sex distribution (2008): male 47.26%; female 52.74%.

Age breakdown (2009⁴): under 15, 12.8%; 15–29, 20.4%; 30–44, 24.7%; 45–59, 24.9%; 60–74, 11.0%; 75–84, 4.6%; 85 and over, 1.6%.

Population projection: (2020) 7,730,000; (2030) 8,216,000.

Ethnic composition (2006): Chinese 95.0%; Filipino 1.6%; Indonesian 1.3%; assorted Caucasian 0.5%; Indian 0.3%; Nepalese 0.2%; other 1.1%.

Religious affiliation (2002): nonreligious/non-practitioner of religion c. 57%; participant of religious practice c. 43%, of which Protestant c. 4.5%, Roman Catholic c. 3.5%, Muslim c. 1.5%, remainder (mostly Buddhist, Taoist, or Confucianist) 33.5%.

Major built-up areas (2006): Kowloon 2,019,533; Victoria 981,714; Tuen Mun 488,249; Sha Tin 425,140; Tseung Kwan O 344,872.

Vital statistics

Birth rate per 1,000 population (2008): 11.3 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 5.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.06.

Marriage/divorce rates per 1,000 population (2007): 6.8/2.7.

Life expectancy at birth (2008): male 79.4 years; female 85.5 years.

Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) 177.6; diseases of the circulatory system 150.4; pneumonia 77.4; chronic lower respiratory diseases 30.5.

National economy

Budget (2007–08). Revenue: HK\$358,465,000,000 (earnings and profits taxes 37.3%; indirect taxes 26.9%; capital revenue 22.9%; other 12.9%). Expenditures: HK\$252,400,000,000 (education 21.3%; social welfare 13.8%; health 13.3%; police 11.1%; housing 5.7%; economic services 5.3%).

Public debt (external, outstanding; 2007⁴): U.S.\$1.673 billion, 000,000.

Gross national income (GNI; 2008): U.S.\$219,255,000,000 (U.S.\$31,420 per capita); purchasing power parity GNI (U.S.\$43,960 per capita).

Structure of gross domestic product and labour force

	2007		2008	
	in value HK\$'000,000	% of total value	labour force	% of labour force
Agriculture	895	0.1	11,003	0.3
Mining	114	—	—	—
Manufacturing	39,319	2.4	168,710	4.6
Construction	40,153	2.5	278,738	7.6
Public utilities	39,673	2.5	11,003	0.3
Transp. and commun.	141,749	8.8	385,098	10.5
Trade	417,339	25.8	1,224,978	33.4
Finance, insurance, and real estate	450,989	27.9	612,489	16.7
Pub. admin., defense, and services	265,108	16.4	975,581	26.6
Other	250,612 ⁵	15.5 ⁵	...	...
TOTAL	1,615,431⁶	100.0⁶	3,667,600	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): vegetables 18,900, fruits 1,617, eggs 3,570,000 units, cut flowers are also produced; livestock (number of live animals) 269,100 pigs, 7,273,000 chickens; roundwood, n.a.; fisheries production 158,661 (from aquaculture 3%). Quarrying (2006): stone/aggregates 6,000,000. Manufacturing (value added in HK\$'000,000; 2006): publishing and printed materials 11,954; textiles 5,580; food 5,548; transport equipment 4,459; electronic parts and components 4,004; wearing apparel 3,324; machinery and apparatus 2,677; chemicals and

chemical products 2,016. Energy production (consumption): electricity (kW-hr; 2006) 38,613,000,000 (44,982,000,000); hard coal (metric tons; 2006) none (10,878,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (3,432,000); natural gas (cu m; 2006) none (2,322,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 13,566; remittances (2008) 355; foreign direct investment (FDI; 2005–07 avg.) 46,190. Disbursements for (U.S.\$'000,000): tourism (2007) 15,086; remittances (2008) 394; FDI (2005–07 avg.) 41,789.

Population economically active (2008): total 3,648,900⁷; activity rate of total population 52.3% (participation rates: ages 15–64, 70.2%; female 46.5%; unemployed [March–May 2009] 5.3%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	101.9	99.4	98.9	100.0	101.8	103.8	108.3
Average earnings index ⁸	101.8	98.8	98.2	100.0	101.4	104.3	...

Household income and expenditure. Average household size (2008) 3.0; median annual income per household (2001) HK\$224,500 (U.S.\$28,800); sources of income: n.a.; expenditure (2001): housing and energy 22.2%, clothing and footwear 15.2%, food and nonalcoholic beverages 13.5%, household furnishings 12.6%, transportation 11.0%.

Land use as % of total land area (2000): in temporary and permanent crops 5.4%, in pasture 29.3%; overall forest area 18.0%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
HK\$'000,000,000	-63.4	-92.0	-79.3	-138.8	-180.5	-201.1
% of total	1.8%	2.2%	1.7%	2.7%	3.2%	3.4%

Imports (2008): HK\$3,025,288,000,000 (capital goods 30.2%, consumer goods 26.8%, mineral fuels and lubricants 3.7%, foodstuffs 3.2%). **Major import sources:** China 46.6%; Japan 9.8%; Singapore 6.4%; Taiwan 6.3%; U.S. 5.0%.

Exports (2008): HK\$2,824,151,000,000 (reexports 96.8%, of which capital goods 32.2%, consumer goods 30.6%; domestic exports 3.2%, of which clothing accessories and apparel 0.8%). **Major export destinations¹¹:** China 48.5%; U.S. 12.7%; Japan 4.3%; Germany 3.3%.

Transport and communications

Transport. Railroads (2003): route length 40 mi, 64 km¹²; passenger-km 4,256,000,000¹³; metric ton-km cargo, n.a. Roads (2008): total length 1,268 mi, 2,040 km (paved 100%). Vehicles (2008): passenger cars 401,000; trucks and buses 128,000. Air transport (2005)¹⁴: passenger-km 71,595,000,000; metric ton-km cargo 8,026,729,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,467	507	PCs	2007	4,751	686
Telephones				Dailies	2007	3,419 ¹⁵	494 ¹⁵
Cellular	2008	11,374 ¹⁶	1,563 ¹⁶	Internet users	2008	4,124	567
Landline	2008	4,108	564	Broadband	2008	1,948 ¹⁶	268 ¹⁶

Education and health

Educational attainment (2008). Percentage of population age 15 and over having: no formal schooling 5.4%; primary education 18.2%; secondary 46.3%; matriculation 5.4%; nondegree higher 8.2%; higher degree 16.5%. **Literacy** (2000): total population age 15 and over literate 93.5%; males literate 96.5%; females literate 90.2%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	24,468	414,501	16.9	91 ¹⁷
Secondary/Voc. (age 12–18)	30,334	540,898	17.8	79
Tertiary	...	157,858	...	34 (age 19–23)

Health (2006⁴): physicians 11,775^{18, 19} (1 per 588 persons); hospital beds 33,939 (1 per 204 persons); infant mortality rate per 1,000 live births (2008) 1.7; undernourished population, n.a.

Military

Total active duty personnel (November 2007): 7,000 troops of Chinese military (including elements of army, navy, and air force); Hong Kong residents are exempted from military service.

¹Thirty seats are directly elected by ordinary voters, and the remaining 30 are elected by special interest groups. ²The 18 districts of Hong Kong have no administrative function. District councils advise the government on local matters. ³Primarily Lantau. ⁴January 1. ⁵Includes ownership of premises and taxes on production and imports. ⁶Detail does not add to total given because of rounding. ⁷Does not include unemployed not previously employed. ⁸Manufacturing sector only. ⁹Represents grassland that may not be grazed. ¹⁰Imports are c.i.f., exports f.o.b. ¹¹Includes reexports and domestic exports. ¹²Combined length of East Rail and West Rail; West Rail was inaugurated in December 2003. ¹³East Rail only. ¹⁴Cathay Pacific and Dragonair only. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷2005–06. ¹⁸Registered personnel; all may not be present and working in the country. ¹⁹There were an additional 4,848 practitioners of traditional Chinese medicine in Hong Kong at the beginning of 2006.

Internet resources for further information:

- Census and Statistics Department <http://www.censtatd.gov.hk>
- Hong Kong Government site <http://www.info.gov.hk>

Hungary

Official name: Magyar Köztársaság (Republic of Hungary).

Form of government: unitary multi-party republic with one legislative house (National Assembly [386]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Budapest.

Official language: Hungarian.

Official religion: none.

Monetary unit: forint (Ft); valuation (Sept. 1, 2009) 1 U.S.\$ = Ft 191.28; 1 £ = Ft 310.37.



Area and population		area		population
Counties	Capitals	sq mi	sq km	2008 ¹ estimate
Bács-Kiskun	Kecskemét	3,261	8,445	533,710
Baranya	Pécs	1,710	4,430	396,633
Békés	Békéscsaba	2,174	5,631	376,657
Borsod-Abaúj-Zemplén	Miskolc	2,798	7,247	709,634
Csongrád	Szeged	1,646	4,263	424,139
Fejér	Székesfehérvár	1,683	4,359	428,572
Győr-Moson-Sopron	Győr	1,579	4,089	444,384
Hajdú-Bihar	Debrecen	2,398	6,211	543,802
Heves	Eger	1,404	3,637	316,874
Jász-Nagykun-Szolnok	Szolnok	2,155	5,582	399,200
Komárom-Esztergom	Tatabánya	875	2,265	314,649
Nógrád	Salgótarján	982	2,544	210,182
Pest	Budapest ²	2,468	6,393	1,195,020
Somogy	Kaposvár	2,331	6,036	325,024
Szabolcs-Szatmár-Bereg	Nyíregyháza	2,292	5,937	571,018
Tolna	Szekszárd	1,430	3,703	238,431
Vas	Szombathely	1,288	3,336	261,877
Veszprém	Veszprém	1,781	4,613	361,620
Zala	Zalaegerszeg	1,461	3,784	291,678
Capital city				
Budapest ²		203	525	1,702,297
TOTAL		35,919	93,030	10,045,401

Demography

Population (2009): 10,021,000.

Density (2009): persons per sq mi 279.0, persons per sq km 107.7.

Urban-rural (2004): urban 64.8%; rural 35.2%.

Sex distribution (2009¹): male 47.46%; female 52.54%.

Age breakdown (2009¹): under 15, 14.9%; 15–29, 19.8%; 30–44, 22.4%; 45–59, 20.8%; 60–74, 14.9%; 75–84, 5.7%; 85 and over, 1.5%.

Population projection: (2020) 9,873,000; (2030) 9,632,000.

Ethnic composition (2000): Hungarian 84.4%; Rom 5.3%; Ruthenian 2.9%; German 2.4%; Romanian 1.0%; Slovak 0.9%; Jewish 0.6%; other 2.5%.

Religious affiliation (2001): Roman Catholic 51.9%; Reformed 15.9%; Lutheran 3.0%; Greek Catholic 2.6%; Jewish 0.1%; nonreligious 14.5%; other/unknown 12.0%.

Major cities (2008¹): Budapest 1,702,297; Debrecen 205,084; Miskolc 171,096; Szeged 167,039; Pécs 156,664; Győr 128,808.

Vital statistics

Birth rate per 1,000 population (2008): 9.9 (world avg. 20.3); within marriage 60.5%; outside of marriage 39.5%.

Death rate per 1,000 population (2008): 13.0 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.35.

Marriage/divorce rates per 1,000 population (2008): 4.0/2.5.

Life expectancy at birth (2007): male 69.2 years; female 77.3 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 703.2; malignant neoplasms (cancers) 303.5; diseases of the digestive system 84.3; diseases of the respiratory system 64.5.

National economy

Budget (2006). Revenue: Ft 8,653,000,000,000 (social security contributions 34.6%; taxes on goods and services 34.0%; personal income taxes 13.2%). Expenditures: Ft 10,710,700,000,000 (social protection 38.0%; economic affairs 12.5%; health 11.6%; public debt 8.6%; education 8.6%; defense 3.1%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 8,400,000, wheat 3,988,177, sugar beets 1,676,000, sunflower seeds 1,043,000, grapes 543,400, apples 538,000, Hungarian red paprika (2006) 32,633; livestock (number of live animals) 3,987,000 pigs, 702,000 cattle, 2,708,000 geese; roundwood 5,640,000 cu m, of which fuelwood 51%; fisheries production 22,888 (from aquaculture 69%). Mining and quarrying (2007): bauxite 546,000. Manufacturing (value added in U.S.\$'000,000; 2005): electrical machinery and apparatus 2,436; food products/beverages 2,363; motor vehicles/parts 1,229; electronic devices and equipment 2,004; paints, soaps, and pharmaceuticals 1,475; refined petroleum 1,436. Energy production (consumption): electricity ('000,000 kW-hr; 2008) 33,586 ([2006] 43,066); hard coal ('000 metric tons; 2006) none (1,851); lignite ('000 metric tons; 2008) 9,333 ([2006] 10,184); crude petroleum ('000 barrels; 2008) 5,180 ([2006] 50,700); petroleum products ('000 metric tons; 2006) 6,184 (6,408); natural gas ('000,000 cu m; 2008) 2,691 ([2006] 14,689).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,739; remittances (2008) 2,946; foreign direct investment (FDI; 2005–07 avg.) 6,690. Disbursements for (U.S.\$'000,000): tourism (2007) 2,949; remittances (2008) 1,407; FDI (2005–07 avg.) 3,314.

Land use as % of total land area (2007): in temporary crops 47.4%, in permanent crops 2.2%, in pasture 11.5%, forest area 22.4%.

Population economically active (2008): total 4,208,600; activity rate of total population 41.9% (participation rates: ages 15–64, 61.5%; female 45.7%; unemployed [August 2008–July 2009] 8.7%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	86.4	90.4	96.6	100.0	103.9	112.1	118.9
Annual earnings index	74.7	84.7	91.9	100.0	107.8	111.0	117.7

Gross national income (GNI; 2008): U.S.\$128,581,000,000 (U.S.\$12,810 per capita); purchasing power parity GNI (U.S.\$17,790 per capita).

Structure of gross domestic product and labour force				
	2007		2008	
	in value Ft '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry	878.3	3.4	174,100	4.1
Mining	675.5	2.7	9,000	0.2
Public utilities			57,400	1.4
Manufacturing	4,770.0	18.8	870,800	20.7
Construction	1,010.2	4.0	309,500	7.4
Transp. and commun.	1,785.2	7.0	287,400	6.8
Trade, restaurants	2,955.4	11.6	742,200	17.6
Finance, real estate	4,927.9	19.4	401,300	9.5
Public administration, defense	4,792.7	18.8	288,600	6.9
Services			739,100	17.6
Other	3,624.0 ³	14.3 ³	329,200 ⁴	7.8 ⁴
TOTAL	25,419.2	100.0	4,208,600	100.0

Public debt (2008): U.S.\$107,200,000,000.

Household income and expenditure. Average household size (2005) 2.6; income per household⁵ (2001) Ft 2,898,000 (U.S.\$10,300); sources of income (2001): wages 48.3%, transfers 25.7%, self-employment 16.3%; expenditure (2007): food and nonalcoholic beverages 18.9%, housing and energy 18.7%, transportation 13.5%, culture and recreation 9.4%.

Foreign trade⁶

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−4,671	−4,780	−3,648	−2,923	−69	+1,160
% of total	5.2%	4.1%	2.8%	1.9%	0.0%	5.5%

Imports (2007): U.S.\$94,660,000,000 (electrical machinery/electronic devices 13.5%; nonelectrical machinery 12.5%; mineral fuels 9.4%; road vehicles 8.6%). **Major import sources:** Germany 26.8%; Russia 6.9%; Austria 6.1%; China 5.4%; Italy 4.5%.

Exports (2007): U.S.\$94,591,000,000 (nonelectrical machinery 15.4%, of which engines/parts 8.1%; telecommunications equipment 11.0%; road vehicles/parts 11.0%; electrical machinery 9.8%). **Major export destinations:** Germany 28.4%; Italy 5.6%; France 4.7%; Austria 4.5%; U.K. 4.5%.

Transport and communications

Transport. Railroads (2008): route length 7,269 km; passenger-km (2007) 8,751,000,000; metric ton-km cargo (2008) 9,817,000,000. Roads (2007): total length 31,183 km (paved 99%). Vehicles (2008): passenger cars 3,055,000; trucks and buses 442,000. Air transport (2007): passenger-km (2007) 4,537,000,000; metric ton-km cargo (2008) 17,000,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	4,810	475	PCs	2007	2,574	256
Telephones				Dailies	2007	1,670 ⁹	166 ⁹
Cellular	2008	12,224 ¹⁰	1,218 ¹⁰	Internet users	2008	5,500	548
Landline	2008	3,094	308	Broadband	2008	1,542 ¹⁰	154 ¹⁰

Education and health

Educational attainment (2007). Population age 25–64 having: no formal schooling through lower-secondary education 20%; upper secondary/higher vocational 61%; university 17%; unknown 2%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	40,580	415,858	10.2	88
Secondary/Voc. (age 11–18)	90,117	948,856	10.5	90
Tertiary	24,712	438,702	17.8	69 (age 19–23)

Health: physicians (2007) 28,189 (1 per 357 persons); hospital beds (2007) 71,902 (1 per 140 persons); infant mortality rate per 1,000 live births (2008) 5.6.

Military

Total active duty personnel (November 2008): 25,207 (army 43.4%, air force 22.5%, joint staff 34.1%); reserves 44,000. **Military expenditure as percentage of GDP** (2008): 1.2%; per capita expenditure U.S.\$161.

¹January 1. ²Budapest acts as the capital of Pest county even though it is administratively not part of Pest county. ³Taxes less subsidies. ⁴Unemployed. ⁵Adjusted disposable income including government transfers. ⁶Imports c.i.f.; exports f.o.b. ⁷National public only. ⁸Malév Hungarian Airlines only. ⁹Circulation of daily newspapers. ¹⁰Subscribers.

Internet resource for further information:

• Hungarian Central Statistical Office <http://portal.ksh.hu>

Iceland

Official name: Lýðveldidh Ísland
(Republic of Iceland).

Form of government: unitary multiparty
republic with one legislative house
(Althingi, or Parliament [63]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Reykjavik.

Official language: Icelandic.

Official religion: Evangelical Lutheran.

Monetary unit: króna (ISK); valuation
(Sept. 1, 2009) 1 U.S.\$ = ISK 125.55;
1 £ = ISK 203.71.



Area and population

		area		population
		sq mi	sq km	2008 ¹ estimate
Geographic regions²	Principal centres			
Capital region ³	Reykjavik	410	1,062	196,564
East	Egilsstaðir	8,773	22,721	13,919
Northeast	Akureyri	8,482	21,968	28,821
Northwest	Sauðárkrúkur	4,918	12,737	7,360
South	Selöf	9,469	24,526	23,505
Southwest	Keflavik	320	829	20,446
West	Borgarnes	3,689	9,554	15,462
Westfjords	Ísafjörður	3,633	9,409	7,299
REMAINDER	—	75	194	0
TOTAL		39,769	103,000	313,376

Demography

Population (2009): 318,000.

Density (2009)⁴: persons per sq mi 34.6, persons per sq km 13.4.

Urban-rural (2008¹): urban 93.1%; rural 6.9%.

Sex distribution (2008¹): male 50.89%; female 49.11%.

Age breakdown (2008¹): under 15, 21.0%; 15–29, 22.3%; 30–44, 21.4%; 45–59, 19.2%; 60–74, 10.4%; 75–84, 4.3%; 85 and over, 1.4%.

Population projection: (2020) 342,000; (2030) 370,000.

Ethnic composition (2008)⁵: Icelandic 93.2%; European 5.5%, of which Polish 2.7%, Nordic 0.6%; Asian 0.8%; other 0.5%.

Religious affiliation (2007): Evangelical Lutheran 80.7%; Roman Catholic 2.5%; other Christian 6.8%; other/not specified 10.0%.

Major cities (2009¹): Reykjavik 119,547 (urban area [2008¹] 195,840); Kópavogur 29,976; Hafnarfjörður 25,850; Akureyri 17,541; Gardhábær 10,358.

Vital statistics

Birth rate per 1,000 population (2008): 15.2 (world avg. 20.3); within marriage 35.9%; outside of marriage 64.1%.

Death rate per 1,000 population (2008): 6.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 8.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.14.

Marriage/divorce rates per 1,000 population (2008): 5.1/1.7.

Life expectancy at birth (2008): male 79.6 years; female 83.0 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 235.7; malignant neoplasms (cancers) 162.3; diseases of the respiratory system 49.4; diseases of the nervous system 40.5; accidents 32.9.

National economy

Budget (2007). Revenue: ISK 454,588,000,000 (tax revenue 78.4%, of which VAT 42.9%, individual income tax 31.5%; nontax revenue 21.6%). Expenditures: ISK 403,199,000,000 (social security and health 48.8%, education 10.6%, social affairs 9.4%, interest payment 6.9%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 13,000, cereals 11,246, tomatoes 1,603, hay 1,993,773 cu m; livestock (number of live animals) 454,812 sheep, 70,660 cattle, 41,497 mink; roundwood, n.a.; fisheries production (value in ISK '000,000): 80,251, of which cod 29,585, haddock 14,538, redfish 7,646, herring 5,700, saithe 4,263, capelin 4,247, blue whiting 3,022; fisheries production by tonnage 1,404,066 (from aquaculture, negligible). Mining and quarrying (2007): pumice 95,000. Manufacturing (value of sales in ISK '000,000; 2008): base metals (nearly all aluminum and ferrosilicon) 196,547; preserved and processed fish 162,252; other food products and beverages 72,049; cement, bricks, and ceramics 17,742; fabricated metal products 14,992. Energy production (consumption): electricity (kW-hr; 2007) 11,976,000,000 (11,976,000,000); coal (metric tons; 2006) none (91,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (797,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 640; remittances (2008) 46; foreign direct investment (FDI; 2005–07 avg.) 3,385. Disbursements for (U.S.\$'000,000): tourism (2007) 1,341; remittances (2008) 100; FDI (2005–07 avg.) 8,180.

Population economically active (2007): total 181,500; activity rate of total population 58.3% (participation rates: ages 16–64, 87.7%; female 45.5%; unemployed [April–June 2009] 9.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.5	93.4	96.0	100.0	106.7	112.1	126.3
Annual earnings index	83.5	88.0	93.3	100.0	109.8	119.2	129.1

Gross national income (GNI; 2008): U.S.\$12,702,000,000 (U.S.\$40,070 per capita); purchasing power parity GNI (U.S.\$25,220 per capita).

Structure of gross domestic product and labour force

	2008		2007	
	in value ISK '000,000,000	% of total value	labour force	% of labour force
Agriculture	18.2	1.2	6,000	3.3
Fishing	62.4	4.2	4,500	2.5
Mining, quarrying	1.3	0.1		
Manufacturing	144.2	9.8	19,200	10.6
Construction	136.4	9.2	15,700	8.7
Public utilities	59.8	4.1	1,700	0.9
Transp. and commun.	100.1	6.8	11,100	6.1
Trade, restaurants	146.8	9.9	31,600	17.4
Finance, real estate	343.0	23.2	25,900	14.3
Services			52,100	28.7
Public administration	287.1	19.5	8,900	4.9
Other	177.2 ⁷	12.0 ⁷	4,800 ⁸	2.6 ⁸
TOTAL	1,476.5	100.0	181,500	100.0

Public debt (December 2008): U.S.\$9,906,000,000.

Household income and expenditure. Average household size (2006) 2.5; annual employment income per household (2003) ISK 2,428,000 (U.S.\$31,700); sources of income (2001): wages and salaries 78.6%, pension 10.3%, self-employment 2.0%, other 9.1%; expenditure (2006): housing and energy 25.6%, transportation and communications 19.7%, recreation, education, and culture 13.3%, food 12.8%, household furnishings 6.4%.

Land use as % of total land area (2007): in temporary crops 0.07%, in permanent crops, none, in pasture 22.7%, forest area 0.5%.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
ISK '000,000	-15,900	-36,547	-93,100	-156,544	-90,058	-6,665
% of total	4.2%	8.3%	19.3%	24.3%	12.8%	0.7%

Imports (2007): ISK 428,509,000,000 (machinery and apparatus 22.6%, road vehicles 11.5%, refined petroleum 8.2%, aircraft/parts 6.6%, food products 6.3%, alumina 4.8%). **Major import sources:** U.S. 13.5%; Germany 12.1%; Sweden 10.0%; Denmark 7.4%; Netherlands 5.6%; U.K. 5.4%.

Exports (2007): ISK 305,670,000,000 (fresh fish 26.6%, aluminum 26.3%, aircraft 14.6%, dried/salted fish 8.2%, fish foodstuff for animals 3.5%, ferrosilicon 2.6%). **Major export destinations:** Netherlands 21.3%; Germany 13.4%; U.K. 13.2%; Ireland 7.6%; U.S. 7.5%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 8,101 mi, 13,038 km (paved c. 33%). Vehicles (2008¹): passenger cars 207,513; trucks and buses 33,038. Air transport (2007)¹⁰: passenger-km 4,252,000; metric ton-km cargo [2005] 121,591,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	101	345	PCs	2005	142	481
Telephones				Dailies	2007	218 ¹¹	700 ¹¹
Cellular	2007	348 ¹²	1,117 ¹²	Internet users	2007	202	648
Landline	2007	187	600	Broadband	2008	100 ¹²	315 ¹²

Education and health

Educational attainment (2007): Percentage of population ages 25–64 having: primary education 3%; lower secondary 33%; upper secondary 23%; post-secondary non-tertiary 11%; higher vocational 4%; university 25%; advanced degree 1%. **Literacy:** virtually 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	2,903	30,421	10.5	98
Secondary/Voc. (age 13–19)	3,144	33,900	10.8	90
Tertiary	1,865	15,721	8.4	73 (age 20–24)

Health: physicians (2007) 1,157 (1 per 270 persons); hospital beds (2002) 2,162 (1 per 133 persons); infant mortality rate per 1,000 live births (2008) 2.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 130 coast guard (paramilitary) personnel; Iceland has no military.¹³ **Coast guard expenditure as percentage of GDP** (2008): 0.3%; per capita expenditure U.S.\$109.

¹January 1. ²Actual local administration is based on 78 municipalities. ³Includes municipalities adjacent to Reykjavik. ⁴Population density calculated with reference to 9,191 sq mi (23,805 sq km) area free of glaciers (covering 4,603 sq mi [11,922 sq km]), lava fields or wasteland (covering 24,918 sq mi [64,538 sq km]), and lakes (covering 1,064 sq mi [2,757 sq km]). ⁵By citizenship. ⁶Within Reykjavik urban area. ⁷Taxes on products less subsidies. ⁸Includes 4,200 unemployed. ⁹Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹⁰Icelandair only. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³U.S. military withdrew permanently in September 2006. NATO agreed to begin regular supervision of Icelandic airspace from July 2007.

Internet resources for further information:

- **Statistics Iceland** <http://www.statice.is>
- **Central Bank of Iceland** <http://www.sedlabanki.is>

India

Official name: Bharat (Hindi); Republic of India (English).

Form of government: multiparty federal republic with two legislative houses (Council of States [245¹]; House of the People [545²]).

Chief of state: President.

Head of government: Prime Minister.

Capital: New Delhi.

Official languages: Hindi; English.

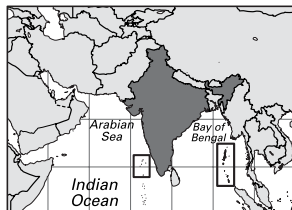
Official religion: none.

Monetary unit: Indian rupee

(Re, plural Rs); valuation

(Sept. 1, 2009) 1 U.S.\$ = Rs 49.04;

1 £ = Rs 79.57.



Area and population

States	Capitals	area		population
		sq mi	sq km	2008 projection ³
Andhra Pradesh	Hyderabad	106,204	275,068	82,180,000
Arunachal Pradesh	Itanagar	32,333	83,743	1,200,000
Assam	Dispur	30,285	78,438	29,929,000
Bihar	Patna	38,301	99,200	93,823,000
Chhattisgarh	Raipur	52,199	135,194	23,646,000
Goa	Panaji	1,429	3,702	1,628,000
Gujarat	Gandhinagar	75,685	196,024	56,408,000
Haryana	Chandigarh	17,070	44,212	23,772,000
Himachal Pradesh	Shimla	21,495	55,673	6,550,000
Jammu and Kashmir	Srinagar	39,146	101,387	12,366,000
Jharkhand	Ranchi	28,833	74,677	30,010,000
Karnataka	Bengaluru (Bangalore)	74,051	191,791	57,399,000
Kerala	Thiruvananthapuram			
	(Trivandrum)	15,005	38,863	34,232,000
Madhya Pradesh	Bhopal	119,016	308,252	69,279,000
Maharashtra	Mumbai (Bombay)	118,800	307,690	106,894,000
Manipur	Imphal	8,621	22,327	2,627,000
Meghalaya	Shillong	8,660	22,429	2,536,000
Mizoram	Aizawl	8,139	21,081	980,000
Nagaland	Kohima	6,401	16,579	2,187,000
Orissa	Bhubaneswar	60,119	155,707	39,899,000
Punjab	Chandigarh	19,445	50,362	26,591,000
Rajasthan	Jaipur	132,139	342,239	64,641,000
Sikkim	Gangtok	2,740	7,096	594,000
Tamil Nadu	Chennai (Madras)	50,216	130,058	66,396,000
Tripura	Agartala	4,049	10,486	3,510,000
Uttar Pradesh	Lucknow	93,933	243,286	190,891,000
Uttarakhand	Dehra Dun	19,739	51,125	9,497,000
West Bengal	Kolkata (Calcutta)	34,267	88,752	87,869,000

Union Territories

Andaman and Nicobar Islands	Port Blair	3,185	8,249	411,000
Chandigarh	Chandigarh	44	114	1,063,000
Dadra and Nagar Haveli	Silvassa	190	491	262,000
Daman and Diu	Daman	43	112	188,000
Lakshadweep	Kavaratti	12	32	69,000
Puducherry (Pondicherry)	Puducherry (Pondicherry)	190	492	1,074,000

National Capital Territory

Delhi	Delhi	573	1,483	17,076,000
TOTAL		1,222,559.4 ⁵	3,166,414 ⁴	1,147,677,000

Demography

Population (2009): 1,198,003,000⁶.

Density (2009)⁴: persons per sq mi 979.9, persons per sq km 378.3.

Urban-rural (2008): urban 29.0%; rural 71.0%.

Sex distribution (2008): male 51.87%; female 48.13%.

Age breakdown (2008): under 15, 30.9%; 15–29, 26.9%; 30–44, 21.2%; 45–59, 13.1%; 60–74, 6.4%; 75–84, 1.3%; 85 and over, 0.2%.

Population projection: (2020) 1,367,225,000; (2030) 1,484,598,000.

Doubling time: 48 years.

Major cities (2006; **urban agglomerations**, 2007): Mumbai (Bombay) 12,880,000 (18,978,000); Delhi 11,220,000 (15,926,000); Kolkata (Calcutta) 4,640,000 (14,787,000); Chennai (Madras) 4,350,000 (7,163,000); Bengaluru (Bangalore) 5,100,000 (6,787,000); Hyderabad 3,630,000 (6,376,000); Ahmadabad 3,770,000 (5,375,000); Pune (Poona) 3,040,000 (4,672,000); Surat 3,020,000 (3,842,000); Kanpur 2,900,000 (3,162,000); Jaipur 2,820,000 (2,917,000); Lucknow 2,540,000 (2,695,000); Nagpur 2,270,000 (2,454,000); Patna 1,660,000 (2,158,000); Vadodara 1,306,227⁷ (1,756,000); Bhopal 1,640,000 (1,727,000); Coimbatore 930,882⁷ (1,696,000); Ludhiana 1,580,000 (1,649,000); New Delhi⁸ 302,363⁷.

Other principal cities (2001)

	population		population		population
Agra	1,275,134	Jodhpur	851,051	Sholapur (Solapur)	872,478
Allahabad	975,393	Kalyan-Dombivali ¹⁰	1,193,512	Srinagar	898,440
Amritsar	966,862	Madurai	928,869	Thane (Thana) ¹⁰	1,262,551
Chandigarh	808,515	Meerut	1,068,772	Thiruvananthapuram	
Faridabad	1,055,938	Mysuru (Mysore)	755,379	(Trivandrum)	744,983
Ghaziabad	968,256	Nashik (Nasik)	1,077,236	Tiruchirappalli	752,066
Guwahati	809,895	Pimpri		Varanasi	
Gwalior	827,026	Chinchwad ¹¹	1,012,472	(Benares)	1,091,918
Howrah (Haora) ⁹	1,007,532	Rajkot	967,476	Vijayawada	851,282
Hubli-Dharwad	786,195	Ranchi	847,093	Vishakhapatnam	982,904
Indore	1,474,968	Shambhajnagar			
Jabalpur	932,484	(Aurangabad)	873,311		

Linguistic composition (2001)¹²: Hindi 41.03%; Bengali 8.11%; Telugu 7.19%; Marathi 6.99%; Tamil 5.91%; Urdu 5.01%; Gujarati 4.48%; Kannada 3.69%;

Malayalam 3.21%; Oriya 3.21%; Punjabi 2.83%; Assamese 1.28%; Maithili 1.18%; Bhili/Bhilodi 0.93%¹³; Santhali 0.63%; Kashmiri 0.54%; Nepali 0.28%; Gondi 0.26%¹³; Sindhi 0.25%; Konkani 0.24%; Dogri 0.22%; Khandeshi 0.20%¹³; Tulu 0.17%¹³; Kurukh/Oraon 0.17%¹³; Manipuri 0.14%; Bodo 0.13%; Khasi 0.11%¹³; Mundari 0.10%¹³; Ho 0.10%¹³; Sanskrit 0.0013%; other c. 1.41%. Hindi (roughly 66%) and English (roughly 33%) are also spoken as lingua francas.

Castes/tribes (2001): number of Scheduled Castes (formerly referred to as “Untouchables”) 166,635,700; number of Scheduled Tribes (aboriginal peoples) 84,326,240.

Religious affiliation (2005): Hindu 72.04%; Muslim 12.26%, of which Sunni 8.06%, Shi'i 4.20%; Christian 6.81%, of which Independent 3.23%, Protestant 1.74%, Roman Catholic 1.62%, Orthodox 0.22%; traditional beliefs 3.83%; Sikh 1.87%; Buddhist 0.67%; Jain 0.51%; Bahā'i 0.17%; Zoroastrian (Parsi) 0.02%¹⁴; nonreligious 1.22%; atheist 0.17%; remainder 0.43%.

Households (2001). Total number of households 193,579,954. Average household size 5.3. Type of household: permanent 51.8%; semipermanent 30.0%; temporary 18.2%. Average number of rooms per household 2.2; 1 room 38.4%, 2 rooms 30.0%, 3 rooms 14.3%, 4 rooms 7.5%, 5 rooms 2.9%, 6 or more rooms 3.7%, unspecified number of rooms 3.2%.

Vital statistics

Birth rate per 1,000 population (2008): 22.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 14.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.80.

Marriage/divorce rates per 1,000 population: n.a./n.a.

Life expectancy at birth (2008): male 63.0 years; female 67.0 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 420, of which HIV/AIDS 34; diseases of the circulatory system 268, of which ischemic heart disease 146; accidents, homicide, and other violence 100; malignant neoplasms (cancers) 71; chronic respiratory diseases 58.

Adult population (ages 15–49) **living with HIV** (2008): 0.4% (world avg. 0.8%).

Social indicators

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 48.1%; incomplete primary education 9.0%; complete primary 22.1%; secondary 13.7%; higher 7.1%.

Distribution of expenditure (2004–05)

percentage of household expenditure by decile/quintile									
1	2	3	4	5	6	7	8	9	10 (highest)
3.6	4.5	—11.3—	—14.9—	—20.4—			14.2	31.1	

Quality of working life. Average workweek (2006): 46.9¹⁵. Rate of fatal injuries per 100,000 employees (2006) 38¹⁵. Agricultural workers in servitude to creditors (early 1990s) 10–20%. Children ages 5–14 working as child labourers (2003): 35,000,000 (14% of age group). Percentage of population living below the poverty line (2004–05): 21.7%.

Access to services (2005–06)¹⁶. Percentage of total (urban, rural) households having access to: electricity for lighting purposes 67.9% (93.1%, 55.7%), kerosene for lighting purposes (2001) 36.9% (8.3%, 46.6%), water closets 24.3% (50.8%, 11.4%), pit latrines 7.9% (7.0%, 8.6%), no latrines 55.3% (16.8%, 74.0%), closed drainage for waste water (2001) 12.5% (34.5%, 3.9%), open drainage for waste water (2001) 33.9% (43.4%, 30.3%), no drainage for waste water (2001) 53.6% (22.1%, 65.8%). Type of fuel used for cooking in households: firewood 54.4% (23.0%, 69.6%), LPG (liquefied petroleum gas) 24.7% (58.7%, 8.2%), dung 10.6% (2.8%, 14.4%), kerosene 3.2% (8.2%, 0.8%), coal 1.9% (4.3%, 0.8%). Source of drinking water: hand pump or tube well 42.8% (21.3%, 53.2%), piped water 24.5% (50.7%, 11.8%), well 9.3% (2.9%, 12.4%), river, canal, spring, public tank, pond, or lake 1.5% (0.8%, 1.8%).

Social participation. Eligible voters participating in April/May 2004 national election: 58.1%. Registered trade unions (2005): 78,465.

Social deviance (2003)¹⁷. Offense rate per 100,000 population for: murder 3.1; rape 1.5; dacoity (gang robbery) 0.5; theft 23.0; riots 5.4. Rate of suicide per 100,000 population (2007): 10.5.

Material well-being (2005–06)¹⁶. Total (urban, rural) households possessing: television receivers 44.2% (73.2%, 30.1%), cellular telephones 16.8% (36.3%, 7.4%), scooters, motorcycles, or mopeds 17.2% (30.5%, 10.8%), cars, jeeps, or vans 2.7% (6.1%, 1.0%). Households availing banking services (2001) 35.5% (49.5%, 30.1%).

National economy

Gross national income (GNI; 2008): U.S.\$1,215,485,000,000 (U.S.\$1,070 per capita); purchasing power parity GNI (U.S.\$2,960 per capita).

Structure of gross domestic product and labour force

	2008–09		1999–2000	
	in value Rs '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	8,618	17.5	190,940,000	52.6
Mining and quarrying	1,254	2.5	2,260,000	0.6
Manufacturing	7,804	15.8	40,790,000	11.2
Construction	4,370	8.9	14,950,000	4.1
Public utilities	795	1.6	1,150,000	0.3
Transp. and commun.	12,467	25.3	13,650,000	3.8
Trade, restaurants, hotels			37,540,000	10.3
Finance, real estate	6,912	14.0	4,620,000	1.3
Pub. admin., defense	7,112	14.4	30,840,000	8.5
Services			...	...
Other	49,332	100.0	26,580,000 ¹⁸	7.3 ¹⁸
TOTAL			363,330,000 ⁵	100.0

Budget (2008–09). Revenue: Rs 9,009,530,000,000 (tax revenue 51.7%, of which corporate taxes 18.3%, income tax 10.0%, excise taxes 9.8%; capital revenue 37.6%; nontax revenue 10.7%). Expenditures: Rs 9,009,530,000,000 (current expenditure 89.2%, of which public debt payments 21.4%, subsidies 14.3%, defense 8.2%; capital expenditure 10.8%).

Public debt (external, outstanding; 2007): U.S.\$74,419,000,000.

Production (in '000 metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 355,520, cereals 252,121 (of which rice 141,134, wheat 74,890, corn [maize] 16,780, millet 10,610, sorghum 7,402), fruits 51,142 (of which bananas 21,766, mangoes 13,501, oranges 3,900, lemons and limes 2,060, apples 2,001, pineapples 1,308), oilseeds 45,321 (of which soybeans 9,433, rapeseed 7,097, peanuts [groundnuts] 6,600, sunflower seeds 1,420, castor beans 830, sesame 670), potatoes 26,280, pulses 14,500 (of which chickpeas 5,970, dry beans 3,000, pigeon peas 2,510), seed cotton 9,480, coconuts 9,400, eggplants 8,500, cauliflower 5,014, okra 3,497, jute 2,140, anise, badi-an, fennel, and coriander 1,100, tea 949, natural rubber 803, garlic 645, tobacco 555, betel 520, ginger 420; livestock (number of live animals) 177,840,000 cattle, 125,456,000 goats, 98,700,000 water buffalo, 64,269,000 sheep, 14,000,000 pigs, 632,000 camels; roundwood 330,210,200 cu m, of which fuelwood 93%; fisheries production 7,308 (from aquaculture 46%). Mining and quarrying (2007): mica 1.7; iron ore 129,000¹⁹; bauxite 19,221; chromium 3,320; barite 1,000; manganese 900¹⁹; zinc 314¹⁹; lead 77.6¹⁹; copper 34.7¹⁹; silver 79,300 kg; gold 3,000 kg; gem diamonds 15,000 carats. Manufacturing (value added in U.S.\$'000,000; 2004): chemicals and chemical products 10,804; base metals 10,109; refined petroleum products 7,214; transportation equipment 6,473; textiles and wearing apparel 5,430; food products 4,300; non-electrical machinery and apparatus 3,222; cements, bricks, and ceramics 2,958; other metals 2,120; electrical machinery and apparatus 1,962.

Manufacturing enterprises (1995–96)²⁰

	no. of factories	no. of persons engaged	avg. wages as a % of avg. of all wages	annual value added (Rs '000,000) ²¹
Chemicals and chemical products, of which synthetic fibres	9,206	758,500	140.3	237,093
fertilizers/pesticides	395	97,100	183.8	68,420
drugs and medicine	753	104,500	217.4	59,521
Transport equipment, of which motor vehicles	2,542	204,600	129.3	40,050
Textiles	6,120	838,600	142.7	120,207
Iron and steel	3,758	392,400	162.4	77,240
Nonelectrical machinery/apparatus	16,228	1,579,400	80.2	99,855
Food products, of which refined sugar	9,075	507,700	152.9	97,274
Electrical machinery/apparatus, of which industrial machinery	22,878	1,285,900	137.2	92,762
Refined petroleum	1,285	341,000	92.0	28,125
Bricks, cement, plaster products	5,472	443,700	149.4	84,320
Nonferrous basic metals	2,048	165,600	190.8	35,717
Fabricated metal products	161	31,100	349.3	52,778
Paper and paper products	10,067	394,500	70.3	49,413
Wearing apparel	3,301	228,700	124.3	42,252
	7,984	277,700	98.6	32,565
	2,742	175,200	99.5	26,380
	3,463	263,700	55.0	23,485

Energy production (consumption): electricity (kW-hr; 2008–09) 724,000,000,000 ([2006] 746,829,000,000); hard coal (metric tons; 2008–09) 493,220,000 ([2007–08] 502,660,000); lignite (metric tons; 2008–09) 33,364,000 ([2007–08] 34,657,000); crude petroleum (barrels; 2008–09) 254,638,000 ([2007–08] 1,186,382,800); petroleum products (metric tons; 2008–09) 149,519,000 ([2007–08] 140,697,000); natural gas (cu m; 2008–09) 31,804,000,000 ([2007–08] 34,328,000,000).

Financial aggregates²²

	2002	2003	2004	2005	2006	2007	2008
Exchange rate, Rs per:							
U.S. dollar	48.03	45.61	43.59	45.07	44.25	39.42	48.46
£	77.41	81.40	84.19	77.61	86.86	78.97	70.64
SDR	65.30	67.77	67.69	64.41	66.56	62.29	74.63
International reserves (U.S.\$)							
Total (excl. gold; '000,000)	67,665	98,938	126,593	131,924	170,738	266,988	247,419
SDRs ('000,000)	7	3	5	4	1	3	3
Reserve pos. in IMF ('000,000)	665	1,318	1,424	902	550	432	813
Foreign exchange ('000,000)	66,994	97,617	125,164	131,018	170,187	266,553	246,603
Gold ('000,000 fine troy oz)	11,502	11,502	11,502	11,502	11,502	11,502	11,502
% world reserves	1.2	1.3	1.3	1.2	1.2	1.2	1.2
Interest and prices							
Central bank discount (%)	6.25	6.00	6.00	6.00	6.00	6.00	6.00
Advance (prime) rate (%)	11.9	11.5	10.9	10.8	11.2	13.0	13.3
Industrial share prices (2005 = 100)	36.2	59.2	69.8	100.0	148.7	222.4	110.2
Balance of payments (U.S.\$'000,000)							
Balance of visible trade	-3,561	-7,188	-17,600	-32,526	-43,078	...	...
Imports, f.o.b.	-54,702	-68,081	-95,539	-134,702	-166,695	...	...
Exports, f.o.b.	51,141	60,893	77,939	102,176	123,617	...	...
Balance of invisibles	+3,498	+1,585	+16,820	+24,691	+33,663	...	...
Balance of payments, current account	+7,059	+8,773	+780	-7,835	-9,415	...	...

Population economically active (2001): total 402,234,724; activity rate of total population 39.1% (participation rates: ages 15–69, 60.2%; female 31.6%; unemployed [2008] 6.8%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	89.1	92.4	95.9	100.0	105.8	112.5	121.9

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 10,729; remittances (2008) 51,974; foreign direct investment (FDI; 2006–09 avg.) 30,785; official development assistance (2007) 1,298. Disbursements for (U.S.\$'000,000): tourism (2006) 7,352; remittances (2008) 1,580; FDI (2005–07 avg.) 9,823.

Household income and expenditure. Average household size (2005–06)¹⁶ 4.7; sources of income: n.a.; expenditure (2003): food and nonalcoholic beverages 50.0%, housing and energy 11.2%, clothing and footwear 7.8%, health 6.7%, transportation 4.1%, tobacco and intoxicants 2.3%.

Service enterprises (net value added in Rs '000,000,000; 1998–99): wholesale and retail trade 1,562; finance, real estate, and insurance 1,310; transport and storage 804; community, social, and personal services 763; construction 545. **Land use** as % of total land area (2007): in temporary crops 53.4%, in permanent crops 3.6%, in pasture 3.5%, forest area 22.8%.

Foreign trade

Balance of trade (current prices)

	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
U.S.\$'000,000	-14,307	-27,982	-46,075	-59,321	-88,522	-119,055
% of total	10.1%	14.3%	18.3%	19.0%	21.3%	26.1%

Imports (2007–08): U.S.\$251,654,000,000 (crude and refined petroleum 31.6%; electronics 8.2%; transportation equipment 8.0%; nonelectrical machinery and apparatus 7.9%; gold 6.6%; chemicals and chemical products 4.6%; base metals 3.5%; precious stones [significantly diamonds] 3.2%; metal ores [significantly copper ore and concentrates] 3.1%; coal 2.6%). **Major import sources:** China 10.8%; U.S. 8.4%; Saudi Arabia 7.7%; U.A.E. 5.4%; Iran 4.3%; Germany 3.9%; Switzerland 3.9%; Singapore 3.2%; Australia 3.1%; Kuwait 3.1%; Iraq 2.7%.

Exports (2007–08): U.S.\$163,132,100,000 (refined petroleum products 17.4%; gems and jewelry [significantly diamonds] 12.1%; textiles and wearing apparel 11.9%; food, beverages, and tobacco 11.3%; chemicals and chemical products 9.1%; machinery and apparatus 5.6%; fabricated metal products 4.3%; transportation equipment 4.3%; iron ore 3.6%). **Major export destinations:** U.S. 12.7%; U.A.E. 9.6%; China 6.6%; Singapore 4.5%; U.K. 4.1%; Hong Kong 3.9%; Netherlands 3.2%; Germany 3.1%; Belgium 2.6%; Italy 2.4%; Japan 2.4%.

Transport and communications

Transport. Railroads (2007–08): route length 63,000 km; passenger-km 735,980,000,000; metric ton-km cargo 511,854,000,000. Roads (2002): total length 3,319,644 km (paved 46%). Vehicles (2004): passenger cars 9,451,000; trucks and buses 4,516,000. Air transport (2008–09): passenger-km 75,932,000,000; metric ton-km cargo 1,071,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	88,876	83	PCs	2007	38,434	33
Telephones				Dailies	2007	98,841 ²³	85 ²³
Cellular	2008	346,890 ²⁴	294 ²⁴	Internet users	2007	81,000	69
Landline	2008	37,900	32	Broadband	2008	5,280 ²⁴	4.5 ²⁴

Education and health

Literacy (2007): percentage of total population age 15 and over literate 66.0%; males literate 76.9%; females literate 54.5%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–10)	2,188,516	139,169,873	63.6	89
Secondary/Voc. (age 11–17)	2,586,211 ²⁵	91,529,430	32.7 ²⁵	...
Tertiary	538,769 ²⁵	12,852,684	18.6 ²⁵	12 (age 18–22)

Health (2008): physicians²⁶, 27 696,700 (1 per 1,696 persons); hospital beds²⁶, 27 482,500 (1 per 2,449 persons); infant mortality rate 54.0; undernourished population (2002–04) 209,500,000 (20% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2008): 1,281,200 (army 85.8%, navy 4.3%, air force 9.4%, coast guard 0.5%); paramilitary 1,300,586; reserve 1,155,000. **Military expenditure as percentage of GDP** (2008): 2.3%; per capita expenditure U.S.\$21.

¹Includes 12 members appointed by the President. ²Includes 2 Anglo-Indians appointed by the President. ³Populations are March 1, 2008, official projections based on the 2001 Indian census results. ⁴Excludes 46,660 sq mi (120,849 sq km) of territory claimed by India as part of Jammu and Kashmir but occupied by Pakistan or China; inland water constitutes 9.6% of total area of India (including all of Indian-claimed Jammu and Kashmir). ⁵Detail does not add to total given because of rounding. ⁶Estimate of the United Nations *World Population Prospects: The 2008 Revision*. ⁷2001 census. ⁸Within Delhi urban agglomeration. ⁹Within Kolkata urban agglomeration. ¹⁰Within Mumbai urban agglomeration. ¹¹Within Pune urban agglomeration. ¹²Data are for the 22 scheduled ("officially recognized") languages of India (including associated languages/dialects of each of the 22) unless otherwise footnoted. ¹³Unscheduled ("not officially recognized") language. ¹⁴2000 estimate. ¹⁵Data apply to the workers employed in the "organized sector" only (27.3 million in 2006–07, of which 18.0 million were employed in the public sector and 9.3 million were employed in the private sector); few legal protections exist for the more than 370 million workers in the "unorganized sector." ¹⁶2005–06 data based on the National Family Health Survey 2005–06, comprising 515,507 people in 109,041 households. ¹⁷Crimes reported to National Crime Records Bureau by police authorities of state governments. ¹⁸Unemployed. ¹⁹Metal content. ²⁰Establishments with at least 10 workers on any workday and all establishments employing 20 or more workers. ²¹In factor values. ²²End-of-period. ²³Circulation of daily newspapers. ²⁴Subscribers. ²⁵2003–04. ²⁶Government hospitals only. ²⁷January 1.

Internet resources for further information:

- Reserve Bank of India <http://www.rbi.org.in>
- Ministry of Statistics and Programme Implementation <http://mospi.nic.in>

Indonesia

Official name: Republik Indonesia (Republic of Indonesia).

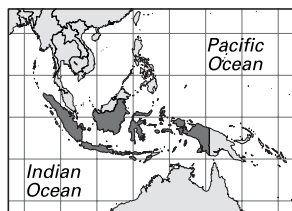
Form of government: multiparty republic with two legislative houses (Regional Representatives Council¹ [128]; House of Representatives [560]).

Head of state and government: President. **Capital:** Jakarta.

Official language: Indonesian.

Official religion: monotheism.

Monetary unit: rupiah (Rp); valuation (Sept. 1, 2009) 1 U.S.\$ = Rp 10,075; 1 £ = Rp 16,348.



Area and population					
Island(s)	area	population	Island(s)	area	population
Provinces	sq km	2009 estimate	Provinces	sq km	2009 estimate
Bali and the Lesser Sunda Islands	71,296	12,604,700	Kalimantan ^{2, 5}	507,412	13,065,800
Bali	5,449	3,551,000	Central Kalimantan	153,565	2,085,800
East Nusa Tenggara	46,138	4,619,700	East Kalimantan	194,849	3,164,800
West Nusa Tenggara	19,709	4,434,000	South Kalimantan	38,884	3,496,100
Celebes (Sulawesi) ²	193,847	16,767,700	West Kalimantan	120,114	4,319,100
Central Sulawesi	68,090	2,480,300	Maluku ⁶ & Papua ²	511,811	5,155,900
Gorontalo	12,165	984,000	Maluku	47,350	1,339,500
North Sulawesi	13,931	2,228,900	North Maluku	39,960	975,000
South Sulawesi	46,117	7,908,500	Papua	309,935	2,097,500
Southeast Sulawesi	36,757	2,118,300	West Papua ⁷	114,566	743,900
West Sulawesi	16,787	1,047,700	Sumatra ²	446,687	49,615,400
Java ²	129,307	134,160,100	Aceh ⁸	56,501	4,363,500
Banten	9,019	9,782,800	Bangka-Belitung	16,424	1,138,100
Central Java	32,800	32,864,600	Bengkulu	19,795	1,666,900
East Java	46,690	37,286,200	Jambi	45,349	2,834,200
Jakarta ³	740	9,223,000	Lampung	37,735	7,491,900
West Java	36,925	41,501,600	North Sumatra	72,428	13,248,400
Yogyakarta ⁴	3,133	3,501,900	Riau	87,844	5,306,500
			Riau Islands	8,084	1,515,300
			South Sumatra	60,302	7,222,600
			West Sumatra	42,225	4,828,000
			TOTAL	1,860,360	231,369,600

Demography

Population (2009): 229,965,000⁹.

Density (2009): persons per sq mi 320.2, persons per sq km 123.6.

Urban-rural (2003): urban 45.6%; rural 54.4%.

Sex distribution (2006): male 50.01%; female 49.99%.

Age breakdown (2006): under 15, 29.1%; 15–29, 27.0%; 30–44, 22.2%; 45–59, 13.5%; 60–74, 6.7%; 75–84, 1.4%; 85 and over, 0.1%.

Population projection: (2020) 254,218,000; (2030) 271,485,000.

Ethnic composition (2000): Javanese 36.4%; Sundanese 13.7%; Malay 9.4%; Madurese 7.2%; Han Chinese 4.0%; Minangkabau 3.6%; other 25.7%.

Religious affiliation (2005): Muslim (excluding syncretists) 55.8%; Neo-religionists (syncretists) 21.2%; Christian 13.2%; Hindu 3.2%; traditional beliefs 2.6%; nonreligious 1.8%; other 2.2%.

Major municipalities (2005): Jakarta 8,603,349; Surabaya 2,611,506; Bandung 2,288,570; Medan 2,029,797; Bekasi 1,940,308; Tangerang 1,451,595; Semarang 1,352,869; Depok 1,339,263; Palembang 1,323,169; Makassar 1,168,258.

Vital statistics

Birth rate per 1,000 population (2006): 20.1 (world avg. 20.3).

Death rate per 1,000 population (2006): 6.3 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 2.41.

Life expectancy at birth (2006): male 67.4 years; female 72.4 years.

Adult population (ages 15–49) living with HIV (2007): 0.2% (world avg. 0.8%).

National economy

Budget (2005). Revenue: Rp 495,444,000,000,000 (tax revenue 70.0%, of which income tax 35.4%, VAT 20.4%; nontax revenue 30.0%, of which revenue from petroleum 14.7%). Expenditures: Rp 509,419,000,000,000 (current expenditure 58.5%; regional expenditure 29.5%; developmental expenditure 12.0%).

Public debt (external, outstanding; December 2007): U.S.\$80,609,000,000.

Population economically active (2006): total 106,388,935; activity rate 46.5% (participation rates: over age 15, 66.2%; unemployed 10.3%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	80.0	85.0	90.5	100.0	113.1	120.3	132.4

Household income and expenditure. Average household size (2008) 4.0.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 57,048,558, sugarcane 25,200,000, cassava 19,610,071, coconuts 17,000,000, corn (maize) 12,381,561, natural rubber 2,540,000, cloves 84,000, cinnamon 60,000; livestock (number of live animals) 14,873,516 goats, 11,365,873 cattle, 9,859,667 sheep; roundwood 103,423,886 cu m, of which fuelwood 66%; fisheries production 6,329,533 (from aquaculture 22%); aquatic plants production 1,733,705 (from aquaculture 99%). Mining and quarrying (2007): bauxite 1,251,000; copper (metal content) 796,000; nickel (metal content) 229,200; silver 268,967 kg; gold 117,851 kg. Manufacturing (value added in U.S.\$'000,000; 2003): textiles, clothing, and footwear 5,011; tobacco products 4,584; transport equipment 4,189; food products 3,970; chemicals and chemical products 3,464; paper products 1,774. Energy production (consumption): electricity (kW-hr; 2006) 133,108,000,000 (133,108,-

000,000); hard coal (metric tons; 2007) 174,800,000 ([2006] 21,201,000); crude petroleum (barrels; 2007) 357,500,000 ([2006] 329,040,000); petroleum products (metric tons; 2006) 42,347,000 (52,700,000); natural gas (cu m; 2007) 85,200,000,000 (37,700,000,000).

Gross national income (GNI; 2008): U.S.\$458,159,000,000 (U.S.\$2,010 per capita); purchasing power parity GNI (U.S.\$3,830 per capita).

Structure of gross domestic product and labour force				
	2008		2006	
	in value Rp '000,000,000	% of total value	labour force	% of labour force
Agriculture, fishing, forestry	713,291	14.4	40,136,242	37.7
Mining	543,364	11.0	923,591	0.9
Manufacturing	1,380,731	27.9	11,890,170	11.1
Public utilities	40,847	0.8	228,018	0.2
Construction	419,322	8.4	4,697,354	4.4
Transp. and commun.	312,454	6.3	5,663,956	5.3
Trade, hotels	692,119	14.0	19,215,660	18.1
Finance, real estate	368,130	7.4	1,346,044	1.3
Public admin., defense	257,548	5.2	11,355,900	10.7
Services	226,223	4.6		
Other	—	—	10,932,000 ¹⁰	10.3 ¹⁰
TOTAL	4,954,029	100.0	106,388,935	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 5,346; remittances (2008) 6,795; foreign direct investment (FDI; 2005–07 avg.) 6,726; official development assistance (2006) 1,404. Disbursements for (U.S.\$'000,000): tourism (2007) 4,446; remittances (2008) 1,766; FDI (2005–07 avg.) 3,519.

Land use as % of total land area (2007): in temporary crops 12.1%, in permanent crops 8.6%, in pasture 6.1%, forest area 46.8%.

Foreign trade¹¹

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+20,824	+21,863	+15,890	+11,463	+23,153	+25,640
% of total	21.4%	20.6%	12.6%	7.1%	12.6%	12.1%

Imports (2005–06): U.S.\$65,712,154,000 (petroleum and natural gas 23.7%, machinery and apparatus 16.8%, chemicals and chemical products 10.4%, base metals 8.8%, transport equipment 6.5%). **Major import sources** (2006): Singapore 16.4%; China 10.9%; Japan 9.0%; U.S. 6.7%; Saudi Arabia 5.5%. **Exports** (2005–06): U.S.\$78,740,892,000 (petroleum and natural gas 27.4%, rubber products 15.7%, machinery and apparatus 14.5%, textiles 10.8%, base metals 7.0%, paper products 4.2%). **Major export destinations** (2006): Japan 21.6%; U.S. 11.2%; Singapore 8.9%; China 8.3%; South Korea 7.6%.

Transport and communications

Transport. Railroads (2007): route length 4,803 km; passenger-km 15,872,000,000; metric ton-km cargo 4,425,000,000. Roads (2007): length 396,362 km (paved 56%). Vehicles (2007): passenger cars 52,902,100; trucks and buses 4,845,900. Air transport (2005): passenger-km 22,986,000,000; metric ton-km cargo (2004) 248,000,000.

Communications				units			
Medium	date	number in '000s	per 1,000 persons	Medium	date	number in '000s	per 1,000 persons
Televisions	2003	33,255	153	PCs	2005	3,285	15
Telephones				Dailies	2007	5,100 ¹²	31 ¹²
Cellular	2008	140,578 ¹³	618 ¹³	Internet users	2008	30,000	132
Landline	2008	30,378	134	Broadband	2007	257 ¹³	1.1 ¹³

Education and health

Educational attainment (2002–03). Percentage of population ages 15–64 having: no schooling or incomplete primary education 19.3%; primary and some secondary 57.2%; complete secondary 19.3%; higher 4.2%. **Literacy** (2007): total population age 15 and over literate 91.9%; males 95.2%; females 88.6%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	1,427,583	28,982,708	20.3	95
Secondary/Voc. (age 13–18)	1,420,111	16,797,809	11.8	60
Tertiary	271,891 ¹⁴	3,657,429	13.5 ¹⁴	17 (age 19–23)

Health: physicians (2003) 29,499 (1 per 7,368 persons); hospital beds (2001) 124,834 (1 per 1,697 persons); infant mortality rate per 1,000 live births (2006) 33.3; undernourished population (2003–05) 37,100,000 (17% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): 302,000 (army 77.2%, navy 14.9%, air force 7.9%). **Military expenditure as percentage of GDP** (2007): 1.0%; per capita expenditure U.S.\$19.

¹Has limited legislative authority. ²Includes area and population of nearby islands. ³Special capital district. ⁴Special district. ⁵Kalimantan is the name of the Indonesian part of the island of Borneo. ⁶Conventionally the Moluccas. ⁷The final status of West Papua (the westernmost part of Papua known as West Irian Jaya prior to April 2007) was unresolved. ⁸Autonomous province. ⁹Estimate of the United Nations *World Population Prospects: The 2008 Revision*. ¹⁰Unemployed. ¹¹Imports c.i.f.; exports f.o.b. ¹²Circulation. ¹³Subscribers. ¹⁴2004–05.

Internet resource for further information:

• **Statistics Indonesia** <http://www.bps.go.id>

Iran

Official name: Jomhūrī-ye Eslāmī-ye Irān (Islamic Republic of Iran).

Form of government: unitary Islamic republic with one legislative house (Islamic Consultative Assembly [290¹]).

Supreme political/religious authority: Leader.

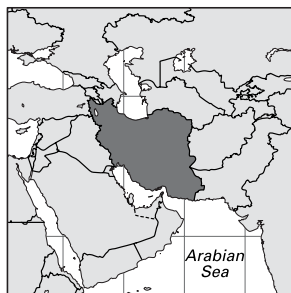
Head of state and government: President.

Capital: Tehrān.

Official language: Farsī (Persian).

Official religion: Islam.

Monetary unit: rial (Rls); valuation (Sept. 1, 2009) 1 U.S.\$ = Rls 9,900; 1 £ = Rls 16,064.



Area and population

	area	population		area	population
Provinces	sq km	2006 census	Provinces	sq km	2006 census
Ardabil	17,800	1,228,155	Khorāsān-e		
Āzārbāyjān-e Gharbī	37,411	2,873,459	Shomālī	28,434	811,572
Āzārbāyjān-e Sharqī	45,650	3,603,456	Khūzestān	64,055	4,274,979
Būshehr	22,743	886,267	Kohgiluyeh va		
Chahār Mahāll va			Būyer Ahmād	15,504	634,299
Bakhtiārī	16,332	857,910	Kordestān	29,137	1,440,156
Esfahān	107,029	4,559,256	Lorestān	28,294	1,716,527
Fārs	122,608	4,336,878	Markazi	29,127	1,351,257
Gilan	14,042	2,404,861	Māzandarān	23,842	2,922,432
Golestān	20,367	1,617,087	Qazvin	15,567	1,143,200
Hamadān	19,368	1,703,267	Qom	11,526	1,046,737
Hormozgān	70,697	1,403,674	Semnān	97,491	589,742
Ilām	20,133	545,787	Sistān va		
Kermān	180,726	2,652,413	Balūchestān	181,785	2,405,742
Kermānshāh	24,998	1,879,385	Tehrān	18,814	13,422,366
Khorāsān-e Jonūbī	95,385	636,420	Yazd	129,285	990,818
Khorāsān-e Razavī	118,854	5,593,079	Zanjān	21,773	964,601
			TOTAL	1,628,750 ²	70,495,782

Demography

Population (2009): 74,196,000.

Density (2009)³: persons per sq mi 116.6, persons per sq km 45.0.

Urban-rural (2007–08): urban 69.3%; rural 30.7%.

Sex distribution (2006–07): male 50.88%; female 49.12%.

Age breakdown (2006–07): under 15, 25.1%; 15–29, 35.4%; 30–44, 20.6%; 45–59, 11.6%; 60–74, 5.4%; 75–84, 1.6%; 85 and over, 0.3%.

Population projection: (2020) 83,740,000; (2030) 89,936,000.

Ethnic composition (2000): Persian 34.9%; Azerbaijani 15.9%; Kurd 13.0%; Luri 7.2%; Gilaki 5.1%; Mazāndarāni 5.1%; Afghan 2.8%; other 16.0%.

Religious affiliation (2005): Muslim 98.2% (Shī'ī 86.1%, Sunnī 10.1%, other 2.0%); Bahā'ī 0.5%; Christian 0.4%; Zoroastrian 0.1%; other 0.8%.

Major cities (2006): Tehrān 7,797,520; Mashhad 2,427,316; Esfahān 1,602,110; Tabriz 1,398,060; Karaj 1,386,030; Shirāz 1,227,331; Ahvāz 985,614; Qom 959,116.

Vital statistics

Birth rate per 1,000 population (2006–07): 17.8 (world avg. 20.3).

Death rate per 1,000 population (2006–07): 5.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 1.83.

Marriage/divorce rates per 1,000 population (2006–07): 11.0/1.3.

Life expectancy at birth (2007): male 70.0 years; female 72.7 years.

Major causes of death (2008): ⁴.

National economy

Budget (2007–08). Revenue: Rls 791,199,000,000,000 (petroleum and natural gas revenue 69.4%; taxes 20.5%, of which taxes on income and profits 12.3%; other 10.1%). Expenditures: Rls 691,225,000,000,000 (current expenditure 72.8%; development expenditures 21.4%; other 5.8%).

Public debt (external, outstanding; 2007): U.S.\$11,146,000,000.

Gross national income (GNI; 2007): U.S.\$251,486,000,000 (U.S.\$3,540 per capita); purchasing power parity GNI (U.S.\$10,840 per capita).

Structure of gross domestic product and labour force

	2007–08		2007	
	in value Rls '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry	268,002	10.2	4,809,000	20.4
Petroleum	709,021	27.0		
Other mining	19,142	0.7	128,000	0.5
Manufacturing	276,876	10.6	3,834,000	16.3
Construction	131,470	5.0	2,601,000	11.0
Public utilities	30,148	1.1	196,000	0.8
Transportation and communications	191,497	7.3	1,976,000	8.4
Trade, restaurants	280,590	10.7	3,210,000	13.6
Finance, real estate	504,997	19.3	720,000	3.1
Pub. admin., defense	221,743	8.5	1,353,000	5.7
Services	73,498	2.8	2,252,000	9.6
Other	-83,807 ⁵	-3.2 ⁵	2,499,000 ⁶	10.6 ⁶
TOTAL	2,623,177	100.0	23,578,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 15,000,000, sugarcane 5,700,000, sugar beets 5,300,000, potatoes 5,240,000, tomatoes 5,000,000, rice 3,500,000, grapes 3,000,000, barley 3,000,000, apples 2,660,000, oranges 2,300,000, dates 1,000,000, pistachios

230,000, cherries 225,000; livestock (number of live animals) 52,220,000 sheep, 25,860,000 goats, 9,776,000 cattle, 146,000 camels; roundwood 865,000 cu m, of which fuelwood 8%; fisheries production 562,424 (from aquaculture 28%). Mining and quarrying (2007): iron ore 11,000,000⁷; copper ore 260,000⁷; chromite 225,000⁷; zinc 100,000⁷. Manufacturing (value added in U.S.\$'000,000; 2005): base metals 3,032; motor vehicles and parts 2,850; refined petroleum products 2,210; cement, bricks, and ceramics 2,158. Energy production (consumption): electricity (kW-hr; 2008) 206,300,000,000 ([2006] 200,794,000,000); coal (metric tons; 2006) 1,520,000 (1,930,000); crude petroleum (barrels; 2008) 1,486,000,000 ([2006] 517,000,000); petroleum products (metric tons; 2006) 75,336,000 (67,265,000); natural gas (cu m; 2007) 111,909,000,000 ([2006] 104,082,000,000).

Population economically active (2006–07): total 23,469,000; activity rate of total population 33.3% (participation rates: ages 10 and over, 39.4%; female 15.5%; unemployed [October–December 2008] 9.5%).

Price and earnings indexes (2004–05 = 100)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
Consumer price index	75.1	86.8	100.0	110.4	123.5	146.2
Monthly earnings index ⁹	87.8	92.8	100.0	118.8	140.7	171.7

Household income and expenditure (2004–05). Average household size (2006–07) 4.1; annual average monetary income per urban household Rls 41,697,965 (U.S.\$4,742); sources of urban monetary income: wages 40.8%, self-employment 35.0%; expenditure: housing and energy 26.8%, food, beverages, and tobacco 25.3%, transportation/communications 16.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,486; remittances (2008) 1,115; foreign direct investment (FDI; 2005–07 avg.) 663; official development assistance (2007) 102. Disbursements for (U.S.\$'000,000): tourism (2007) 6,002; FDI (2005–07 avg.) 380.

Land use as % of total land area (2007): in temporary crops 7.6%, in permanent crops 1.0%, in pasture 18.1%, forest area 6.8%.

Foreign trade

Balance of trade (current prices)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
U.S.\$'000,000	+6,201	+4,430	+5,653	+19,044	+26,035	+40,819
% of total	12.3%	7.0%	6.9%	18.9%	20.7%	26.5%

Imports (2005–06): U.S.\$40,969,000,000 (nonelectrical machinery 23.5%, base metals 13.8%, road vehicles 13.0%, chemical products 10.7%). **Major import sources:** U.A.E. 19.7%; Germany 13.1%; France 6.8%; Italy 6.0%; China 5.5%. **Exports** (2005–06): U.S.\$60,013,000,000 (crude petroleum 73.1%; chemicals and chemical products 5.2%; fruits and nuts 2.2%, of which pistachios 1.4%; wool carpets 0.8%). **Major export destinations:** Japan 16.9%; China 11.9%; Turkey 5.8%; Italy 5.7%; South Korea 5.7%.

Transport and communications

Transport. Railroads (2006–07): route length 5,322 mi, 8,565 km; passenger-km 12,549,000,000; metric ton-km cargo 20,542,000,000. Roads (2006–07): length 45,118 mi, 72,611 km (paved 92%). Vehicles (2006–07): passenger cars 920,136; trucks and buses 184,629. Air transport (2008)⁹: passenger-km 11,760,610,000; metric ton-km cargo 110,843,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	11,566	173	PCs	2007	7,678	106
Telephones				Dailies	2007	1,660 ¹⁰	23 ¹⁰
Cellular	2008	43,000 ¹¹	587 ¹¹	Internet users	2008	23,000	314
Landline	2008	24,800	338	Broadband	2008	300 ¹¹	4.1 ¹¹

Education and health

Educational attainment: n.a. **Literacy** (2006–07): total population age 6 and over literate 84.6%; males literate 88.7%; females literate 80.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	372,859	7,152,492	19.2	94 ¹²
Secondary/Voc. (age 11–17)	409,699	8,323,213	20.3	77 ¹³
Tertiary	133,484	2,828,528	21.2	31 (age 18–22)

Health (2006–07): physicians 29,937¹⁴ (1 per 2,355 persons); hospital beds 116,474 (1 per 605 persons); infant mortality rate (2007) 29.1; undernourished population (2002–04) 2,500,000 (4% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2008): 523,000 (revolutionary guard corps 23.9%, army 66.9%, navy 3.5%, air force 5.7%). **Military expenditure as percentage of GDP** (2007): 2.9%¹⁵; per capita expenditure U.S.\$103¹⁵.

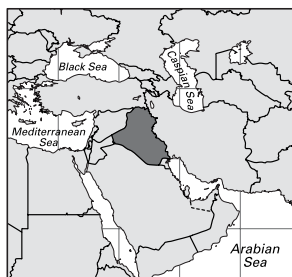
¹Includes seats reserved for Christians (3), of which Armenian 2; Jews (1); and Zoroastrians (1). ²Reported total of land area only (summed land area total equals 1,628,777 sq km); estimated total area is 1,648,200 sq km. ³Based on estimated total area. ⁴Per official announcement by deputy health minister: road accidents, heart disease, depression/suicide, addiction. ⁵Less imputed bank service charges. ⁶Includes 2,486,000 unemployed. ⁷Metal content. ⁸Minimum wage. ⁹Iran Air, Iran Aseman Airlines, and Mahan Air. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2005–06. ¹³2004–05. ¹⁴Excludes private sector physicians. ¹⁵Excludes defense industry funding.

Internet resources for further information:

- Statistical Centre of Iran <http://www.sci.org.ir>
- Central Bank of Iran http://www.cbi.ir/default_en.aspx

Iraq

Official name: Al-Jumhūrīyah al-'Irāqīyah (Republic of Iraq).
Form of government: multiparty republic with one legislative house (Council of Representatives [275]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Baghdad.
Official languages: Arabic; Kurdish.
Official religion: Islam.
Monetary unit: Iraqi dinar (ID); valuation (Sept. 1, 2009) 1 U.S.\$ = ID 1,150; 1 £ = ID 1,866.



Area and population		area		population
Governorates	Capitals	sq mi	sq km	2004 estimate
Al-Anbār	Ar-Ramādī	53,208	137,808	1,328,776
Bābil	Al-Hillah	2,163	5,603	1,493,718
Baghdād	Baghdad	1,572	4,071	6,554,126
Al-Baṣrah	Al-Baṣrah	7,363	19,070	1,797,821
Dhī Qār	An-Nāṣirīyah	4,981	12,900	1,472,405
Diylāla ¹	Ba'qūbah	6,828	17,685	1,418,455
Karbālā ¹	Karbālā ¹	1,944	5,034	787,072
Maysān	Al-'Amārah	6,205	16,072	762,872
Al-Muthannā	As-Samāwah	19,977	51,740	554,994
An-Najaf	An-Najaf	11,129	28,824	978,400
Nīnawā ¹	Mosul	14,410	37,323	2,554,270
Al-Qādisīyah	Ad-Dīwānīyah	3,148	8,153	911,641
Salāh ad-Dīn	Tikrīt	9,407	24,363	1,119,369
At-Ta'mīm ¹	Karkūk (Kirkūk)	3,737	9,679	854,470
Wāsiṭ	Al-Kūt	6,623	17,153	971,280
Region				
Kurdistan Region (in part)	Irbīl	14,923	38,650	3,579,916
TOTAL		167,618	434,128	27,139,585

Demography

Population (2009): 30,747,000².
Density (2009): persons per sq mi 183.4, persons per sq km 70.8.
Urban-rural (2007): urban 66.5%; rural 33.5%.
Sex distribution (2007): male 50.35%; female 49.65%.
Age breakdown (2007): under 15, 43.1%; 15–29, 27.9%; 30–44, 16.4%; 45–59, 8.2%; 60–74, 3.3%; 75 and over, 1.0%.
Population projection: (2020) 40,228,000; (2030) 48,909,000.
Doubling time: 27 years.
Ethnic composition (2000): Arab 64.7%; Kurd 23.0%; Turkmen/Azerbaijani 6.8%; other 5.5%.
Religious affiliation (2000): Shī'ī Muslim 62.0%; Sunnī Muslim 34.0%; Christian (primarily Chaldean rite and Syrian rite Catholic and Nestorian) 3.2%; other (primarily Yazīdī syncretist) 0.8%.
Major urban agglomerations (2007): Baghdad 5,054,000; Mosul 1,316,000; Irbīl 926,000; Al-Baṣrah 870,000; Karkūk (2003) 750,000.

Vital statistics

Birth rate per 1,000 population (2008): 30.7 (world avg. 20.3).
Death rate per 1,000 population (2008): 5.1 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): 25.6 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2008): 3.97.
Marriage/divorce rates per 1,000 population: (2000) 7.3/(1997) 1.3.
Life expectancy at birth (2008): male 68.3 years; female 71.0 years.
Major causes of death per 100,000 population (2002): communicable diseases 377, diseases of the circulatory system 187, accidents and violence 115, malignant neoplasms (cancers) 54.

National economy

Budget (2007). Revenue: ID 58,714,000,000,000 (crude oil export revenue 80.3%; oil-related public enterprises 9.8%; grants 4.9%; other 5.0%). Expenditures: ID 48,153,000,000,000 (current expenditure 79.6%; development expenditure 20.4%).
Public debt (external, outstanding; September 2009): U.S.\$70,000,000,000–U.S.\$120,000,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,700,000, tomatoes 830,000, potatoes 740,000, barley 500,000, cucumbers/gherkins 480,000, eggplants 380,000, dates 290,000, grapes 285,000, oranges 245,000; livestock (number of live animals) 6,200,000 sheep, 1,500,000 cattle; roundwood 117,400 cu m, of which fuelwood 50%; fisheries production 73,589 (from aquaculture 21%). Mining and quarrying (2007): salt 25,000. Manufacturing (2007): gasoline 19,000,000 barrels; distillate fuels 19,000,000 barrels; residual fuels 58,000,000 barrels. Energy production (consumption): electricity (kW-hr; 2006) 31,869,000,000 (33,170,000,000); coal, none (none); crude petroleum (barrels; 2008) 884,000,000 ([2006] 178,900,000); petroleum products (metric tons; 2006) 19,703,000 (21,896,000); natural gas (cu m; 2006) 3,408,000,000 (3,408,000,000).

Population economically active (2006)³: total 7,002,000; activity rate of total population 24.6% (participation rates: ages 15–64, 43.3%; female 16.8%; unemployed [UN estimate; 2009] 18%).

Price index (2005 = 100)					
	2004	2005	2006	2007	2008
Consumer price index	73.0	100.0	153.2	200.5	205.8

Household income and expenditure (2004). Average household size 6.4; median annual household income ID 2,230,000 (U.S.\$1,517); sources of income: n.a.; expenditure (1993)⁴: food 63.2%, housing 11.5%, clothing 9.7%.
Gross national income (2007): U.S.\$69,800,000,000 (U.S.\$2,367 per capita).

Structure of gross domestic product and labour force				
	2006			
	in value ID '000,000,000	% of total value	labour force	% of labour force
Agriculture	4,133	6.7	...	...
Crude petroleum	50,240	81.2	...	...
Other mining	62	0.1	...	...
Manufacturing	1,288	2.1	...	...
Public utilities	367	0.6	...	...
Construction	616	1.0	...	...
Transp. and commun.	5,562	9.0	...	...
Trade, hotels	4,630	7.5	...	...
Finance, real estate	840	1.3	...	...
Pub. admin., defense, services	9,983	16.1	...	...
Subsidies	−16,781	−27.1	...	...
Other	905	1.5	...	...
TOTAL	61,845	100.0	7,002,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism, n.a.; remittances (2008) 389; foreign direct investment (FDI; 2005–07 avg.) 449; official development assistance (2007) 9,115. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances (2008) 781; FDI (2005–07 avg.) 180.

Land use as % of total land area (2007): in temporary crops 11.9%, in permanent crops 0.6%, in pasture 9.1%, forest area 1.9%.

Foreign trade

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+3,695	+11,822	+21,301	+22,600
% of total	8.5%	24.0%	36.8%	20.6%

Imports (2007): U.S.\$18,289,000,000 (private sector imports 55.7%, of which capital goods 41.8%, consumer good 13.9%; government imports 44.3%, of which refined petroleum 7.9%). **Major import sources** (2008): Syria 27.6%; Turkey 20.6%; U.S. 11.2%; China 6.2%; Jordan 4.7%.

Exports (2007): U.S.\$39,590,000,000 (crude petroleum 95.4%; refined petroleum 4.0%; remainder 0.6%). **Major export destinations** (2008): U.S. 43.5%; Italy 11.0%; South Korea 7.3%; Canada 4.5%; France 4.1%.

Transport and communications

Transport. Railroads (2006): route length 360 mi (580 sq km)⁵. Roads (2002): total length 45,550 km (paved 84%). Vehicles (2001): passenger cars 754,066; trucks and buses 372,241. Air transport: ⁶.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	472	19	PCs	2007	...	...
Telephones				Dailies	2007	...	...
Cellular	2009	17,700 ⁷	585 ⁷	Internet users	2007	275	9.3
Landline	2008	1,082	36	Broadband	2008	—	—

Education and health

Educational attainment (2004)⁸. Percentage of population age 25 and over having: no formal schooling 28%; incomplete primary education 12%; primary 36%; secondary 9%; higher 15%. **Literacy** (2003): total population age 15 and over literate 40.4%; males 55.9%; females 24.4%.

Education (2004–05)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	215,795	4,430,267	20.5	89
Secondary/Voc. (age 12–17)	93,219	1,751,164	18.8	38
Tertiary	19,231	424,908	22.1	16 (age 18–22)

Health (2008): physicians 16,000⁹ (1 per 1,901 persons); hospital beds (2003) 34,505 (1 per 778 persons); infant mortality rate per 1,000 live births 46.2; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 577,056 (army/national guard 32.4%, navy 0.3%, air force 0.3%, ministry of interior/police 67.0%); U.S. forces (August 2009): 130,000. **Military expenditure as percentage of GDP:** n.a.

¹Kurdistan Region has de facto authority in part. ²Including about 1,200,000 Iraqi refugees in Syria, 450,000 Iraqi refugees in Jordan, and 400,000 Iraqi refugees elsewhere; about 2.8 million Iraqis were internally displaced in June 2009. ³ILO estimates. ⁴Weights of consumer price index components. ⁵Represents the Baghdad-Mosul line, the only operational route in July 2006. ⁶Iraqi Airways resumed international flights in September 2004 after 14 years of being grounded by war and sanctions. ⁷Subscribers. ⁸Based on the Iraq Living Conditions Survey, which comprised 21,668 households and was conducted between March and August 2004. ⁹End of 2008 estimate.

Internet resources for further information:

- Central Bank of Iraq <http://www.cbi.iq/index2.htm>
- Central Organization for Statistics <http://cosit.gov.iq>

Ireland

Official name: Éire (Irish); Ireland¹ (English).

Form of government: unitary multi-party republic with two legislative houses (Senate [60²]; House of Representatives [166]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Dublin.

Official languages: Irish; English.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13³.



Area and population

Provinces/Countries/Cities	area sq km	population 2006 census	Provinces/Countries/Cities	area sq km	population 2006 census
Connacht (Connacht)	17,711	504,121	South Dublin	224	246,935
Galway	6,098	159,256	Westmeath	1,840	79,346
Galway (city)	51	72,414	Wexford	2,367	131,749
Leitrim	1,590	28,950	Wicklow	2,027	126,194
Mayo	5,586	123,839	Munster	24,674	1,173,340
Roscommon	2,548	58,768	Clare	3,450	110,950
Sligo	1,838	60,894	Cork	7,460	361,877
Leinster	19,801 ⁴	2,295,123	Cork (city)	40	119,418
Carlow	897	50,349	Kerry	4,807	139,835
Dublin (city)	118	506,211	Limerick	2,735	131,516
Dun Laoghaire-Rathdown	126	194,038	Limerick (city)	21	52,539
Fingal	455	239,992	North Tipperary	2,046	66,023
Kildare	1,695	186,335	South Tipperary	2,258	83,221
Kilkenny	2,073	87,558	Waterford	1,816	62,213
Laoighis	1,720	67,059	Waterford (city)	41	45,748
Longford	1,091	34,391	Ulster (part of)	8,088	267,264
Louth	826	111,267	Cavan	1,932	64,003
Meath	2,342	162,831	Donegal	4,861	147,264
Offaly	2,001	70,868	Monaghan	1,295	55,997
			TOTAL	70,273⁴	4,239,848

Demography

Population (2009): 4,553,000.

Density (2009): persons per sq mi 167.8, persons per sq km 64.8.

Urban-rural (2005): urban 60.5%; rural 39.5%.

Sex distribution (2008): male 49.89%; female 50.11%.

Age breakdown (2008): under 15, 20.6%; 15–29, 23.4%; 30–44, 23.1%; 45–59, 17.5%; 60–74, 10.6%; 75–84, 3.6%; 85 and over, 1.2%.

Population projection: (2020) 5,384,000; (2030) 5,826,000.

Ethnic composition (2000): Irish 95.0%; British 1.7%, of which English 1.4%; Ulster Irish 1.0%; U.S. white 0.8%; other 1.5%.

Religious affiliation (2006): Roman Catholic 86.8%; Church of Ireland (Anglican) 3.0%; other Christian 2.7%; nonreligious 4.4%; other 3.1%.

Major cities (2006): Dublin 506,211 (urban agglomeration 1,186,159); Cork 119,418; Galway 72,414; Limerick 52,539; Waterford 45,748.

Vital statistics

Birth rate per 1,000 population (2008): 16.9 (world avg. 20.3); (2006) within marriage 66.8%; outside of marriage 33.2%.

Death rate per 1,000 population (2007): 6.4 (world avg. 8.5).

Marriage/divorce rates per 1,000 population (2007): 5.2/0.8.

Total fertility rate (avg. births per childbearing woman; 2007): 2.03.

Life expectancy at birth (2006): male 76.8 years; female 81.6 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 234.2; malignant neoplasms (cancers) 185.0; diseases of the respiratory system 83.5; accidents and violence 39.5.

National economy

Budget (2005). Revenue: €39,849,000,000 (VAT 30.3%, income taxes 28.3%, corporate taxes 13.5%). Expenditures: €33,496,000,000 (current expenditure 88.4%, capital expenditure 11.6%).

Total public debt (2008): c. U.S.\$90,000,000,000.

Gross national income (GNI; 2008): U.S.\$221,158,000,000 (U.S.\$49,590 per capita); purchasing power parity GNI (U.S.\$37,350 per capita).

Structure of gross domestic product and labour force

	2005 ⁵			
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	2,955	1.8	113,700	5.6
Mining	497	0.3	9,000	0.4
Manufacturing	34,893	21.7	272,100	13.5
Public utilities	1,667	1.0	13,100	0.7
Construction	14,256	8.8	242,400	12.0
Transp. and commun.	7,549	4.7	118,200	5.9
Trade, hotels	16,881	10.5	377,900	18.8
Finance, real estate	35,850	22.2	257,100	12.8
Pub. admin., defense	6,418	4.0	98,200	4.9
Services	21,265	13.2	414,100	20.6
Other	18,932 ⁶	11.7 ⁶	99,000 ⁷	4.9 ⁷
TOTAL	161,163	100.0⁴	2,014,800	100.0⁴

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 1,125,000, wheat 713,000, potatoes 399,000, mushrooms 75,000, sugar beets 45,000; livestock (number of live animals) 6,704,000 cattle, 5,522,000 sheep, 1,588,000 pigs; roundwood 2,710,000 cu m, of which fuelwood 1%;

fisheries production 284,246 (from aquaculture 20%). Mining and quarrying (2005): zinc ore 428,596⁸; lead ore 63,810⁸. Manufacturing (gross value added in €'000,000; 2005): chemicals and chemical products 12,000; electrical and optical equipment 7,097; food, beverages, and tobacco 6,391; paper products, printing, and publishing 4,440. Energy production (consumption): electricity (kW-hr; 2007) 27,888,000,000 ([2006] 29,824,000,000); coal (metric tons; 2006) none (2,597,000); crude petroleum (barrels; 2006) none (22,974,000); petroleum products (metric tons; 2006) 3,223,000 (7,384,000); natural gas (cu m; 2007) 498,000,000 ([2006] 4,784,000,000); peat (metric tons; 2006) 4,300,000 (n.a.).

Population economically active (2005): total 2,014,800⁵; activity rate 48.8% (participation rates: ages 15–64, 70.2%; female 42.3%; unemployed [March 2005–February 2006] 4.4%).

Price and earnings indexes (2000 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	109.7	113.6	116.1	118.9	123.6	129.6	134.9
Weekly earnings index	115.2	122.6	128.7	133.6	137.2	143.8	...

Household income and expenditure. Average household size (2006) 2.8; average annual disposable income per household (1999–2000) £Ir 22,589 (U.S.\$28,800); expenditure (2004): housing and energy 20.7%, food, beverages, and tobacco 14.9%, hotels and restaurants 14.2%, transportation and communications 14.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 6,140; remittances (2008) 643; foreign direct disinvestment (2005–07 avg.) –2,213. Disbursements for (U.S.\$'000,000): tourism (2007) 8,682; remittances (2008) 2,691; foreign direct investment (2005–07 avg.) 16,804.

Land use as % of total land area (2007): in temporary crops 5.5%, in permanent crops 0.04%, in pasture 56.6%, forest area 10.1%.

Foreign trade⁹

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
€'000,000	+38,088	+34,532	+34,370	+32,505	+16,828	+27,069
% of total	25.8%	27.2%	25.8%	22.6%	11.2%	17.8%

Imports (2007): €62,173,000,000 (machinery and transport equipment 40.2%, of which office machines and parts 14.8%, road vehicles 7.0%, electrical machinery 5.2%; chemicals and chemical products 13.2%; mineral fuels 7.9%; food 7.2%). **Major import sources** (2006): U.K. 30.1%; U.S. 11.3%; Germany 8.7%; China 8.3%; Netherlands 4.2%.

Exports (2007): €88,581,000,000 (organic chemicals 21.9%; medicinal and pharmaceutical products 16.5%; office machines and parts 14.2%; food 8.3%).

Major export destinations (2007): U.K. 18.7%; U.S. 17.8%; Belgium 14.3%; Germany 7.5%; France 5.8%.

Transport and communications

Transport. Railroads (2007): route length (2004) 3,312 km; passenger-km 2,007,065,000; metric ton-km cargo 128,908,000. Roads (2003): length 96,602 km (paved 100%). Vehicles (2006): passenger cars 1,778,861; trucks and buses 318,604¹⁰. Air transport (2007)¹¹: passenger-km 14,807,000,000; metric ton-km cargo 75,400,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	2,707	694	PCs	2007	2,536	582
Telephones				Dailies	2007	954 ¹²	219 ¹²
Cellular	2008	5,048 ¹³	1,503 ¹³	Internet users	2008	2,830	646
Landline	2008	2,202	503	Broadband	2008	891 ¹³	203 ¹³

Education and health

Educational attainment (2006). Percentage of population ages 15–64 having: no formal schooling/primary education 15.1%; some/complete secondary 46.5%; post secondary certificate 9.4%; some higher 9.5%; complete higher 16.8%; unknown 2.7%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 4–11)	26,833	461,588	17.2	95
Secondary/Voc. (age 12–16)	29,729	313,479	10.5	87
Tertiary	12,095	186,044	15.4	59 (age 17–21)

Health: physicians (2004) 11,141 (1 per 365 persons); hospital beds (2006) 12,051¹⁴ (1 per 352 persons); infant mortality rate (2007) 2.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 10,460 (army 81.3%, navy 10.5%, air force 8.2%); reserve 14,875. **Military expenditure as percentage of GDP** (2008): 0.5%; per capita expenditure U.S.\$303.

¹As provided by the constitution. ²Includes 11 nonelective seats. ³The Irish pound was the former monetary unit; on Jan. 1, 2002, 1 £Ir = €1.27. ⁴Detail does not add to total given because of rounding. ⁵In 2005 there were 243,000 foreigners in the labour force, of which 120,000 were from Poland. ⁶Taxes less subsidies plus minuscule statistical discrepancy. ⁷Includes 85,600 unemployed. ⁸Metal content. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Excludes buses. ¹¹Aer Lingus only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Publicly funded acute hospitals only.

Internet resources for further information:

- Central Statistics Office (Ireland) <http://www.cso.ie>
- Central Bank of Ireland <http://www.centralbank.ie>

Isle of Man

Official name: Isle of Man¹.

Political status: crown dependency (United Kingdom) with two legislative bodies² (Legislative Council [11³]; House of Keys [24]).

Chief of state: British Monarch represented by Lieutenant-Governor.

Head of government: Chief Minister assisted by the Council of Ministers.

Capital: Douglas.

Official language: English⁴.

Official religion: none.

Monetary unit: Manx pound (£M)⁵; valuation (Sept. 1, 2009)

1 £M = U.S.\$1.62.



Area and population					
	area	population		area	population
	sq km	2006 census		sq km	2006 census
Towns			Parishes (cont.)		
Castletown	2.3	3,109	Ballaugh	23.6	1,042
Douglas	10.1	26,218	Braddan	42.6	3,151
Peel	1.7	4,280	Bride	21.7	418
Ramsey	3.7	7,309	German	45.3	995
Villages			Jurby	17.7	659
Laxey	2.4	1,768	Lezayre	62.3	1,237
Onchan	24.7	9,172	Lonan	35.2	1,563
Port Erin	2.6	3,575	Malew	47.1	2,304
Port St. Mary	1.4	1,913	Marown	26.7	2,086
Parishes			Maughold	34.5	950
Andreas	31.1	1,381	Michael	33.9	1,640
Arbory	17.7	1,723	Patrick	42.2	1,294
			Rushen	24.6	1,591
			Santon	16.9	680
			TOTAL	572.0⁶	80,058

Demography

Population (2009): 81,500.

Density (2009): persons per sq mi 368.8, persons per sq km 142.5.

Urban-rural (2006): urban 71.6%; rural 28.4%.

Sex distribution (2006): male 49.37%; female 50.63%.

Age breakdown (2006): under 15, 16.9%; 15–29, 17.2%; 30–44, 22.0%; 45–59, 21.1%; 60–74, 14.4%; 75–84, 6.0%; 85 and over, 2.4%.

Population projection: (2020) 86,000; (2030) 88,000.

Population by place of birth (2006): Isle of Man 47.6%; United Kingdom 43.9%, of which England 37.2%, Scotland 3.4%, Northern Ireland 2.1%, Wales 1.2%; Ireland 2.1%; other Europe 2.0%; other 4.4%.

Religious affiliation (2000): Christian 63.7%, of which Anglican 40.5%, Methodist 9.9%, Roman Catholic 8.2%; other (mostly nonreligious) 36.3%.

Major towns (2006): Douglas 26,218; Onchan 9,172; Ramsey 7,309; Peel 4,280; Port Erin 3,575.

Vital statistics

Birth rate per 1,000 population (2008): 12.1 (world avg. 20.3); (2006) within marriage 62.1%; outside of marriage 37.9%.

Death rate per 1,000 population (2008): 10.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 1.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 1.65.

Marriage/divorce rates per 1,000 population: (2006) 5.3/(2003) 4.4.

Life expectancy at birth (2006): male 75.3 years; female 81.2 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 347.5, of which ischemic heart diseases 123.4, cerebrovascular disease 86.9; malignant neoplasms (cancers) 246.7; diseases of the respiratory system 146.0; diseases of the digestive system 35.2; accidents 26.4.

National economy

Budget (2007–08). Revenue: £598,318,000 (customs duties and excise taxes 71.8%; income taxes 26.6%; nontax revenue 1.6%). Expenditures: £518,186,000 (health and social security 43.5%; education 19.5%; transportation 7.5%; home affairs 7.2%; local government/environment 5.7%; tourism and recreation 5.2%).

Production. Agriculture, forestry, fishing: main crops include hay, oats, barley, wheat, and orchard crops; livestock (number of live animals; 2007) 145,864 sheep, 36,934 cattle, 565 pigs; roundwood, n.a.; fish catch (value of principal catch in £; 2008): scallops 2,325,000, lobster 441,000, queen scallops 300,300, crab (2007) 295,000; fisheries production by tonnage (2007) 3,760 metric tons (from aquaculture, none). Mining and quarrying: sand, gravel, and limestone. Manufacturing (value added in £; 2006–07): electrical and nonelectrical machinery/apparatus, textiles, other 121,700,000; food and beverages 24,400,000. Energy production (consumption): electricity (kW-hr; 2008) n.a. (391,800,000); crude petroleum, none (n.a.); petroleum products, n.a. (n.a.); natural gas, none (n.a.).

Household income and expenditure. Average household size (2006) 2.4; average annual income per household (2006–07) £36,624 (U.S.\$70,648); sources of income (2006–07): wages and salaries 72.1%, interest/private pensions 11.3%, transfer payments 11.0%, self-employment 2.1%, other 3.5%; expenditure (January 2008): recreation and culture 22.2%, housing and energy 15.5%, food and nonalcoholic beverages 13.1%, transportation 12.0%, restaurants and hotels 8.1%, household furnishings 5.7%.

Gross national income (at current market prices; 2006–07): U.S.\$3,512,000,000 (U.S.\$43,579 per capita).

Structure of gross domestic product and labour force

	2006–07		2006	
	in value £'000 ⁸	% of total value ⁸	labour force	% of labour force
Agriculture, fishing	18,514	1.0	642	1.5
Mining	...	...	...	...
Manufacturing	146,124	8.0	2,248	5.4
Construction	135,297	7.4	3,374	8.1
Public utilities	33,043	1.8	603	1.4
Transp. and commun.	115,686	6.4	3,171	7.6
Trade, hotels	188,854	10.4	6,809 ⁹	16.3 ⁹
Finance, real estate, insurance	721,428 ¹⁰	39.7 ¹⁰	...	...
International business	294,161 ¹⁰	16.2 ¹⁰	11,143	26.7
Pub. admin., defense	89,823	5.0	2,898	6.9
Services	262,383	14.4	9,876	23.6
Other	−187,675 ¹¹	−10.3 ¹¹	1,029	2.5
TOTAL	1,817,638	100.0	41,793	100.0

Public debt: n.a.

Population economically active (2006): total 41,793; activity rate of total population 52.2% (participation rates: ages 16–64, 79.9%; female 45.8%; unemployed [2008] 1.4%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Retail price index	88.5	91.3	96.0	100.0	103.0	107.1	112.6
Weekly earnings index	90.2	96.7	99.1	100.0	109.6	112.7	116.2

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 163; remittances, n.a.; foreign direct investment (FDI), n.a.

Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.

Land use as % of total land area (2007): in temporary crops c. 12%, in permanent crops, n.a., in pasture c. 33%, forest area c. 6%.

Foreign trade¹²

Imports: n.a. *Major import sources:* mostly the United Kingdom.

Exports: traditional exports including scallops, herring, beef, lambs, and tweeds are of declining importance; light manufacturing is encouraged. *Major export destinations:* mostly the United Kingdom.

Transport and communications

Transport. Railroads (2007): route length 39 mi, 63 km¹³. Roads (2006): total length 500 mi, 800 km (paved virtually 100%). Vehicles (2003): passenger cars 50,596; trucks and buses 11,637. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	29	355	PCs	2007	...	...
Telephones	...	...	...	Dailies	2007	0	0
Cellular	2007	...	...	Internet users	2007	...	...
Landline	2001	...	...	Broadband	2007	...	...

Education and health

Educational attainment: n.a. *Literacy:* n.a.

Education (2008–09)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	...	5,139	...	...
Secondary/Voc. (age 11–17)	...	5,574	...	...
Tertiary	...	1,433 ¹⁴	...	... (age 18–22)

Health (2006): physicians 130 (1 per 616 persons); hospital beds 355¹⁵ (1 per 225 persons); infant mortality rate per 1,000 live births 5.0; undernourished population, n.a.

Military

Total active duty personnel: ¹⁶.

¹Ellan Vannin in Manx Gaelic. ²Collective name is Tynwald. ³Includes 3 ex officio seats.

⁴Manx Gaelic has limited official recognition. ⁵Equivalent in value to pound sterling (£); the Isle of Man government issues both paper money and coins. ⁶220.9 sq mi.

⁷Weights of consumer price index components. ⁸At factor cost. ⁹Includes entertainment and catering. ¹⁰The Isle of Man is an international finance centre with 40 licensed banks, 166 authorized insurers, and 27,577 registered companies at the end of 2008; nearly U.S.\$83,000,000,000 was deposited in the island at the end of 2008. ¹¹Ownership of dwellings less adjustments. ¹²Because of the customs union between the Isle of Man and the U.K. since 1980, there are no customs controls on the movement of goods between the Isle of Man and the U.K. ¹³Length of three tourist (novel) railways operating in summer. ¹⁴2007–08; includes Isle of Man College and students studying abroad; excludes Isle of Man International Business School. ¹⁵Combined total for Noble's Hospital and Ramsey and District Cottage Hospital. ¹⁶The United Kingdom is responsible for defense.

Internet resources for further information:

- Isle of Man Government: Economic Affairs

<http://www.gov.im/treasury/economic/data/welcome.xml>

- Isle of Man Finance

<http://www.gov.im/iomfinance>

Israel

Official name: Medinat Yisra'el (Hebrew); Dawlat Isrā'il (Arabic) (State of Israel).

Form of government: multiparty republic with one legislative house (Knesset [120]).

Chief of state: President.

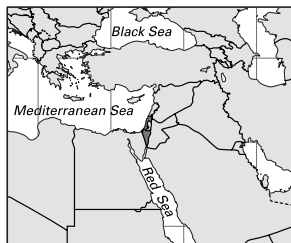
Head of government: Prime Minister.

Capital (proclaimed): Jerusalem; international recognition of its capital status has largely been withheld.

Official languages: Hebrew; Arabic.

Official religion: none.

Monetary unit: new Israeli sheqel (NIS); valuation (Sept. 1, 2009) 1 U.S.\$ = NIS 3.80; 1 £ = NIS 6.16.



Area and population

Districts	Capitals	area ¹		population 2009 ² estimate
		sq mi	sq km	
Central (Ha Merkaz)	Ramla	500	1,294	1,770,200
Haifa (Hefa)	Haifa	334	866	880,000
Jerusalem (Yerushalayim)	Jerusalem	252	653	910,300
Northern (Ha Zafon)	Tiberias	1,727	4,473	1,242,100
Southern (Ha Darom)	Beersheba	5,477	14,185	1,053,600
Tel Aviv	Tel Aviv–Yafó	66	172	1,227,000
TOTAL		8,357 ³	21,643	7,083,200 ⁴

Demography

Population (2009): 7,128,000⁵.

Density (2009)⁵: persons per sq mi 852.9, persons per sq km 329.3.

Urban-rural (2008): urban 91.7%; rural 8.3%.

Sex distribution (2008): male 49.44%; female 50.56%.

Age breakdown (2008): under 15, 28.4%; 15–29, 23.4%; 30–44, 19.4%; 45–59, 15.2%; 60–74, 9.0%; 75–84, 3.5%; 85 and over, 1.1%.

Population projection⁵: (2020) 8,260,000; (2030) 9,166,000.

Ethnic composition (2009)²: Jewish 75.5%; Arab 20.2%; other 4.3%.

Religious affiliation (2009)²: Jewish 75.5%; Muslim 16.8%; Christian 2.1%; Druze 1.7%; other 3.9%.

Major cities (2009)²: Jerusalem 763,600; Tel Aviv–Yafó 392,500 (metro area [2006] 3,040,400); Haifa 264,800 (metro area [2006] 996,000); Rishon LeZiyyon 226,100.

Vital statistics

Birth rate per 1,000 population (2008): 21.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.4 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 2.96.

Marriage/divorce rates per 1,000 population (2007): 6.5/1.8.

Life expectancy at birth (2008): male 79.1 years; female 83.0 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 157; malignant neoplasms (cancers) 137; diseases of the respiratory system 46; diabetes mellitus 34; accidents and violence 26.

National economy

Budget (2007). Revenue: NIS 294,399,000,000 (current revenue 67.3%, of which income tax 31.0%, VAT 18.3%; capital revenue 29.2%, of which loans and grants 19.7%; other 3.5%). Expenditures: NIS 307,240,000,000 (debt service 32.5%; defense 18.2%; social security and welfare 12.8%; education 11.3%; health 5.5%).

Public debt (January 2009): U.S.\$86,080,000,000.

Gross national income (GNI; 2008): U.S.\$180,499,000,000 (U.S.\$24,700 per capita); purchasing power parity GNI (U.S.\$27,450 per capita).

Structure of net domestic product and labour force

	2007		2008	
	in value NIS '000,000	% of total value	labour force	% of labour force
Agriculture	11,575	1.7	47,900	1.6
Mining	90,571	13.6	432,000	14.6
Manufacturing	30,207	4.6	150,700	5.1
Construction	11,824	1.8	19,900	0.7
Public utilities	47,382	7.1	174,500	5.9
Transp. and commun.	72,102	10.9	507,800	17.2
Trade, hotels	153,171	23.0	488,100	16.5
Finance, real estate	106,812 ⁶	16.1 ⁶	130,600	4.4
Public admin., defense	81,020	12.2	802,200	27.1
Services	60,098 ⁷	9.0 ⁷	203,400 ⁸	6.9 ⁸
Other	664,764 ³	100.0	2,957,100	100.0
TOTAL				

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): potatoes 592,001, tomatoes 421,721, oranges (2007) 162,000, carrots 148,937, apples 96,000, grapes 94,250, bananas 82,000, dates 22,800; livestock (number of live animals) 430,000 sheep, 416,000 cattle; roundwood (2007) 27,000 cu m, of which fuelwood 8%; fisheries production (2007) 26,236 (from aquaculture 85%). Mining and quarrying (2007): phosphate rock 3,069,000, potash 2,150,000, gypsum 82,974, diamonds 526,000 carats. Manufacturing (value added in U.S.\$'000,000; 2005): chemicals and chemical products 3,427; medical, measuring, and testing appliances 2,270; electronics and telecommunications equipment 2,259; fabricated metals 1,789; food products 1,590; transportation equipment 865; plastic products 853. Energy production (consumption): electricity (kW-hr; 2008) 54,504,000,000 ([2006] 49,967,000,000);

hard coal (metric tons; 2008) none (12,882,000); lignite (metric tons; 2006) 452,000 (452,000); crude petroleum (barrels; 2007) 8,200 ([2006] 73,310,000); petroleum products (metric tons; 2006) 10,687,000 (11,572,000); natural gas (cu m; 2007) 2,758,000,000 ([2008] 1,847,000,000).

Population economically active (2008): total 2,957,100; activity rate 42.1% (participation rates: ages 15 and over, 56.5%; female 46.6%; unemployed [July 2008–June 2009] 7.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	98.4	99.1	98.7	100.0	102.1	102.6	107.4
Daily earnings index	93.2	95.1	97.3	100.0	104.6	109.2	112.8

Household income and expenditure (2007). Average household size (2008) 3.3; gross annual income per household NIS 155,220 (U.S.\$40,368); sources of income: salaries and wages 66.6%, self-employment 11.3%; expenditure: housing 22.3%, transport and communications 20.1%, food and beverages 16.9%, education and entertainment 13.3%, household operations 10.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 3,059; remittances (2008) 1,422; foreign direct investment (FDI; 2005–07 avg.) 9,869. Disbursements for (U.S.\$'000,000): tourism (2007) 3,260; remittances (2008) 3,537; FDI (2005–07 avg.) 8,364.

Land use as % of total land area (2007): in temporary crops 9.9%, in permanent crops 3.2%, in pasture 5.8%, forest area 8.0%.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-2,428	-2,349	-2,262	-1,042	-2,531	-3,834
% of total	3.7%	3.0%	2.6%	1.1%	2.3%	3.0%

Imports (2008): U.S.\$65,173,200,000 (machinery and apparatus 19.7%; crude petroleum 16.7%; diamonds 13.6%; chemicals and chemical products 11.0%; transportation equipment 8.0%). **Major import sources:** U.S. 12.3%; Belgium and Luxembourg 6.8%; China 6.5%; Switzerland 6.1%; Germany 6.0%; unspecified 17.0%.

Exports (2008): U.S.\$61,339,100,000 (machinery and apparatus 22.4%; chemicals and chemical products 21.5%; polished diamonds 10.3%; rough diamonds 5.4%; crude petroleum and refined petroleum products 5.0%; professional/scientific equipment 3.6%). **Major export destinations:** U.S. 32.6%; Belgium and Luxembourg 7.6%; Hong Kong 6.8%; India 3.8%; Neth. 3.3%.

Transport and communications

Transport. Railroads (2008): route length 949 km; passenger-km 1,968,000,000, metric ton-km cargo 1,056,000,000. Roads (2008): total length 18,096 km (paved 100%). Vehicles (2008): passenger cars 1,875,765; trucks and buses 372,268. Air transport (2008)¹⁰: passenger-km 17,388,000,000; metric ton-km cargo 606,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,136	330	PCs	2004	5,037	734
Telephones				Dailies	2007	1,050 ¹¹	152 ¹¹
Cellular	2008	8,982 ¹²	1,274 ¹²	Internet users	2008	2,106	299
Landline	2008	2,900	411	Broadband	2008	1,600 ¹²	227 ¹²

Education and health

Educational attainment (2007). Percentage of population age 25–64 having: no formal schooling/unknown 1%; primary 12%; secondary 44%; postsecondary, vocational, and higher 43%. **Literacy** (2004): total population age 15 and over literate 97.1%; males literate 98.5%; females literate 95.9%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	59,644	802,555	13.5	97
Secondary/Voc. (age 12–17)	51,449	613,366	11.9	87
Tertiary	...	310,014	...	58 (age 18–22)

Health (2008): physicians (2007) 25,314¹³ (1 per 273 persons); hospital beds 42,178 (1 per 166 persons); infant mortality rate per 1,000 live births 3.8; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 176,500 (army 75.4%, navy 5.4%, air force 19.2%); reserve 565,000. **Military expenditure as percentage of GDP** (2007): 7.2%; per capita expenditure U.S.\$1,681.

¹Excludes the West Bank (2,278 sq mi [5,900 sq km]), the Gaza Strip (140 sq mi [363 sq km]), the Sea of Galilee (63 sq mi [164 sq km]), and the Dead Sea (102 sq mi [265 sq km]); includes the Golan Heights (446 sq mi [1,154 sq km]) and East Jerusalem (27 sq mi [70 sq km]). ²January 1. ³Detail does not add to total given because of rounding. ⁴Includes the population of the Golan Heights and East Jerusalem; excludes the Jewish population of the West Bank (297,300). ⁵Excludes estimated mid-year Jewish population of West Bank ([2009] 305,000). ⁶Includes community services. ⁷Taxes on products less imputed bank service charges and statistical discrepancy. ⁸Includes 23,000 not adequately classified and 180,400 unemployed. ⁹Imports c.i.f.; exports f.o.b.; the import of military goods (equaling U.S.\$2,493,000,000 in 2006) are excluded from foreign trade data. ¹⁰El Al only. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³Up to age 65.

Internet resources for further information:

- Central Bureau of Statistics <http://www.cbs.gov.il/engindex.htm>
- Bank of Israel <http://www.bankisrael.gov.il/firsteng.htm>

Italy

Official name: Repubblica Italiana (Italian Republic).
Form of government: republic with two legislative houses (Senate [322¹]; Chamber of Deputies [630]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Rome.
Official language: Italian.²
Official religion: none.
Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population		area ³		population
Regions				2008 ⁴ estimate
Provinces ⁵	Capitals	sq mi	sq km	
Abruzzo (Abruzzi)	L'Aquila	4,156	10,763	1,323,987
Chieti	Chieti	999	2,587	394,452
L'Aquila	L'Aquila	1,944	5,034	307,643
Pescara	Pescara	473	1,225	315,825
Teramo	Teramo	752	1,948	306,067
Basilicata	Potenza	3,859	9,995	591,001
Matera	Matera	1,331	3,447	203,806
Potenza	Potenza	2,527	6,545	387,195
Calabria	Catanzaro	5,823	15,081	2,007,707
Catanzaro	Catanzaro	924	2,392	367,655
Cosenza	Cosenza	2,568	6,650	732,072
Crotone	Crotone	662	1,716	172,849
Reggio di Calabria	Reggio di Calabria	1,229	3,183	567,374
Vibo Valentia	Vibo Valentia	440	1,139	167,757
Campania	Naples	5,247	13,590	5,811,390
Avellino	Avellino	1,028	2,792	439,049
Benevento	Benevento	800	2,071	288,832
Caserta	Caserta	1,019	2,639	897,820
Napoli	Naples	452	1,171	3,083,060
Salerno	Salerno	1,900	4,922	1,102,629
Emilia-Romagna	Bologna	8,539	22,117	4,275,802
Bologna	Bologna	1,429	3,702	964,074
Ferrara	Ferrara	1,016	2,632	355,809
Forlì-Cesena	Forlì	969	2,510	383,043
Modena	Modena	1,039	2,690	677,672
Parma	Parma	1,332	3,449	425,702
Piacenza	Piacenza	1,000	2,589	281,616
Ravenna	Ravenna	718	1,859	379,468
Reggio nell'Emilia	Reggio nell'Emilia	885	2,292	510,124
Rimini	Rimini	154	400	298,294
Friuli-Venezia Giulia	Trieste	3,034	7,858	1,222,061
Gorizia	Gorizia	180	467	141,948
Pordenone	Pordenone	878	2,273	307,664
Trieste	Trieste	82	212	236,457
Udine	Udine	1,889	4,893	535,992
Lazio	Rome	6,655	17,236	5,661,017
Frosinone	Frosinone	1,251	3,239	494,815
Latina	Latina	869	2,251	537,213
Rieti	Rieti	1,061	2,749	156,796
Roma	Rome	2,066	5,352	4,061,543
Viterbo	Viterbo	1,395	3,612	310,650
Liguria	Genoa	2,093	5,422	1,609,822
Genova	Genoa	709	1,836	883,778
Imperia	Imperia	446	1,155	219,383
La Spezia	La Spezia	341	882	221,595
Savona	Savona	596	1,545	285,066
Lombardy ⁵	Milan	9,213	23,863	9,642,406
Bergamo	Bergamo	1,051	2,722	1,059,593
Brescia	Brescia	1,846	4,782	1,211,617
Como	Como	497	1,288	578,175
Cremona	Cremona	684	1,771	355,947
Lecco	Lecco	315	816	331,607
Lodi	Lodi	302	783	219,670
Mantova	Mantova	903	2,339	403,665
Milano ⁵	Milan	765	1,980	3,906,726
Pavia	Pavia	1,145	2,965	530,969
Sondrio	Sondrio	1,240	3,212	181,338
Varese	Varese	463	1,199	863,099
Marche ⁵	Ancona	3,743	9,694	1,553,063
Ancona	Ancona	749	1,940	470,716
Ascoli Piceno ⁵	Ascoli Piceno	806	2,087	386,376
Macerata	Macerata	1,071	2,774	319,650
Pesaro e Urbino	Pesaro	1,117	2,892	376,321
Molise	Campobasso	1,713	4,438	320,838
Campobasso	Campobasso	1,123	2,909	231,711
Isernia	Isernia	590	1,529	89,127
Piedmont	Turin	9,808	25,402	4,401,266
Alessandria	Alessandria	1,375	3,560	435,891
Asti	Asti	583	1,511	218,081
Biella	Biella	352	913	187,491
Cuneo	Cuneo	2,665	6,903	580,513
Novara	Novara	530	1,373	361,904
Torino	Turin	2,637	6,830	2,277,686
Verbano-Cusio-Ossola	Verbania	858	2,221	162,333
Vercelli	Vercelli	806	2,088	177,367
Puglia ⁵	Bari	7,474	19,358	4,076,546
Bari ⁵	Bari	1,980	5,129	1,599,378
Brindisi	Brindisi	710	1,838	402,985
Foggia ⁵	Foggia	2,774	7,185	682,456
Lecce	Lecce	1,065	2,759	811,230
Taranto	Taranto	941	2,437	580,497
Sardinia	Cagliari	9,301	24,090	1,665,617
Cagliari	Cagliari	1,764	4,570	557,679
Carbonia-Iglesias	Carbonia, Iglesias	577	1,495	130,856
Medio Campidano	Sanluri, Villacidro	585	1,516	103,436
Nuoro	Nuoro	1,519	3,934	161,684
Ogliastra	Launese, Tortolì	716	1,854	58,019
Olbia-Tempio	Olbia	1,312	3,399	151,346
Oristano	Oristano	1,174	3,040	167,941
Sassari	Sassari	1,653	4,282	334,656

Area and population (continued)

		area ³		population
Regions				2008 ⁴ estimate
Provinces ⁵	Capitals	sq mi	sq km	
Sicily	Palermo	9,927	25,711	5,029,683
Agrigento	Agrigento	1,175	3,042	455,550
Caltanissetta	Caltanissetta	822	2,128	272,570
Catania	Catania	1,371	3,552	1,081,915
Enna	Enna	989	2,562	173,723
Messina	Messina	1,254	3,248	654,032
Palermo	Palermo	1,927	4,992	1,243,385
Ragusa	Ragusa	623	1,614	311,770
Siracusa	Siracusa	814	2,109	400,764
Trapani	Trapani	951	2,462	435,974
Trentino-Alto Adige (Trentino-Südtirol)	Trento (Trient)	5,254	13,607	1,007,267
Bolzano (Bozen)	Bolzano (Bozen)	2,857	7,400	493,910
Trento	Trento (Trient)	2,401	6,218	513,357
Tuscany	Florence	8,878	22,993	3,677,048
Arezzo	Arezzo	1,248	3,232	342,367
Firenze	Florence	1,365	3,536	977,088
Grosseto	Grosseto	1,739	4,504	223,429
Livorno	Livorno	468	1,213	339,340
Lucca	Lucca	684	1,773	387,058
Massa-Carrara	Massa	447	1,157	202,435
Pisa	Pisa	945	2,448	405,883
Pistoia	Pistoia	373	965	287,415
Prato	Prato	133	344	245,742
Siena	Siena	1,475	3,821	266,291
Umbria	Perugia	3,265	8,456	884,450
Perugia	Perugia	2,446	6,334	653,802
Terni	Terni	819	2,122	230,648
Valle d'Aosta (Vallée d'Aoste)	Aosta (Aoste)	1,260	3,263	125,979
Veneto	Venice	7,104	18,399	4,832,340
Belluno	Belluno	1,420	3,678	213,612
Padova	Padova	827	2,142	909,775
Rovigo	Rovigo	691	1,789	246,255
Treviso	Treviso	956	2,477	869,534
Venezia	Venice	950	2,460	844,606
Verona	Verona	1,195	3,096	896,316
Vicenza	Vicenza	1,051	2,722	852,242
TOTAL		116,346	301,336	59,619,290

Demography

Population (2009): 60,325,000.
Density (2009): persons per sq mi 518.5, persons per sq km 200.2.
Urban-rural (2005): urban 67.6%; rural 32.4%.
Sex distribution (2008⁴): male 48.56%; female 51.44%.
Age breakdown (2008⁴): under 15, 14.1%; 15–29, 16.3%; 30–44, 23.8%; 45–59, 20.1%; 60–74, 16.1%; 75–84, 7.2%; 85 and over, 2.4%.
Population projection: (2020) 62,938,000; (2030) 64,787,000.
Ethnolinguistic composition (2000): Italian 96.0%; North African Arab 0.9%; Italo-Albanian 0.8%; Albanian 0.5%; German 0.4%; Austrian 0.4%; other 1.0%.
Religious affiliation (2005): Roman Catholic *c.* 83%, of which practicing *c.* 28%; Muslim *c.* 2%; nonreligious/atheist *c.* 14%; other *c.* 1%.
Major cities/urban agglomerations (2008⁴/2007): Rome 2,718,768 (3,339,000); Milan 1,299,633 (2,945,000); Naples 973,132 (2,250,000); Turin 908,263 (1,652,000); Palermo 663,173 (863,000); Genoa 610,887; Bologna 372,256; Florence 364,710; Bari 322,511; Catania 298,957; Venice 268,993; Verona 264,191; Messina 243,997; Padua 210,173; Trieste 205,356; Taranto 195,130; Brescia 189,742; Prato 185,603; Reggio di Calabria 185,577; Modena 179,937; Parma 178,718.
Households. Average household size (2008⁴) 2.4; composition of households (2001): 1 person 24.9%, 2 persons 27.1%, 3 persons 21.6%, 4 persons 19.0%, 5 or more persons 7.4%. Family households (2001): 21.810,676, of which couple with children 41.5%, single family 24.9%, couple without children 20.8%, mother with children 7.3%, father with children 1.6%.
Immigration (2008⁴): resident foreigners 3,432,651, of which from EU countries 17.7%, other Europe 23.0%, North African countries 15.2%, other Africa 6.6%, Asian countries 7.7%, other/not stated 29.8%.

Vital statistics

Birth rate per 1,000 population (2008): 9.6 (world avg. 20.3); (2007) within marriage 79.3%; outside of marriage 20.7%.
Death rate per 1,000 population (2008): 9.8 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): –0.2 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2007): 1.37.
Marriage/divorce rates per 1,000 population (2007): 4.2/0.8.
Life expectancy at birth (2007): male 78.6 years; female 84.1 years.
Major causes of death per 100,000 population (2006): diseases of the circulatory system 373.4; malignant neoplasms 286.2; diseases of the respiratory system 60.7; diseases of the digestive system 39.2.
Adult population (ages 15–49) *living with HIV* (2007): 0.4%⁶ (world avg. 0.8%).

Social indicators

Educational attainment (2007). Percentage of population ages 25 to 64 having: no formal schooling through primary education 15%; lower secondary 33%; upper secondary 37%; university 13%; other 2%.
Quality of working life. Average workweek (2008): 34.6 hours. Annual rate per 100,000 workers (2007) for: nonfatal injury 2,647; fatal injury 4. Number of working days lost to labour stoppages per 1,000 workers (2007): 52.6.
Material well-being. Rate per 100 households possessing (2008): mobile phone 88.5; personal computer 50.1; Internet access 42.0; satellite dish 30.7.
Transport used for work per 100 employees (includes double-counting; 2008): car 75.7%, walking 11.1%, bus 4.9%, motorcycle/motorbike 4.6%, bicycle 3.1%, train 2.9%, underground 2.5%, other 2.9%.
Social participation. Eligible voters participating in last national election (April 2008): over 80%. Trade union membership in total workforce (2004): *c.* 30%.

Social deviance (2007). Offense rate per 100,000 population for: murder/manslaughter 4.6; rape 8.2; theft 2,756; battery 132.2; robbery 86.2.
Access to services (2002). Nearly 100% of dwellings have access to electricity, a safe water supply, and toilet facilities.
Leisure (2006). Favourite leisure activities (attendance per 100 people age 6 and over): cinema 48.9; museum/art exhibition 27.7; sporting events 27.3; discotheque 24.8; archaeological sites/monuments 21.1.

National economy

Gross national income (GNI; 2008): U.S.\$2,109,075,000,000 (U.S.\$35,240 per capita); purchasing power parity GNI (U.S.\$30,250 per capita).

Structure of gross domestic product and labour force

	2006		2008	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	27,192	1.8	895,000	3.6
Mining	4,931	0.3	36,000	0.1
Manufacturing	238,699	16.2	4,805,000	19.1
Construction	79,776	5.4	1,970,000	7.9
Public utilities	26,371	1.8	144,000	0.6
Transportation and communications	100,925	6.8	1,294,000	5.2
Trade, hotels	202,166	13.7	4,719,000	18.8
Finance, real estate	356,600	24.2	3,271,000	13.0
Pub. admin., defense	88,132	6.0	1,436,000	5.7
Services	191,792	13.0	4,798,000	19.1
Other	158,817 ⁷	10.8 ⁷	1,728,000 ⁸	6.9 ⁸
TOTAL	1,475,401	100.0	25,096,000	100.0

Budget (2006)⁹. Revenue: €672,610,000,000 (taxes on goods and services 27.6%; social security contributions 27.6%; individual income taxes 24.4%; nontax revenue 6.7%; taxes on corporations 6.4%). Expenditures: €722,750,000,000 (social protection 37.2%; health 14.4%; economic affairs 12.0%; public debt 9.5%; education 9.2%; defense 2.8%).

Public debt (May 2009): U.S.\$2,137,581,000,000.

Financial aggregates

	2003	2004	2005	2006	2007	2008
Exchange rate, € per ¹⁰ :						
U.S. dollar	0.79	0.73	0.85	0.76	0.68	0.72
£	1.41	1.42	1.46	1.49	1.36	1.03
SDR	1.18	1.14	1.21	1.14	1.07	1.11
International reserves (U.S.\$) ¹⁰						
TOTAL (excl. gold: '000,000)	30,372	27,859	25,515	25,662	28,385	37,088
SDRs ('000,000)	156	145	229	272	331	261
Reserve pos. in IMF ('000,000)	4,154	3,703	1,758	977	735	1,520
Foreign exchange ('000,000)	26,062	24,011	23,528	24,413	27,319	35,306
Gold ('000,000 fine troy oz)	78.83	78.83	78.83	78.83	78.83	78.83
% world reserves	...	...	8.1	8.1	8.2	8.3
Interest and prices						
Central bank discount (%)	...	...	...	...	...	...
Govt. bond yield (%)	4.25	4.26	3.56	4.05	4.49	4.68
Share prices ¹¹ (2005 = 100)	73.0	84.0	100.0	115.7	127.0	88.1
Balance of payments (U.S.\$'000,000)						
Balance of visible trade	+11,477	+10,893	+564	-12,511	+4,242	-51
Imports, f.o.b.	-286,641	-341,278	-371,814	-430,585	-498,142	-546,908
Exports, f.o.b.	298,118	352,171	372,378	418,074	502,384	546,857
Balance of invisibles	-30,884	-27,349	-30,277	-35,534	-55,274	-77,978
Balance of payments, current account	-19,407	-16,456	-29,713	-48,045	-51,032	-78,029

Energy production (consumption): electricity (kW-hr; 2008) 316,719,000,000 ([2006] 359,106,000,000); coal (metric tons; 2006) 21,000 (24,806,000); crude petroleum (barrels; 2008) 36,400,000 ([2006] 691,000,000); petroleum products (metric tons; 2006) 89,810,000 (77,681,000); natural gas (cu m; 2008) 9,103,000,000 ([2006] 82,488,000,000).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 11,000,000, corn (maize) 9,891,362, grapes 8,519,418, wheat 7,260,309, tomatoes 6,025,613, sugar beets 4,629,900, olives 3,481,379, oranges 2,293,466, apples 2,072,500, potatoes 1,837,844, peaches and nectarines 1,718,938, cattle meat 1,100,000, pears 840,516, sheep's milk 560,000, artichokes 474,253, kiwi fruit 454,609, hazelnuts 130,743; livestock (number of live animals) 9,281,000 pigs, 8,227,000 sheep, 6,109,500 cattle, 100,000,000 chickens; roundwood 8,124,000 cu m, of which fuelwood 63%; fisheries production 465,637 (from aquaculture 38%). Mining and quarrying (2007): limestone 32,953,000; feldspar 4,727,000 [world rank: 1]; marble and travertine 4,643,000; pozzolana 4,000,000 [world rank: 1]. Manufacturing (value added in U.S.\$'000,000; 2005): fabricated metal products 34,849; food products 21,119; general purpose machinery 19,782; paints, soaps, pharmaceuticals 14,945; special purpose machinery 13,548; bricks, cement, ceramics 12,684; printing and publishing 10,567; plastic products 9,205; textiles 9,063; motor vehicles and parts 8,533; wearing apparel 8,317; furniture 8,195; iron and steel 7,298; footwear and leather products 6,643.

Population economically active (2008): total 25,096,600; activity rate of total population 42.2% (participation rates: ages 15-64, 63.0%; female 40.7%; unemployed [April 2008-March 2009] 7.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.4	95.9	98.0	100.0	102.2	104.2	107.9
Earnings index	91.7	94.1	97.0	100.0	103.2	106.1	108.3

Household income and expenditure. Average household size (2005)⁴ 2.5; average annual disposable income per household (2000) c. €28,100 (c. U.S.\$25,900); sources of income (1996): salaries and wages 38.8%, property income and self-employment 38.5%, transfer payments 22.0%; expenditure (2007⁴): housing and energy 31.4%, food and beverages 18.8%, transportation and communications 16.7%, clothing 6.3%, leisure 5.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 42,660; remittances (2008) 3,136; foreign direct investment (FDI; 2005-07 avg.) 33,138. Disbursements for (U.S.\$'000,000): tourism (2007) 27,329; remittances (2008) 12,718; FDI (2005-07 avg.) 58,225.

Land use as % of total land area (2007): in temporary crops 24.4%, in permanent crops 8.6%, in pasture 14.2%, forest area 34.6%.

Foreign trade¹²

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+2,047	-1,733	-11,879	-25,412	-12,524	-16,887
% of total	0.3%	0.2%	1.6%	3.0%	1.3%	1.5%

Imports (2007): U.S.\$504,582,000,000 (machinery and apparatus 16.4%, chemicals and chemical products 12.6%, road vehicles/parts 11.0%, crude petroleum 9.0%, food 6.4%, iron and steel 5.8%, nonferrous metals 4.0%). **Major import sources**: Germany 16.7%; France 9.0%; China 5.9%; Netherlands 5.2%; Belgium 4.3%; Spain 4.2%; Libya 3.3%; U.K. 3.2%; U.S. 3.0%; Switzerland 3.0%.

Exports (2007): U.S.\$492,058,000,000 (assorted manufactured goods 20.9%, of which iron and steel 5.2%, fabricated metal products 4.4%; nonelectrical machinery and apparatus 20.7%, of which general industrial machinery 10.0%, specialized machinery for particular industries 6.3%; chemicals and chemical products 10.1%; road vehicles/parts 8.0%; electrical machinery and apparatus 5.3%; apparel and clothing accessories 4.6%; food 4.5%). **Major export destinations**: Germany 12.8%; France 11.4%; Spain 7.3%; U.S. 6.8%; U.K. 5.8%; Switzerland 3.7%; Belgium 2.9%; Russia 2.7%; Poland 2.4%; Austria 2.3%.

Transport and communications

Transport. Railroads: (2008⁴) route length 16,356 km; (2006) passenger-km 46,439,000,000; (2005) metric ton-km cargo 22,760,000,000. Roads (2003): total length 484,688 km (paved 100%). Vehicles (2006): passenger cars 35,297,282; trucks and buses 4,427,846. Air transport (2008)¹³: passenger-km 39,421,000,000; metric ton-km cargo 1,231,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	28,153	494	PCs	2007	21,791	367
Telephones				Dailies	2007	9,453 ¹⁴	159 ¹⁴
Cellular	2008	88,580 ¹⁵	1,480 ¹⁵	Internet users	2008	29,118	486
Landline	2008	20,031	335	Broadband	2008	11,283 ¹⁵	189 ¹⁵

Education and health

Literacy (2007): total population age 15 and over literate 98.9%; males literate 99.1%; females literate 98.6%.

Education (2005-06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6-10)	264,378	2,790,254	10.6	99
Secondary/Voc. (age 11-18)	426,822	4,531,571	10.6	94
Tertiary	99,595	2,029,023	20.4	67 (age 19-23)

Health: physicians (2006) 215,000 (1 per 274 persons); hospital beds (2005) 234,428 (1 per 250 persons); infant mortality rate per 1,000 live births (2007) 3.8; undernourished population (2002-04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 292,983 (army 36.9%, navy 11.6%, air force 14.7%, carabinieri 36.8%); U.S. military forces (December 2008) 9,160. **Military expenditure as percentage of GDP** (2007): 1.8%¹⁶; per capita expenditure U.S.\$635.

¹Included 7 nonelective seats in June 2009 (4 presidential appointees and 3 former presidents serving ex officio). ²In addition, German is locally official in the region of Trentino-Alto Adige and French is locally official in the region of Valle d'Aosta. ³Region areas are based on an end-of-2002 survey; province areas are based on an older survey and therefore may not sum to the region area. ⁴January 1. ⁵Three new provinces were formally established in June 2009. Monza and Brianza province was created from part of Milano province, Lombardy region; Fermo from part of Ascoli Piceno province, Marche region; and Barletta-Andria-Trani from parts of Bari and Foggia provinces, Puglia region. ⁶Statistically derived midpoint within range. ⁷Taxes less subsidies. ⁸Includes 1,692,000 unemployed. ⁹According to the general government budget; for Italy this is the central government budget and some of the local government budget. ¹⁰End of year. ¹¹Yearly average. ¹²Imports c.i.f.; exports f.o.b. ¹³Air One, Alitalia, Livingston S.P.A., and Meridiana airlines only. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶Includes military pensions.

Internet resources for further information:

- National Statistical Institute <http://www.istat.it>
- Banca d'Italia <http://www.bancaditalia.it>

Jamaica

Official name: Jamaica.

Form of government: constitutional monarchy with two legislative houses (Senate [21¹]; House of Representatives [60]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Kingston.

Official language: English.

Official religion: none.

Monetary unit: Jamaican dollar

(J\$); valuation (Sept. 1, 2009)

1 U.S.\$ = J\$88.58; 1 £ = J\$143.72.



Area and population		area		population
Parishes	Capitals	sq mi	sq km	2009 ² estimate
Clarendon	May Pen	462	1,196	246,518
Hanover	Lucea	174	450	69,926
Kingston	3	9	22	3
Manchester	Mandeville	320	830	190,920
Portland	Port Antonio	314	814	82,245
Saint Andrew	3	166	431	666,182 ³
Saint Ann	Saint Ann's Bay	468	1,213	173,414
Saint Catherine	Spanish Town	460	1,192	498,451
Saint Elizabeth	Black River	468	1,212	151,122
Saint James	Montego Bay	230	595	184,412
Saint Mary	Port Maria	236	611	114,317
Saint Thomas	Morant Bay	287	743	94,245
Trelawny	Falmouth	338	875	75,618
Westmoreland	Savanna-la-Mar	312	807	144,988
TOTAL		4,244	10,991	2,692,358

Demography

Population (2009): 2,702,000.

Density (2009): persons per sq mi 636.7, persons per sq km 245.8.

Urban-rural (2008): urban 53.3%; rural 46.7%.

Sex distribution (2009²): male 49.28%; female 50.72%.

Age breakdown (2009²): under 15, 27.9%; 15–29, 25.0%; 30–44, 23.8%; 45–59, 12.4%; 60–74, 7.1%; 75 and over, 3.8%.

Population projection: (2020) 2,818,000; (2030) 2,857,000.

Doubling time: 67 years.

Ethnic composition (2001): black 91.6%; mixed race 6.2%; East Indian 0.9%; Chinese 0.2%; white 0.2%; other/unknown 0.9%.

Religious affiliation (2001): Protestant 61.2%, of which Church of God 23.8%⁴, Seventh-day Adventist 10.8%, Pentecostal 9.5%; Roman Catholic 2.6%; other Christian 1.7%; Rastafarian 0.9%; nonreligious 20.9%; other 12.7%.

Major cities (2006): Kingston 585,300⁵; Spanish Town 148,800; Portmore 103,900; Montego Bay 82,700; Mandeville 47,700; May Pen 44,800.

Vital statistics

Birth rate per 1,000 population (2008): 16.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 6.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 10.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.30.

Marriage/divorce rates per 1,000 population (2008): 8.1/0.8.

Life expectancy at birth (2008): male 71.9 years; female 75.4 years.

Major causes of death per 100,000 population (2002): circulatory diseases 321, of which cerebrovascular disease 135; malignant neoplasms (cancers) 130; communicable diseases 106; diabetes 81.

National economy

Budget (2008–09). Revenue: J\$276,199,800,000 (tax revenue 89.1%; nontax revenue 5.8%; grants and other revenue 5.1%). Expenditures: J\$351,521,400,000 (public debt 35.6%; wages and salaries 31.7%; capital expenditures 11.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 2,000,000, fruit 415,000 (of which oranges 142,000), coconuts 170,000, yams 127,000, bananas 125,000, chicken meat 101,500, pumpkins, squash, and gourds 36,300, pimiento and allspice (2005) 10,400, coffee 2,700; livestock (number of live animals) 430,000 cattle, 12,500,000 chickens; roundwood 833,800 cu m, of which fuelwood 67%; fisheries production 22,164 (from aquaculture 25%). Mining and quarrying (2008): bauxite 14,697,000; alumina 3,991,000; limestone (2007) 2,950,000; gypsum 238,000. Manufacturing (2008): cement 724,600,000; animal feeds (2005) 367,600; sugar 140,000; flour 132,561; molasses 62,654; beer 859,870 hectolitres; rum [and other distilled spirits] 265,349 hectolitres; cigarettes (2005) 724,313,000 units. Energy production (consumption): electricity (kW-hr; 2006) 7,473,000,000 (7,473,000,000; hard coal (metric tons; 2006) none (32,000); crude petroleum (barrels; 2006) none (7,440,000); petroleum products (metric tons; 2006) 995,000 (3,806,000); natural gas, none (none).

Land use as % of total land area (2007): in temporary crops 16.1%, in permanent crops 10.2%, in pasture 21.1%, forest area 31.2%.

Population economically active (2008): total 1,302,400; activity rate of total population 48.4% (participation rates: ages 14 and over [2006] 64.6%; female 45.4%; unemployed 10.3%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	69.2	76.3	86.7	100.0	108.6	118.7	144.8

Gross national income (GNI; 2008): U.S.\$13,098,000,000 (U.S.\$4,870 per capita); purchasing power parity GNI (U.S.\$7,360 per capita).

Structure of gross domestic product and labour force

	2008			
	in value J\$'000,000	% of total value	labour force	% of labour force
Agriculture	50,078.5	4.9	222,600	17.1
Mining	16,239.5	1.6	9,200	0.7
Manufacturing	83,316.0	8.2	68,600	5.3
Construction	74,603.7	7.3	106,100	8.1
Public utilities	38,126.3	3.7	9,000	0.7
Transp. and commun.	96,394.5	9.5	81,300	6.2
Trade, hotels	232,399.0	22.8	265,200	20.4
Finance, real estate	179,379.5	17.6	77,800	6.0
Pub. admin., defense	108,674.5	10.7	326,600	25.1
Services	56,023.4	5.5		
Other	82,992.9 ⁶	8.2 ⁶	136,000 ⁷	10.4 ⁷
TOTAL	1,018,227.7 ⁸	100.0	1,302,400	100.0

Public debt (external, outstanding; May 2009): U.S.\$6,297,000,000.

Household income and expenditure. Average household size (2004) 3.5; average annual income per household: n.a.; sources of income: n.a.; expenditure (2006)⁹: food and nonalcoholic beverages 37.5%, housing/energy 12.8%, transportation 12.8%, restaurants and hotels 6.2%, household furnishings 4.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 1,984; remittances (2008–09) 1,860; foreign direct investment (2006–08 avg.) 1,062; official development assistance (2007) 26. Disbursements for (U.S.\$'000,000): tourism (2007) 298; remittances (2008–09) 262; foreign direct disinvestment (2005–07 avg.) –77.

Foreign trade¹⁰

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007 ¹¹
U.S.\$'000,000	–2,439	–2,422	–2,528	–3,370	–3,052	–3,916
% of total	52.5%	50.3%	47.3%	52.7%	39.6%	49.8%

Imports (2006): U.S.\$5,041,000,000 (petroleum 23.6%, machinery and apparatus 15.5%, food 12.5%, chemicals and chemical products 11.3%, road vehicles 6.1%). *Major import sources:* U.S. 36.8%; Trinidad and Tobago 11.5%; Venezuela 10.7%; Japan 4.2%; China 4.1%.

Exports (2006): U.S.\$1,989,000,000 (alumina 52.3%; refined petroleum 13.5%; food 12.0%, of which raw sugar 4.5%, vegetables and fruit 2.9%, coffee 1.5%; alcoholic beverages 4.2%). *Major export destinations:* U.S. 30.4%; Canada 15.6%; China 15.1%; U.K. 10.3%; Netherlands 7.0%.

Transport and communications

Transport. Railroads (2004): route length 125 mi, 201 km¹². Roads (2005): total length 13,379 mi, 21,532 km (paved 74%). Vehicles (2004): passenger cars 357,660; trucks and buses 128,239. Air transport (2006)¹³: passenger-km 3,907,530,000; metric ton-km cargo 20,192,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,006	374	PCs	2005	179	68
Telephones				Dailies	2007	115 ¹⁴	43 ¹⁴
Cellular	2008	2,723 ¹⁵	1,006 ¹⁵	Internet users	2008	1,540	569
Landline	2008	317	117	Broadband	2008	98 ¹⁵	36 ¹⁵

Education and health

Educational attainment (2001). Percentage of population age 15 and over having: no formal schooling 0.9%; primary education 25.5%; secondary 55.5%; higher 12.3%, of which university 4.2%; other/unknown 5.8%. *Literacy* (2007): population age 15 and over literate 86.0%; males 80.5%; females 91.1%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	11,793	326,411	27.7	90
Secondary/Voc. (age 12–16)	13,336	246,332	18.5	78
Tertiary ¹⁶	2,006	45,770	22.8	19 (age 17–21)

Health: physicians (2005) 2,253 (1 per 1,176 persons); hospital beds (2006) 5,326 (1 per 500 persons); infant mortality rate (2008) 15.6; undernourished population (2002–04) 250,000 (9% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2008): 2,830 (army 88.3%, coast guard 6.7%, air force 5.0%). *Military expenditure as percentage of GDP* (2007): 1.0%; per capita expenditure U.S.\$40.

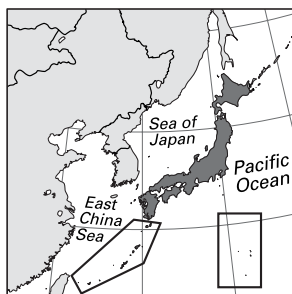
¹All seats appointed by Governor-General. ²January 1. ³The parishes of Kingston and Saint Andrew are jointly administered from the Half Way Tree section of Saint Andrew. ⁴Includes numerous denominations. ⁵Urban population of the amalgamated Kingston and St. Andrew parishes. ⁶Taxes on products less subsidies and less imputed bank service charges. ⁷Includes 1,400 not adequately defined and 134,600 unemployed. ⁸Detail does not add to total given because of rounding. ⁹Weights of consumer price index components. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Excludes December. ¹²Inoperable since 1992 except for 35-mi (57-km) section leased to a mining operator. ¹³Air Jamaica only. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶2002–03.

Internet resources for further information:

- Statistical Institute of Jamaica <http://www.statinja.gov.jm>
- Bank of Jamaica <http://www.boj.org.jm>

Japan

Official name: Nihon, or Nippon (Japan).
Form of government: constitutional monarchy with a national Diet consisting of two legislative houses (House of Councillors [242]; House of Representatives [480]).
Symbol of state: Emperor.
Head of government: Prime Minister.
Capital: Tokyo.
Official language: Japanese.
Official religion: none.
Monetary unit: yen (¥); valuation (Sept. 1, 2009) 1 U.S.\$ = ¥93.11; 1 £ = ¥151.07.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2007 estimate
Prefectures				
Chūbu		25,786	66,786	21,819,000
Aichi	Nagoya	1,991	5,156	7,360,000
Fukui	Fukui	1,617	4,189	816,000
Gifu	Gifu	4,092	10,598	2,104,000
Ishikawa	Kanazawa	1,616	4,185	1,170,000
Nagano	Nagano	5,245	13,585	2,180,000
Niigata	Niigata	4,858	12,582	2,405,000
Shizuoka	Shizuoka	3,003	7,779	3,801,000
Toyama	Toyama	1,640	4,247	1,106,000
Yamanashi	Kōfu	1,724	4,465	877,000
Chūgoku		12,322	31,913	7,631,000
Hiroshima	Hiroshima	3,273	8,477	2,873,000
Okayama	Okayama	2,746	7,112	1,953,000
Shimane	Matsue	2,590	6,707	731,000
Tottori	Tottori	1,354	3,507	600,000
Yamaguchi	Yamaguchi	2,359	6,110	1,474,000
Hokkaidō		32,221	83,453	5,570,000
Hokkaidō	Sapporo	32,221	83,453	5,570,000
Kantō		12,522	32,432	41,825,000
Chiba	Chiba	1,991	5,156	6,098,000
Gumma	Maebashi	2,457	6,363	2,016,000
Ibaraki	Mito	2,354	6,096	2,969,000
Kanagawa	Yokohama	932	2,415	8,880,000
Saitama	Saitama	1,466	3,797	7,090,000
Tochigi	Utsunomiya	2,474	6,408	2,014,000
Tokyo-to	Tokyo	848	2,197	12,758,000
Kinki		12,783	33,108	22,737,000
Hyōgo	Kōbe	3,240	8,392	5,589,000
Kyōto-fu	Kyōto	1,781	4,613	2,635,000
Mie	Tsu	2,230	5,776	1,876,000
Nara	Nara	1,425	3,691	1,410,000
Osaka-fu	Osaka	731	1,893	8,812,000
Shiga	Ōsu	1,551	4,017	1,396,000
Wakayama	Wakayama	1,825	4,726	1,019,000
Kyūshū		17,157	44,436	14,659,000
Fukuoka	Fukuoka	1,919	4,971	5,056,000
Kagoshima	Kagoshima	3,547	9,187	1,730,000
Kumamoto	Kumamoto	2,859	7,404	1,828,000
Miyazaki	Miyazaki	2,986	7,734	1,143,000
Nagasaki	Nagasaki	1,580	4,092	1,453,000
Ōita	Ōita	2,447	6,338	1,203,000
Okinawa	Naha	877	2,271	1,373,000
Saga	Saga	942	2,439	859,000
Shikoku		7,259	18,802	4,040,000
Ehime	Matsuyama	2,192	5,676	1,452,000
Kagawa	Takamatsu	724	1,876	1,006,000
Kōchi	Kōchi	2,743	7,105	782,000
Tokushima	Tokushima	1,600	4,145	800,000
Tohoku		25,825	66,886	9,504,000
Akita	Akita	4,483	11,612	1,121,000
Aomori	Aomori	3,709	9,606	1,407,000
Fukushima	Fukushima	5,321	13,782	2,067,000
Iwate	Morioka	5,899	15,278	1,364,000
Miyagi	Sendai	2,813	7,285	2,347,000
Yamagata	Yamagata	3,600	9,323	1,198,000
TOTAL		145,898 ¹	377,873 ¹	127,771,000

Demography

Population (2009): 127,556,000².
Density (2009): persons per sq mi 874.2, persons per sq km 337.5.
Urban-rural (2005): urban 66.0%; rural 34.0%.
Sex distribution (2009³): male 48.72%; female 51.28%.
Age breakdown (2009³): under 15, 13.4%; 15–29, 16.2%; 30–44, 21.1%; 45–59, 19.4%; 60–74, 19.3%; 75–84, 7.8%; 85 and over, 2.8%.
Population projection: (2020) 124,054,000; (2030) 117,794,000.
Composition by nationality (2004): Japanese 98.5%; Korean 0.5%; Chinese 0.4%; Brazilian 0.2%; other 0.4%.
Immigration/Emigration (2006⁴): permanent immigrants/registered aliens in Japan 2,084,919, from North and South Korea 28.7%, from Taiwan, Hong Kong, Macau, and China 26.9%, from Brazil 15.0%, from the Philippines 9.3%, from Peru 2.8%, from the U.S. 2.5%, from Thailand 1.9%, from Vietnam 1.6%, other 11.3%. Japanese nationals living abroad 1,063,695, in the U.S. 34.8%, in China 11.8%, in Brazil 6.1%, in the U.K. 5.7%, in Australia 5.6%, in Thailand 3.8%, in Germany 3.2%, other 29.0%. Permanent expatriates (including those with dual nationality) 328,317, of which living in the U.S. 37.6%, in Brazil 19.1%, in Australia 8.5%, in Canada 8.3%.
Major cities (2008⁵): Tokyo 8,731,000; Yokohama 3,648,000; Ōsaka 2,651,000; Nagoya 2,246,000; Sapporo 1,898,000; Kōbe 1,533,000; Kyōto 1,467,000; Fukuoka 1,437,000; Kawasaki 1,388,000; Saitama 1,210,000; Hiroshima 1,166,000; Sendai 1,031,000; Kita-Kyūshū 985,000.

Major metropolitan areas (2007): Tokyo 35,676,000; Ōsaka-Kōbe 11,294,000; Nagoya 3,230,000; Fukuoka-Kita-Kyūshū 2,792,000; Sapporo 2,544,000; Sendai 2,250,000; Hiroshima 2,045,000; Kyōto 1,805,000.

Other principal cities (2007)⁶

city	population	city	population	city	population
Akita	328,723	Kawagoe	328,917	Okayama	683,258
Amagasaki	458,958	Kawaguchi	484,902	Okazaki	360,008
Aomori	311,101	Kōchi	326,322	Ōtsu	325,413
Asahikawa	357,182	Koriyama	334,224	Sagamihara	688,385
Chiba	910,142	Koshigaya	314,979	Sakai	831,715
Fujisawa	396,123	Kumamoto	662,565	Shizuoka	711,882
Fukuyama	463,438	Kurashiki	471,401	Suita	346,020
Funabashi	576,384	Kurume	304,785	Takamatsu	422,428
Gifu	413,099	Machida	408,535	Takasaki	341,197
Hachioji	539,679	Maebashi	319,338	Takatsuki	356,076
Hamamatsu	788,078	Matsudo	470,765	Tokorozawa	355,705
Higashi-Ōsaka	492,473	Matsuyama	513,902	Toyama	417,591
Himeji	532,853	Miyazaki	370,620	Toyohashi	362,887
Hirakata	404,944	Nagano	379,125	Toyonaka	388,227
Ichikawa	454,923	Nagasaki	452,064	Toyota	401,120
Ichinomiya	375,630	Naha	312,938	Utsunomiya	500,211
Iwaki	357,026	Nara	367,902	Wakayama	383,699
Kagoshima	601,122	Niigata	803,791	Yokkaichi	302,983
Kanazawa	441,681	Nishinomiya	462,044	Yokosuka	428,889
Kashiwa	381,999	Ōita	464,018		

Religious affiliation (2003): Shintō and related beliefs 84.2%⁷; Buddhism and related beliefs 73.6%⁷; Christian 1.7%; Muslim 0.1%; other 7.8%.

Households (2007). Total households (2006) 47,531,000; average household size 2.6; composition of households 1 person 28.2%, 2 persons 28.0%, 3 persons 18.5%, 4 persons 16.2%, 5 persons 6.1%, 6 or more persons 3.0%. Family households (2006) 32,351,000 (68.1%); nonfamily 15,180,000 (31.9%).

Type of household (2003)

Total number of occupied dwelling units: 46,863,000

	number of dwellings	percentage of total
by kind of dwelling		
exclusively for living	45,258,000	96.6
mixed use	1,523,600	3.3
combined with nondwelling	81,400	0.2
detached house	26,491,000	56.5
apartment building	18,733,000	40.0
tenement (substandard or overcrowded building)	1,483,000	3.2
other	156,000	0.3
by legal tenure of householder		
owned	28,666,000	61.2
rented	17,166,000	36.6
other	1,031,000	2.2
by kind of amenities		
flush toilet	41,407,600	88.4
bathroom	44,824,700	95.6
by year of construction		
1950 and earlier	2,188,300	4.7
1951–70	5,866,100	12.5
1971–80	9,541,400	20.4
1981–90	11,519,900	24.6
1991–2000	12,762,900	27.2
2001–2003 (Sept.)	2,786,200	5.9
not reported	2,198,200	4.7

Mobility (2007). Percentage of total population moving: within a prefecture 2.3%; between prefectures 2.0%.

Vital statistics

Birth rate per 1,000 population (2008): 8.6 (world avg. 20.3).
Death rate per 1,000 population (2008): 8.8 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): –0.2 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2008): 1.37.
Marriage/divorce rates per 1,000 population (2008): 5.8 (average age at first marriage, men 30.2 years; women 28.5 years)/2.0.
Life expectancy at birth (2008): male 79.3 years; female 86.1 years.
Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) 303.6; heart disease 158.4; cerebrovascular disease 114.6; pneumonia 99.4; accidents 34.3; suicide 27.8; renal failure 19.5; diseases of the liver 14.6; pulmonary disease 13.4; diabetes mellitus 12.6.

Social indicators

Educational attainment (2007). Percentage of population ages 25–64 having: no formal schooling through upper secondary education 59%; higher vocational 18%; university 23%.

Distribution of income (2000)

percentage of average household income by quintile				
1	2	3	4	5 (highest)
11.2	15.3	18.7	23.0	31.7

Quality of working life. Average hours worked per week (2008): 40.7. Annual rate of deaths/nonfatal injuries per 100,000 workers (2008): 1.9/177.5. Proportion of labour force insured for damages or income loss resulting from injury, permanent disability, and death (2005): 53.1%. Average man-days lost to labour stoppages per 1,000 workdays (2006): 1.8. Average duration of journey to work⁸ (2003): 34.2 minutes.

Access to services (2004). Proportion of households having access to: safe public water supply 96.9%; public sewage system c. 68%.

Social participation. Eligible voters participating in last national election (August 2009): 69%. Adult population working as volunteers at least once

in the year (2006) 26.2%. Trade union membership in total workforce (2007): 15.1%.

Social deviance (2005). Offense rate per 100,000 population for: homicide 1.0; robbery 3.0; larceny and theft 151.6. Incidence in general population of: alcoholism per 100,000 population, n.a.; drug and substance abuse 0.1. Rate of suicide per 100,000 population (2007): 24.1.

Leisure/use of personal time

Discretionary daily activities (2006)

(Population age 10 years and over)

	weekly average hrs./min.
Total discretionary daily time	6:23
of which	
Hobbies and amusements	0:45
Sports	0:15
Learning (except schoolwork)	0:12
Social activities	0:22
Radio, television, newspapers, and magazines	2:24
Rest and relaxation	1:25
Other activities	1:00

Favourite sports according to the rates of participation (2006): males—bowling 27.2%, jogging/marathon 26.8%, fishing 20.8%, baseball 17.6%, stretching 15.7%, golf 14.9%; females—stretching 22.0%, bowling 18.6%, jogging/marathon 17.0%, swimming in pool 15.3%.

Favourite amusements according to the rates of participation (2006): males—lotteries 43.7%, karaoke 41.6%, home video games 34.3%; females—lotteries 39.8%, karaoke 36.4%, card games 27.3%.

Favourite hobbies according to the rates of participation (2006): average for both sexes—personal computer-related activities c. 37%, listening to music c. 33%, gardening c. 29%.

Favourite excursions according to the rates of participation (2006): average for both sexes—taking part in domestic sightseeing tours c. 52%, going for a drive c. 46%, visiting zoos, museums, aquariums, or botanical gardens c. 34%, visiting amusement parks c. 25%, picnicking/hiking c. 24%.

Material well-being (2003–04). Households possessing: automobile 81.6%; air conditioner (2002) 87.2%; personal computer 77.5%.

National economy

Gross national income (GNI; 2008): U.S.\$4,879,171,000,000 (U.S.\$38,210 per capita); purchasing power parity GNI (U.S.\$35,220 per capita).

Structure of gross domestic product and labour force

	2007		2008 ³	
	in value ¥'000,000,000	% of total value	labour force	% of labour force
Agriculture, fishing	7,402	1.4	2,900,000	4.4
Mining	408	0.1	30,000	0.1
Manufacturing	108,696	21.1	11,450,000	17.2
Construction	31,019	6.0	5,430,000	8.1
Public utilities	10,206	2.0	300,000	0.4
Transportation and communications	33,721	6.5	5,290,000	7.9
Trade, hotels	68,835	13.4	14,310,000	21.5
Finance, real estate	95,634	18.5	2,520,000	3.8
Pub. admin., defense	47,898	9.3	2,310,000	3.5
Services	123,997	24.0	18,810,000	28.2
Other	-12,012 ⁹	-2.3 ⁹	3,270,000 ¹⁰	4.9 ¹⁰
TOTAL	515,804	100.0	66,620,000	100.0

Budget (2007–08)¹¹. Revenue: ¥83,000,000,000,000 (government bonds 30.5%; corporation tax 20.1%; income tax 19.6%; VAT 12.8%). Expenditures: ¥83,000,000,000,000 (social security 26.2%; debt service 24.3%; public works 8.1%; education and science 6.4%; national defense 5.8%).

Public debt (July 2009): U.S.\$8,602,560,000,000.

Financial aggregates

	2002	2003	2004	2005	2006	2007	2008
Exchange rate ⁴ , ¥ per:							
U.S. dollar	119.90	107.10	104.12	117.97	118.95	114.00	90.75
£	193.26	191.14	201.09	203.12	233.49	228.39	132.29
SDR	163.01	159.15	161.70	168.61	178.95	180.15	139.78
International reserves (U.S.\$)							
Total (excl. gold; '000,000)	461,186	663,289	833,891	834,275	879,682	952,784	1,009,365
SDRs ('000,000)	2,524	2,766	2,839	2,584	2,812	3,033	3,032
Reserve pos. in IMF ('000,000)	7,203	7,733	6,789	2,877	1,934	1,395	2,658
Foreign exchange ('000,000)	451,458	652,790	824,264	828,813	874,936	948,356	1,003,674
Gold ('000,000 fine troy oz)	24.60	24.60	24.60	24.60	24.60	24.60	24.60
% world reserves	...	...	...	2.5	2.5	2.6	2.6
Interest and prices							
Central bank discount (%)	0.10	0.10	0.10	0.10	0.40	0.75	0.30
Govt. bond yield (%)	1.25	1.01	1.50	1.36	1.73	1.65	1.45
Share prices (2005 = 100)	77.2	72.3	88.1	100.0	128.2	131.1	93.5
Balance of payments (U.S.\$'000,000,000)							
Balance of visible trade	+93.83	+106.40	+132.13	+93.96	+81.30	+104.75	+38.13
Imports, f.o.b.	-301.75	-342.72	-406.87	-473.61	-534.51	-573.34	-708.34
Exports, f.o.b.	395.58	449.12	539.00	567.57	615.81	678.09	746.47
Balance of invisibles	+18.82	+29.82	+39.93	+71.82	+89.22	+105.74	+118.50
Balance of payments, current account	+112.45	+136.22	+172.06	+165.78	+170.52	+210.49	+156.63

Household income and expenditure. Average household size (2007) 2.6; average annual income per household (2004) ¥6,380,280 (U.S.\$58,970); sources of income (1994): wages and salaries 59.0%, transfer payments 20.5%, self-employment 12.8%, other 7.7%; expenditure (2007)¹²: food 23.0%, transportation and communications 12.8%, culture and recreation 10.4%, fuel, light, and water charges 7.3%, housing 6.0%, medical care 4.4%, clothing and footwear 4.3%, education 4.3%, furniture and household utensils 3.3%.

Energy production (consumption): electricity (kW-hr; 2008) 990,864,000,000 ([2007] 959,660,000,000); coal (metric tons; 2007) 1,340,000¹³ ([2006] 179,075,000); crude petroleum (barrels; 2008) 6,180,000 ([2006] 1,461,000,000); petroleum products (metric tons; 2006) 169,502,000 (173,182,000); natural gas (cu m; 2008) 3,864,000,000 ([2006] 92,352,000,000). Composition of energy supply by source (2002): crude oil and petroleum products 49.7%, coal 19.5%, natural gas 13.5%, nuclear power 11.6%, hydroelectric power 3.2%, solar power and other new energy supplies 2.4%, geothermal 0.1%.

Population economically active (2008⁸): total 66,620,000; activity rate of total population 52.2% (participation rates: ages 15 and over, 60.3%; female 41.7%; unemployed [September 2008–August 2009] 4.7%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	100.5	100.3	100.3	100.0	100.2	100.3	101.7
Monthly earnings index	99.4	99.4	99.4	100.0	100.6	102.3	101.4

Retail and wholesale trade (2004)

	no. of establish- ments	avg. no. of em- ployees	annual sales (¥'000,000,000)
Retail trade	1,238,296	7,767,000	133,285
Food and beverages	444,693	3,154,000	41,434
Grocery	38,536	855,000	17,099
Liquors	60,194	177,000	3,330
General merchandise	5,555	541,000	16,897
Department stores	1,982	517,000	16,392
Motor vehicles and bicycles	87,009	542,000	16,189
Furniture and home furnishings	115,135	517,000	11,371
Apparel and accessories	177,881	698,000	11,009
Gasoline service stations	62,557	400,000	10,937
Books and stationery	54,338	636,000	4,745
Wholesale trade	375,378	3,805,000	405,646
Machinery and equipment	89,913	1,018,000	98,795
Motor vehicles and parts	18,078	180,000	15,109
General machinery except electrical	33,075	308,000	24,043
General merchandise	1,245	38,000	49,031
Farm, livestock, and fishery products	39,520	406,000	42,628
Food and beverages	45,069	482,000	43,819
Building materials	84,063	712,000	87,387
Minerals and metals	17,063	185,000	40,962
Chemicals	15,191	151,000	20,940
Textiles, apparel, and accessories	30,322	307,000	18,898
Drugs and toilet goods	18,709	245,000	22,023

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 10,970,000, sugar beets 4,025,000, potatoes 2,650,000, cabbages 2,390,000, sugarcane 1,275,000, dry onions 1,165,000, sweet potatoes 1,000,000, wheat 858,000, tangerines and mandarin oranges 853,000, apples 850,000, carrots 750,000, tomatoes 750,000, cucumbers 634,000, green onions 560,000, lettuce 560,000, eggplant 375,000, pears 325,000, spinach 302,000, persimmons 240,000, pumpkins 237,000, soybeans 235,000, grapes 215,000, yams 205,000, taro 195,000, strawberries 193,000, peaches 150,000, chilies 150,000, cauliflower 132,000, apricots 125,000, tea 95,000, mushrooms 67,000, ginger 42,000, chestnuts 24,000, cherries 22,000; livestock (number of live animals) 9,759,000 pigs, 4,398,000 cattle, 288,511,000 chickens; roundwood 17,750,500 cu m, of which fuelwood 1%; fisheries production¹⁴ (2008) 5,588,000, of which mackerel 514,000, bonito 304,000, squid 291,000, tuna 217,000, pollack 212,000 (from aquaculture [including aquatic plants] 21% [of which laver 338,000, oysters 190,000, yellowtail 158,000, wakame 55,000, pearls 25,000]); whales caught (2005) 815. Mining and quarrying (2007): limestone 165,982,000; silica (industrial sand and gravel) 4,600,000 [world rank: 9]; dolomite 3,655,000; pyrophyllite 345,000; magnesium 12,000; iodine 8,700 [world rank: 2]; silver 11,000 kg; gold 8,869 kg.

Manufacturing enterprises (2005)

	avg. no. of persons engaged	annual wages as a % of avg. of all mfg. wages	value added (U.S.\$'000,000)
Food products	1,067,940	60.5	80,059
Paints, soaps, and pharmaceuticals	203,164	148.4	65,407
Motor vehicle parts	533,865	142.9	61,424
Special purpose machinery	481,666	101.0	58,629
Motor vehicles	157,138	220.1	56,461
Iron and steel	136,210	167.6	47,941
General purpose machinery	376,192	117.2	45,210
Plastics	393,660	79.3	39,458
Fabricated metal products (not structural)	433,195	77.8	39,340
Electronic valves and tubes	247,858	148.4	37,958
Television and radio receivers, sound or video equipment	268,461	128.0	36,464
Base chemicals	105,820	174.1	33,896
Printing	328,159	76.0	29,260
Publishing	...	...	...
Structural metal products	259,709	66.5	24,878
Bricks, cement, and ceramics	220,148	63.8	24,306
Paper and paper products	197,817	90.7	23,363
Medical appliances and instruments	155,601	117.2	19,779
Beverages	64,097	97.0	18,609
Office machines and computers	118,012	142.7	15,170
Domestic appliances	83,741	115.5	12,493
Rubber products	108,272	108.8	11,985
Electricity distribution and control apparatus	114,290	107.8	10,216

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 9,345; remittances (2008) 1,929; foreign direct investment (FDI);

2005–07 avg.) 6,273. Disbursements for (U.S.\$'000,000): tourism (2007) 26,511; remittances (2008) 4,743; FDI (2005–07 avg.) 56,532.
Land use as % of total land area (2007): in temporary crops 10.1%, in permanent crops 0.9%, in pasture 1.7%, forest area 68.2%.

Foreign trade¹⁵

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
¥'000,000,000	+10,230	+12,023	+8,810	+7,869	+9,505	+2,580
% of total	10.3%	10.9%	7.2%	5.5%	6.1%	1.6%

Imports (2006): ¥67,345,000,000,000 (mineral fuels 27.9%, of which petroleum 20.1%, natural gas 5.3%, coal 2.5%; machinery and apparatus 21.1%, of which heavy machinery 4.8%, office machines/computers 4.6%, electronic integrated circuits and micro-assemblies 3.7%; food 7.4%, of which marine products 2.3%; chemicals and chemical products 7.1%; metal ores and metal scrap 4.2%; apparel and clothing accessories 4.1%; nonferrous base metals [particularly aluminum and platinum-group] 3.1%; professional/scientific equipment 2.7%; road vehicles 2.4%). *Major import sources*: China 20.5%; U.S. 12.0%; Saudi Arabia 6.4%; U.A.E. 5.5%; Australia 4.8%; South Korea 4.7%; Indonesia 4.2%; unspecified Asia (probably Taiwan) 3.5%; Germany 3.2%; Thailand 2.9%.

Exports (2006): ¥75,214,000,000,000 (machinery and apparatus 39.5%, of which microcircuits and transistors 6.5%, machinery specialized for particular industries 5.9%, general industrial machinery 5.4%, telecommunications equipment 5.2%, office machines/computers 3.7%, power-generating machinery 3.7%; road vehicles 21.6%, of which passenger cars 14.6%, parts for road vehicles 4.1%; chemicals and chemical products 8.9%; iron and steel 4.6%). *Major export destinations*: U.S. 22.8%; China 14.3%; South Korea 7.8%; unspecified Asia (probably Taiwan) 6.8%; Hong Kong 5.6%; Thailand 3.5%; Germany 3.2%; Singapore 3.0%; U.K. 2.4%; Netherlands 2.3%.

Trade by commodity group (2007)				
SITC group	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
00 Food and live animals	45,475	7.3	...	...
01 Beverages and tobacco	5,852	0.9	...	...
02 Crude materials, excluding fuels	49,539	8.0	8,953	1.3
03 Mineral fuels, lubricants, and related materials	172,785	27.8	9,280	1.3
04 Animal and vegetable oils, fats, and waxes	...	...	...	...
05 Chemicals and related products, n.e.s.	45,521	7.3	65,191	9.1
06 Basic manufactures	60,475	9.7	83,628	11.7
07 Machinery and transport equipment	150,712	24.2	451,952	63.3
08 Miscellaneous manufactured articles	79,539	12.8	52,492	7.3
09 Goods not classified by kind/remainder	12,345	2.0	42,831	6.0
TOTAL	622,243	100.0	714,327	100.0

Direction of trade (2007)				
	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
Africa	14,768	2.4	11,492	1.6
Asia	383,453	61.6	374,138	52.4
Eastern Asia	176,592	28.4	247,800	34.7
Southeastern Asia	87,134	14.0	87,168	12.2
Western Asia	101,513	16.3	28,345	4.0
Australia	31,252	5.0	14,203	2.0
Europe (excl. Russia)	72,021	11.6	108,971	15.2
Russia	10,563	1.7	10,770	1.5
North America	82,464	13.2	156,223	21.9
Latin America and Caribbean	22,797	3.7	33,266	4.7
REMAINDER	4,925	0.8	5,264	0.7
TOTAL	622,243	100.0	714,327	100.0

Transport and communications

Transport. Railroads: length (2004) 14,650 mi, 23,577 km; (2006) passengers carried 22,243,000; (2007) passenger-km 395,908,000,000; (2007) metric ton-km cargo 23,191,000,000. Roads (2006): total length 743,780 mi, 1,197,000 km (paved 79%). Vehicles (2008¹⁶): passenger cars 57,617,000; trucks and buses 16,490,000. Air transport (2007): passengers carried 112,543,000; passenger-km 162,954,000,000; metric ton-km cargo 9,449,850,000.

Distribution of traffic (2006)			
	cargo carried ('000,000 tons)	% of national total	passengers carried ('000,000)
Road	4,961	91.4	65,944
Rail (intercity)	52	1.0	22,243
Inland water	414	7.6	...
Air	2	0.0	114
TOTAL	5,429	100.0	88,301

Urban transport (2000)¹⁷: passengers carried 57,719,000, of which by rail 34,020,000, by road 19,466,000, by subway 4,233,000.

Communications					
Medium	date	number in '000s	units per 1,000 persons	Medium	date
Televisions	2003	107,527	842	PCs	2005
Telephones				Dailies	2007
Cellular	2008	110,395 ¹⁹	864 ¹⁹	Internet users	2007
Landline	2007	51,232	401	Broadband	2008

Radio and television broadcasting (2003): total radio stations 1,612, of which commercial 723; total television stations 15,021, of which commercial 8,276. Commercial broadcasting hours (by percentage of programs): reports—radio 12.3%, television 19.8%; education—radio 2.4%, television 12.3%; culture—radio 13.3%, television 25.1%; entertainment—radio 69.3%, television 37.5%. Advertisements (daily average): radio 149, television 445.

Other communications media (2005–06)

titles		titles	
Print	Books (new)	77,074	
	of which		
	Social sciences	16,652	
	Fiction	12,309	
	Arts	10,974	
	Engineering	8,164	
	Natural sciences	6,303	
	History	5,040	
	Philosophy	3,688	
	Magazines/journals	4,540	
Cinema (2005)	Feature films	731	
	Domestic	356	
	Foreign	375	
			traffic ('000)
Post (2006–07)	Postal offices	24,574	
	Mail	22,558,800	
	Domestic	22,284,200	
	International	274,600	
	Parcels	2,320,700	
	Domestic	2,317,400	
	International	3,300	

Education and health

Literacy: total population age 15 and over literate, virtually 100%.

Education (2005–06)				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	386,443	7,229,135	18.7	100
Secondary/Voc. (age 12–17)	609,557	7,561,241	12.4	99
Tertiary	511,246	4,084,861	8.0	57 (age 18–22)

Health (2006): physicians 275,127 (1 per 464 persons); dentists 95,944 (1 per 1,332 persons); nurses and assistant nurses 1,194,129 (1 per 107 persons); pharmacists 234,429 (1 per 545 persons); midwives (2004) 25,257 (1 per 5,059 persons); hospital beds (2007) 1,620,173 (1 per 79 persons); infant mortality rate per 1,000 live births (2008) 2.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 230,300 (army 60.1%, navy 19.1%, air force 19.8%, central staff 1.0%); reserve 41,800. U.S. troops (December 2008) 34,039²⁰. *Military expenditure as percentage of GDP* (2008): 0.9%; per capita expenditure U.S.\$370.

¹Region areas do not sum to total given because of particular excluded inland water areas; total area per 2007 survey equals 145,920 sq mi (377,930 sq km). ²July 1 estimate. ³August 1. ⁴End of year. ⁵September 1. ⁶April 1. ⁷Many Japanese practice both Shintōism and Buddhism. ⁸Based on labour force survey. ⁹Statistical discrepancy and import duties less imputed bank service charges and less consumption taxes for gross capital formation. ¹⁰Includes 710,000 not adequately defined and 2,560,000 unemployed. ¹¹Budgeted funds for General Account. ¹²Households with two or more persons. ¹³All major coal mines were closed by 2002 but 8 smaller mines were still operational in 2007. ¹⁴Fisheries production (2007) 4,977,047 (from aquaculture 15%); aquatic plants production (2007) 617,100 (from aquaculture 83%). ¹⁵Imports c.i.f.; exports f.o.b. ¹⁶May 1. ¹⁷Tokyo, Nagoya, and Ōsaka metropolis traffic range only. ¹⁸Circulation of daily newspapers. ¹⁹Subscribers. ²⁰Includes 2,850 troops deployed in Afghanistan and Iraq.

Internet resources for further information:

- Bank of Japan <http://www.boj.or.jp/en/index.htm>
- Statistics Bureau and Statistical Research and Training Institute <http://www.stat.go.jp/english/index.htm>

Jersey

Official name: Bailiwick of Jersey.
Political status: crown dependency (United Kingdom) with one legislative house (Assembly of the States of Jersey [58]¹).

Chief of state: British Monarch represented by Lieutenant Governor.

Head of government: Chief Minister² assisted by the Council of Ministers.

Capital: Saint Helier.

Official language: English³.

Official religion: none.

Monetary unit: Jersey pound (£J); valuation (Sept. 1, 2009) 1 Jersey pound = U.S.\$1.62; at par with the British pound.



Area and population	area		population
	sq mi	sq km	2001 census
Parishes			
Grouville	3.0	7.8	4,702
St. Brelade	4.9	12.8	10,134
St. Clement	1.6	4.2	8,196
St. Helier	4.1	10.6	28,310
St. John	3.4	8.7	2,618
St. Lawrence	3.7	9.5	4,702
St. Martin	3.8	9.9	3,628
St. Mary	2.5	6.5	1,591
St. Ouen	5.8	15.0	3,803
St. Peter	4.5	11.6	4,293
St. Saviour	3.6	9.3	12,491
Trinity	4.7	12.3	2,718
TOTAL	45.6	118.2	87,186

Demography

Population (2009): 92,300.

Density (2009): persons per sq mi 2,024, persons per sq km 780.9.

Urban-rural (2005)⁴: urban 30.9%, rural 69.1%.

Sex distribution (2008): male 49.27%; female 50.73%.

Age breakdown (2008): under 15, 16.4%; 15–29, 16.1%; 30–44, 22.7%; 45–59, 22.6%; 60–74, 15.0%; 75–89, 6.5%; 90 and over, 0.7%.

Population projection: (2020) 98,000; (2030) 98,000.

Population by place of birth (2008)⁵: Jersey 48.5%; United Kingdom, Guernsey, or Isle of Man 39.7%; Portugal 3.7%; Poland 0.8%; other 7.3%.

Religious affiliation (2000)⁴: Christian 86.0%, of which Anglican 44.1%, Roman Catholic 14.6%, other Protestant 6.9%, unaffiliated Christian 20.1%; nonreligious/atheist 13.4%; other 0.6%.

Major cities (2001)⁶: St. Helier 28,310; St. Saviour 12,491; St. Brelade 10,134.

Vital statistics

Birth rate per 1,000 population (2008): 10.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 2.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.57.

Marriage/divorce rates per 1,000 population (2001): 7.6/3.2.

Life expectancy at birth (2008): male 77.1 years; female 82.3 years.

Major causes of death per 100,000 population (2003–06 avg.): diseases of the circulatory system c. 298, malignant neoplasms (cancers) c. 233, diseases of the respiratory system c. 122, accidents and violence c. 38, diseases of the digestive system c. 38.

National economy

Budget (2008). Revenue: £J 630,000,000 (income tax 74.6%; import duties 7.9%; VAT 5.2%; stamp duties 3.7%; other 8.6%). Expenditures: £J 669,000,000 (current expenditure 78.6%; capital expenditure 21.4%).

Production. Agriculture, forestry, fishing (value of export crops in £J '000; 2007): potatoes 23,300, tomatoes 4,100, other fruits and vegetables 1,600, flowers (2004) 900; livestock (number of live animals; 2002) 3,970 mature dairy cattle; roundwood, none; fisheries production (metric tons) 2,501 (including whelks 545, brown crabs 412, scallops 372, lobsters 155; from aquaculture 32% [including oysters 737]). Mining and quarrying: n.a. Manufacturing: light industry, mainly electrical goods, textiles, and clothing. Energy production (consumption): electricity (kW-hr; 2008) 38,390,600 (651,821,000); crude petroleum, none (n.a.); petroleum products (metric tons; 2008) n.a. (102,586); natural gas, none (n.a.).

Gross national income (2008): c. U.S.\$5,790,000,000 (c. U.S.\$63,400 per capita).

Structure of gross value added ⁷ and labour force	2008		2007	
	in value £J '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	56	1.3	1,560	2.9
Mining and quarrying	...	...	...	...
Construction	224	5.2	5,090	9.5
Manufacturing	56	1.3	1,510	2.8
Public utilities	41	1.0	520	1.0
Transp. and commun.	164	3.8	2,660	5.0
Trade, hotels, restaurants	385	8.9	13,150	24.7
Finance, real estate ⁸	3,090	71.7	16,930	31.7
Pub. admin., defense	294	6.8	6,630	12.4
Services	...	...	4,980	9.3
Other	...	...	320 ⁹	0.6 ⁹
TOTAL	4,310⁷	100.0	53,360¹⁰	100.0¹⁰

Household income and expenditure. Average household size (2007) 2.3; median annual household income (2004–05) £J 34,000 (U.S.\$62,100); sources of income: n.a.; expenditure (2004–05): housing 29.2%, recreation 14.2%, transportation 11.6%, food 9.8%, restaurants and hotels 5.8%, household furnishings 5.5%.

Population economically active (2008): total 54,210; activity rate of total population c. 59% (participation rates: ages 15–64 [male], 15–59 [female] c. 85%; female c. 48%; unemployed 1.2%).

Price and earnings indexes (2005 = 100)							
	2003	2004	2005	2006	2007	2008	2009
Consumer price index ¹¹	92.1	96.5	100.0	102.9	107.3	113.4	113.0
Weekly earnings index	92.5	96.2	100.0	103.8	109.4	113.2	...

Public debt: none.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 467; remittances, n.a.; foreign direct investment (FDI), n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.

Land use as % of total land area (1997): in temporary and permanent crops c. 29%, in pasture c. 22%; overall forest area (2005) 4.1%⁴.

Foreign trade

Imports: ¹²Major import sources (2007): mostly the United Kingdom.

Exports: ¹²agricultural and marine exports (2007): £J 34,435,000 (potatoes 67.7%, greenhouse tomatoes 11.9%, lobsters 5.5%, flowers 3.3%, zucchini 2.0%). **Major export destinations:** mostly the United Kingdom.

Transport and communications

Transport. Railroads: none. Roads (1995): total length 346 mi, 557 km (paved 100%). Vehicles (2002): passenger cars 74,007; trucks and buses 12,957. Air transport (2008): 800,454 passenger arrivals.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2006 ¹³	...	...	PCs	2006 ¹⁴	...	...
Telephones	...	...	...	Dailies	2008	20 ¹⁵	220 ¹⁵
Cellular	2006	102 ¹⁶	1,148 ¹⁶	Internet users	2008	29	317
Landline	2008	74	810	Broadband	2008	...	...

Education and health

Educational attainment (2008)⁵. Percentage of male population (16–64), female population (16–59) having: no formal degree/unknown c. 20%; primary education, n.a.; secondary c. 55%; higher c. 25%. **Literacy** (2008): virtually 100%.

Education (2008)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	...	6,980	...	...
Secondary/Voc. (age 11–16)	...	6,328	...	...
Tertiary (age 17–21)

Health: physicians (2001) 174 (1 per 500 persons); hospital beds (2000) 651 (1 per 133 persons); infant mortality rate per 1,000 live births (2008) 4.8; undernourished population, n.a.

Military

Total active duty personnel (November 2008): none; defense is the responsibility of the United Kingdom.

¹Includes 53 elected officials and 5 ex officio members (4 of the 5 ex officio members have no voting rights). ²The first chief minister of Jersey was elected in December 2005. ³Until the 1960s French was an official language of Jersey and is still used by the court and legal professions; Jerriais, a Norman-French dialect, is spoken by a small number of residents. ⁴Includes Guernsey. ⁵Based on the Jersey Annual Social Survey 2008, comprising 1,859 people. ⁶Population of parishes. ⁷GNI for 2008 equals £J 4,000,000,000; gross value added total includes net interest income from bank profits, which are excluded from GNI calculations. ⁸In 2005 Jersey was an international finance centre with 49 banks and 906 administered investment funds; more than U.S.\$317,000,000,000 was deposited in the banks. ⁹Unemployed. ¹⁰Detail does not add to total given because of rounding. ¹¹June. ¹²Customs ceased recording imports and exports as of 1980. ¹³In 2006 98% of households had a television. ¹⁴In 2006 76% of households had a computer. ¹⁵Circulation of the *Jersey Evening Post*. ¹⁶Subscribers.

Internet resource for further information:

• **States of Jersey: Statistics**
<http://www.gov.je/statistics>

Jordan

Official name: Al-Mamlakah al-Urduniyah al-Hāshimiyah (Hashemite Kingdom of Jordan).

Form of government: constitutional monarchy with two legislative houses (Senate [55¹]; House of Representatives [110]).

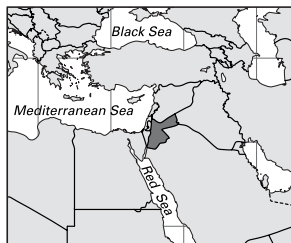
Head of state and government: King assisted by Prime Minister.

Capital: Amman.

Official language: Arabic.

Official religion: Islam.

Monetary unit: Jordanian dinar (JD); valuation (Sept. 1, 2009) JD 1.00 = U.S.\$1.41 = £0.87.



Area and population

Governorates	Capitals	area		population
		sq mi	sq km	2007 estimate
'Ajlūn	'Ajlūn	162	420	131,000
'Ammān	Amman	2,926	7,579	2,216,000
Al-'Aqabah	Al-'Aqabah	2,664	6,900	125,000
Al-Balqā'	As-Salt	432	1,119	383,000
Irbid	Irbid	607	1,572	1,019,000
Jarash	Jarash	158	410	172,000
Al-Karak	Al-Karak	1,349	3,495	223,000
Ma'ān	Ma'ān	12,677	32,832	109,000
Mādabā	Mādabā	363	940	143,000
Al-Mafraq	Al-Mafraq	10,248	26,541	269,000
At-Tafilah	At-Tafilah	853	2,209	80,000
Az-Zarqā'	Az-Zarqā'	1,838	4,761	853,000
TOTAL		34,277	88,778	5,723,000

Demography

Population (2009): 5,981,000², 3.

Density (2009): persons per sq mi 174.5, persons per sq km 67.4.

Urban-rural (2004): urban 82.6%; rural 17.4%.

Sex distribution (2008): male 51.05%; female 48.95%.

Age breakdown (2005): under 15, 37.2%; 15–29, 28.9%; 30–44, 20.7%; 45–59, 8.2%; 60–74, 4.2%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 7,105,000; (2030) 8,142,000.

Doubling time: 33 years.

Ethnic composition (2000): Arab 97.8%, of which Jordanian 32.4%, Palestinian 32.2%, Iraqi 14.0%, Bedouin 12.8%; Circassian 1.2%; other 1.0%.

Religious affiliation (2005): Sunni Muslim c. 95%; Christian c. 3%; other (mostly Shī'ī Muslim and Druze) c. 2%.

Major cities (2004): Amman 1,036,330; Az-Zarqā' 395,227; Irbid 250,645; Ar-Ruṣayfah 227,735; Al-Quwaysimah 135,500; Wādī as-Sir 122,032.

Vital statistics

Birth rate per 1,000 population (2007): 28.0 (world avg. 20.3).

Death rate per 1,000 population (2007): 7.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 21.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.50.

Marriage/divorce rates per 1,000 population (2007): 10.6/2.1.

Life expectancy at birth (2008): male 71.6 years; female 74.4 years.

Major causes of death per 100,000 population: n.a.

National economy

Budget (2007). Revenue: JD 3,971,500,000 (tax revenue 75.4%, of which taxes on goods and services 39.5%, taxes on corporations 10.0%, customs duties 9.3%, property taxes 7.7%; nontax revenue 15.5%; grants 8.6%). Expenditures: JD 4,540,100,000 (social protection 28.0%; defense 16.7%; education 13.9%; public order 8.8%; economic affairs 7.6%; health 7.1%; public debt 7.1%).

Public debt (external, outstanding; 2007): U.S.\$7,318,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): tomatoes 550,000, potatoes 170,000, cucumbers 140,000, olives 115,000, eggplants 95,000, watermelons 92,000, cauliflower 63,000, tangerines and mandarin oranges 48,000, apples 46,500, peppers 38,000, grapes 32,200; livestock (number of live animals) 2,100,000 sheep, 434,000 goats, 25,000,000 chickens; roundwood 281,300 cu m, of which fuelwood 99%; fisheries production 1,015 (from aquaculture 50%). Mining and quarrying (2007): phosphate ore 5,552,000; potash (crude salts) 1,796,000; bromine 85,105. Manufacturing (value added in U.S.\$'000,000; 2006): bricks, cement, and ceramics 423; food products 280; paints, soaps, and pharmaceuticals 260; tobacco products 255; wearing apparel 247; base chemicals 144; iron and steel 119. Energy production (consumption): electricity (kW-hr; 2008) 12,682,000,000 ([2006] 11,598,000,000); coal, none (none); crude petroleum (barrels; 2007) 9,300 ([2006] 30,900,000); petroleum products (metric tons; 2006) 4,067,000 (4,710,000); natural gas (cu m; 2006) 199,000,000 (2,150,000,000).

Land use as % of total land area (2007): in temporary crops 1.1%, in permanent crops 0.9%, in pasture 8.4%, forest area 0.9%.

Population economically active (2006): total 1,627,000⁴; activity rate of total population 28.4%⁴ (participation rates: ages 15–64, 46.8%⁴; female 17.0%⁴; unemployed [2007] 13.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.0	93.5	96.6	100.0	106.3	112.0	128.7

Gross national income (GNI; 2008): U.S.\$19,526,000,000 (U.S.\$3,310 per capita); purchasing power parity GNI (U.S.\$5,530 per capita).

Structure of gross domestic product and labour force

	2007		2003	
	in value JD '000,000	% of total value	labour force	% of labour force
Agriculture	312	2.8	39,000	3.0
Mining	312	2.8	14,000	1.1
Manufacturing	1,890	16.8	137,000	10.6
Construction	478	4.3	71,000	5.5
Public utilities	208	1.9	18,000	1.4
Transp. and commun.	1,510	13.5	110,000	8.5
Trade, hotels	1,016	9.1	224,000	17.3
Pub. admin., defense	1,673	14.9	184,000	14.2
Finance, real estate	2,198	19.6	59,000	4.5
Services	578	5.1	246,000	19.1
Other	1,050 ⁵	9.4 ⁵	191,000 ⁶	14.8 ⁶
TOTAL	11,225	100.07	1,293,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,312; remittances (2007) 3,737; foreign direct investment (FDI; 2005–07 avg.) 2,276; official development assistance (2007) 504. Disbursements for (U.S.\$'000,000): tourism (2007) 883; remittances (2007) 479; FDI (2005–07 avg.) 24.

Household income and expenditure. Average household size (2007) 5.4; income per household (2006) JD 6,220 (U.S.\$8,770); sources of income (2006): wages and salaries 45.3%, transfer payments 21.7%, rent and property income 18.4%, self-employment 14.6%; expenditure (2006): food and beverages 33.0%, housing and energy 26.8%, transp. and commun. 15.8%, education 7.0%, clothing and footwear 5.0%, alcohol and tobacco 3.6%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-2,572	-4,252	-6,176	-6,280	-7,831	-9,090
% of total	29.4%	35.3%	41.9%	37.8%	40.7%	36.9%

Imports (2007): U.S.\$13,531,000,000 (machinery and apparatus 17.4%; crude petroleum 15.3%; food 13.0%; chemicals and chemical products 9.3%; road vehicles/parts 7.2%). **Major import sources:** Saudi Arabia 21.0%; China 9.7%; Germany 7.5%; United States 4.7%; Egypt 4.4%.

Exports (2007): U.S.\$5,700,000,000 (apparel/accessories 21.3%; fertilizers [all types] 14.5%; food products 10.9%, of which tomatoes 3.1%; medicaments 7.5%; telecommunications equipment/parts 5.9%). **Major export destinations:** United States 21.8%; Iraq 12.7%; free zones 9.2%; India 8.3%; Saudi Arabia 7.2%; U.A.E. 6.8%.

Transport and communications

Transport. Railroads (2006): route length 506 km; (2004) passenger-km 1,000,000; (2004) metric ton-km cargo 563,000,000. Roads (2005): total length 7,601 km (paved 100%). Vehicles (2006): passenger cars 482,042; trucks and buses 216,905. Air transport (2006)⁹: passenger-km 5,521,000,000; metric ton-km cargo 210,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,065	198	PCs	2007	383	67
Telephones				Dailies	2007	270 ¹⁰	47 ¹⁰
Cellular	2008	5,314 ¹¹	908 ¹¹	Internet users	2008	1,501	257
Landline	2008	519	89	Broadband	2008	128 ¹¹	22 ¹¹

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling: illiterate 14.0%, literate 4.8%; primary/lower secondary education 36.6%; upper secondary 19.4%; some higher 25.1%, of which advanced degree 2.1%; unknown 0.1%. **Literacy** (2007): percentage of population age 15 and over literate 92.1%; males 95.7%; females 88.4%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	39,441 ¹²	805,457	19.9 ¹²	90
Secondary/Voc. (age 12–17)	34,294 ¹²	649,242	17.9 ¹²	82
Tertiary	8,337	220,103	26.4	39 (age 18–22)

Health: physicians (2007) 15,280 (1 per 375 persons); hospital beds (2007) 11,029 (1 per 519 persons); infant mortality rate (2008) 19.0; undernourished population (2002–04) 300,000 (6% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): 100,500 (army 84.6%, navy 0.5%, air force 14.9%). **Military expenditure as percentage of GDP** (2008): 10.6%; per capita expenditure U.S.\$332.

¹Appointed by king. ²Includes c. 2.0 million registered Palestinian refugees of whom c. 350,000 reside in camps. ³Excludes 450,000 Iraqi refugees. ⁴ILO estimate. ⁵Net taxes on products less imputed bank service charges. ⁶Including 4,000 not adequately defined and 187,000 unemployed. ⁷Detail does not add to total given because of rounding. ⁸Imports c.i.f.; exports f.o.b. ⁹Royal Jordanian airlines only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2002–03.

Internet resources for further information:

- Dept. of Statistics <http://www.dos.gov.jo>
- Central Bank of Jordan <http://www.cbj.gov.jo>

Kazakhstan

Official name: Qazaqstan Respublikasy (Kazakh); Respublika Kazakhstan (Russian) (Republic of Kazakhstan).

Form of government: unitary republic¹ with a Parliament consisting of two chambers (Senate [47²] and House of Representatives [107]).

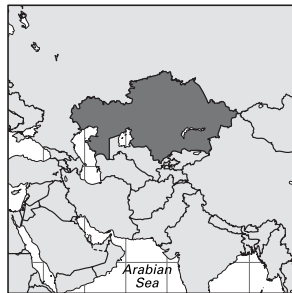
Head of state and government: President assisted by Prime Minister.

Capital: Astana.

Official languages: Kazakh; Russian³.

Official religion: none.

Monetary unit: tenge (T); valuation (Sept. 1, 2009) 1 U.S.\$ = T 150.78; 1 £ = T 244.65.



Area and population

area		population		area		population	
Provinces	sq km	2009 ⁴ estimate	Provinces	sq km	2009 ⁴ estimate		
Almaty	224,000	1,667,143	Qostanay	196,000	889,368		
Aqmola	146,200	741,897	Qyzylorda ⁵	226,000	641,563		
Aqtöbe	300,600	712,130	Shyghys Qazaqstan				
Atyrau	118,600	501,623	(Eastern Kazakhstan)	283,200	1,417,764		
Batys Qazaqstan			Soltüstik Qazaqstan				
(Western Kazakhstan)	151,300	618,785	(Northern Kazakhstan)	98,000	648,236		
Mangghystau	165,600	425,684	Kazakhstan)	144,300	1,031,144		
Onghüstik Qazaqstan			Zhambyl				
(Southern Kazakhstan)	117,300	2,381,543	Cities	300	1,365,105		
Pavlodar	124,800	748,823	Almaty	700	639,311		
Qaraghandy	428,000	1,346,373	Astana				
			TOTAL	2,724,900	15,776,492		

Demography

Population (2009): 15,881,000.

Density (2009): persons per sq mi 15.1, persons per sq km 5.8.

Urban-rural (2008⁴): urban 53.1%; rural 46.9%.

Sex distribution (2008): male 47.59%; female 52.41%.

Age breakdown (2005): under 15, 23.7%; 15–29, 28.7%; 30–44, 20.7%; 45–59, 16.4%; 60–74, 7.9%; 75–84, 2.3%; 85 and over, 0.3%.

Population projection: (2020) 17,072,000; (2030) 17,601,000.

Ethnic composition (2004⁴): Kazakh 57.2%; Russian 27.2%; Ukrainian 3.1%; Uzbek 2.7%; German 1.6%; Tatar 1.6%; Uighur 1.5%; other 5.1%.

Religious affiliation (2000): Muslim (mostly Sunni) 42.7%; nonreligious 29.3%; Christian 16.7%, of which Orthodox 8.6%; atheist 10.9%; other 0.4%.

Major cities (2006⁴): Almaty 1,247,896; Astana 550,438; Shymkent (Chimkent) 526,140; Qaraghandy (Karaganda) 446,139; Taraz 336,057.

Vital statistics

Birth rate per 1,000 population (2008): 22.6 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.7 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.88.

Marriage/divorce rates per 1,000 population: (2008) 8.6/(2007) 2.3.

Life expectancy at birth (2008): male 61.9 years; female 72.6 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 814.7; malignant neoplasms (cancers) 164.8; accidents, poisoning, and violence 155.4; diseases of the respiratory system 75.8.

National economy

Budget (2007). Revenue: T 2,895,975,900,000 (tax revenue 81.4%; transfers 8.9%; capital revenue 3.2%). Expenditures: T 2,678,280,300,000 (social security 18.8%; education 17.0%; health 11.2%; transportation and communications 10.8%; public order 9.0%).

Public debt (external, outstanding; July 2009): U.S.\$2,254,900,000.

Population economically active (2008): total 8,415,100; activity rate of total population 53.7% (participation rates: ages 15–64, 78.2%; female 49.6%; unemployed [July 2008–June 2009] 6.7%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	81.7	87.0	93.0	100.0	108.6	120.3	140.9
Monthly earnings index	59.5	67.7	83.0	100.0	119.6	154.0	178.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): wheat 12,538,200, potatoes 2,354,400, barley 2,059,000, corn (maize) 420,000, olives 414,000, cotton 317,500; livestock (number of live animals) 16,770,400 sheep and goats, 5,991,600 cattle, 148,300 camels; roundwood (2007) 852,000 cu m, of which fuelwood 25%; fisheries production (2007) 41,628 (from aquaculture 1%). Mining and quarrying (2006): iron ore 18,600,000; bauxite 4,800,000; chromite 3,600,000 (world rank: 2); copper (metal content) 457,000; zinc (metal content) 400,000; silver 830,000 kg; gold 18,000 kg. Manufacturing (value of production in T '000,000; 2008): base metals 1,408,325; food products 757,757; machinery and apparatus 297,501; coke, refined petroleum products, and nuclear fuel 235,309. Energy production (consumption): electricity (kW-hr; 2008–09) 77,556,000,000 ([2006] 72,488,000,000); hard coal (metric tons; 2008–09) 95,011,000 ([2006] 63,765,000); lignite (metric tons; 2008–09) 4,478,000 ([2006] 4,207,000); crude petroleum (barrels; 2008–09) 515,758,000 ([2006] 92,615,000); petroleum products (metric tons; 2006) 11,524,000 (9,048,000); natural gas (cu m; 2008) 33,382,500,000 ([2007] 30,580,000,000). **Gross national income** (GNI; 2008): U.S.\$96,240,000,000 (U.S.\$6,140 per capita); purchasing power parity GNI (U.S.\$9,690 per capita).

Structure of gross domestic product and labour force

	2008			
	in value T '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	842	5.3	2,370,000	28.2
Mining and quarrying	3,004	18.8	200,000	2.4
Manufacturing	1,853	11.6	573,000	6.8
Public utilities	273	1.7	165,000	2.0
Construction	1,304	8.2	549,000	6.5
Transp. and commun.	1,623	10.2	589,000	7.0
Trade, hotels	2,112	13.3	1,253,000	14.9
Finance, real estate	3,280	20.6	474,200	5.6
Pub. admin., defense	268	1.7	354,000	4.2
Services	990	6.2	1,330,400	15.8
Other	388 ⁶	2.4 ⁶	558,100 ⁷	6.6 ⁷
TOTAL	15,937	100.0	8,415,100 ⁸	100.0

Household income and expenditure (2008). Average household size (2004) 3.8; sources of income: salaries and wages 77.4%, pensions 11.5%, agriculture 4.1%; expenditure: food and beverages 42.5%, clothing 10.6%, housing 10.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,013; remittances (2008) 192; foreign direct investment (FDI; 2006–08 avg.) 10,337; official development assistance (2007) 202. Disbursements for (U.S.\$'000,000): tourism (2007) 1,041; remittances (2008) 3,559; FDI (2005–07 avg.) 876.

Land use as % of total land area (2007): in temporary crops 8.4%, in permanent crops 0.04%, in pasture 68.6%, forest area 1.2%.

Foreign trade⁹

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	+2,193	+3,086	+4,518	+7,312	+10,497	+14,581
% of total	14.5%	19.0%	21.2%	22.2%	23.2%	23.6%

Imports (2008): U.S.\$37,889,000,000 (mineral fuels 15.0%; fabricated metal products 12.4%; transportation equipment 9.3%; machinery and apparatus 7.6%; chemical products 3.6%; iron and steel 3.1%). **Major import sources:** Russia 36.3%; China 12.0%; Germany 6.8%; Ukraine 5.6%; U.S. 5.1%.

Exports (2008): U.S.\$71,183,500,000 (mineral fuels 72.1%; iron and steel 8.8%; nonferrous metals 6.0%, of which refined copper 4.1%). **Major export destinations:** Italy 16.7%; Switzerland 15.8%; China 10.8%; Russia 8.7%; France 7.6%.

Transport and communications

Transport. Railroads (2008): route length 13,700 km; passenger-km 14,130,000,000; metric ton-km cargo 215,110,600,000. Roads (2008): total length 93,600 km (paved 90%). Vehicles (2008⁴): passenger cars 2,183,100; trucks and buses 442,572. Air transport (2008): passenger-km 5,550,000,000; metric ton-km cargo (2007) 85,700,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,106	338	PCs	2005	...	...
Telephones				Dailies	2007	900 ¹⁰	58 ¹⁰
Cellular	2008	14,911 ¹¹	961 ¹¹	Internet users	2008	2,300	148
Landline	2008	3,410	220	Broadband	2008	661 ¹¹	43 ¹¹

Education and health

Educational attainment (1999). Population age 25 and over having: no formal schooling/some primary education 9.1%; primary education 23.1%; secondary/some postsecondary 57.8%; higher 10.0%. **Literacy** (2007): percentage of total population age 15 and over literate 99.6%; males 99.8%; females 99.5%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	57,473	956,019	16.6	90
Secondary/Voc. (age 11–17)	177,552	1,778,106	10.0	86
Tertiary	41,207	719,802	17.5	47 (age 18–22)

Health (2008): physicians 58,945 (1 per 266 persons); hospital beds 120,840 (1 per 130 persons); infant mortality rate per 1,000 live births 20.5; undernourished population (2002–04) 900,000 (6% of total population based on the consumption of a minimum daily requirement of 1,950 calories).

Military

Total active duty personnel (November 2008): 49,000 (army 61.2%, navy 6.1%, air force 24.5%, Ministry of Defense staff 8.2%). **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$75.

¹No election since independence in 1991 has been deemed free and fair by international standards. ²Includes 15 nonelective seats. ³Russian has official equal status per article 7.2 of the constitution. ⁴January 1. ⁵Includes an area of 6,700 sq km (2,600 sq mi) enclosing the Bayqongyr (Baykonur) space launch facilities and the city of Bayqongyr (formerly Leninsk) leased to Russia in 1995 until 2050. The estimated 70,000 residents of Bayqongyr are excluded from the Qyzylorda population total. ⁶Taxes on products less imputed bank service charges. ⁷Includes 558,000 unemployed and 100 undefined. ⁸Detail does not add to total given because of rounding. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation of daily newspapers. ¹¹Subscribers.

Internet resources for further information:

- National Bank of Kazakhstan <http://www.nationalbank.kz>
- Agency of Statistics of Kazakhstan <http://www.eng.stat.kz>

Kenya

Official name: Jamhuri ya Kenya (Swahili); Republic of Kenya (English).

Form of government: unitary multiparty republic with one legislative house (National Assembly [224]).

Head of state and government: President assisted by the Prime Minister².

Capital: Nairobi.

Official languages: Swahili; English.

Official religion: none.

Monetary unit: Kenyan shilling (K Sh); valuation (Sept. 1, 2009) 1 U.S.\$ = K Sh 76.22; 1 £ = K Sh 123.68.



Area and population

Provinces	Provincial headquarters	area		population
		sq mi	sq km	2006 estimate ³
Central	Nyeri	5,087	13,176	3,923,900
Coast	Mombasa	32,279	83,603	2,975,400
Eastern	Embu	61,734	159,891	5,322,400
North Eastern	Garissa	48,997	126,902	1,326,000
Nyanza	Kisumu	6,240	16,162	4,984,900
Rift Valley	Nakuru	67,131	173,868	8,418,100
Western	Kakamega	3,228	8,360	4,151,000
Special area				
Nairobi	—	264	684	2,845,400
TOTAL		224,961⁴	582,646	33,947,100

Demography

Population (2009): 39,802,000⁵.

Density (2009): persons per sq mi 176.9, persons per sq km 68.3.

Urban-rural (2005): urban 20.7%; rural 79.3%.

Sex distribution (2006): male 48.90%; female 51.10%.

Age breakdown (2006): under 15, 43.1%; 15–29, 30.2%; 30–44, 15.2%; 45–59, 7.0%; 60–74, 3.5%; 75 and over, 1.0%.

Population projection: (2020) 52,034,000; (2030) 63,199,000.

Doubling time: 25 years.

Ethnic composition (2004): Kikuyu c. 21%; Luhya c. 14%; Luo c. 13%; Kalenjin c. 11%; Kamba c. 11%; Gusii c. 6%; Meru c. 5%; other c. 19%.

Religious affiliation (2006)⁶: Protestant/independent Christian c. 66%; Roman Catholic c. 23%; Muslim c. 8%; nonreligious c. 2%; traditional beliefs c. 1%.

Major cities (2006): Nairobi 2,864,700; Mombasa 823,500; Nakuru 266,500; Eldoret 227,800; Kisumu 220,000; Ruiru 120,900; Thika 102,300.

Vital statistics

Birth rate per 1,000 population (2006): 39.7 (world avg. 20.3).

Death rate per 1,000 population (2006): 11.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 28.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 4.91.

Life expectancy at birth (2006): male 54.3 years; female 54.2 years.

Adult population (ages 15–49) **living with HIV** (2007): 7.1–8.5% (world avg. 0.8%).

National economy

Budget (2008–09). Revenue: K Sh 511,355,000,000 (tax revenue 85.5%, of which income and profit taxes 39.9%, VAT 24.8%, excise tax 13.7%; nontax revenue 11.0%; grants 3.5%). Expenditures: K Sh 621,909,000,000 (current expenditure 74.3%, of which interest payments 8.4%; development expenditure 25.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane (2008) 4,991,907, cow's milk 3,500,000, corn (maize) 3,240,000, cassava 850,000, sweet potatoes 800,000, potatoes 800,000, pineapples 605,000, plantains 605,000, bananas 580,000, cabbages and other brassicas 550,000, dry beans 535,000, cattle meat 390,000, tea (2008) 345,818, tomatoes 330,000, wheat 265,000, pigeon peas 105,000, coffee (2008) 38,705, supplier of cut flowers for EU; livestock (number of live animals) 12,500,000 cattle, 9,300,000 sheep; roundwood 27,646,000 cu m, of which fuelwood 95%; fisheries production 136,005 (from aquaculture 3%). Mining and quarrying (2007): soda ash 386,598; fluorspar 82,000; salt 64,000; tourmaline 8,800 carats; ruby 5,600 carats. Manufacturing (value added in U.S.\$'000,000; 2006): food products 473; coke oven products (nearly all soda ash) 268; glass and glass products 244; beverages 175; iron and steel 106. Energy production (consumption): electricity (kW-hr; 2008) 5,694,000,000 (5,301,000,000); coal (metric tons; 2006) none (120,000); crude petroleum (barrels; 2006) none (12,800,000); petroleum products (metric tons; 2006) 1,586,000 (3,365,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 4.5; average annual income per household: n.a.; sources of income: n.a.; expenditure (2005): food and beverages c. 44%, transportation c. 9%, housing and energy c. 8%, cafés and hotels c. 5%, clothing and footwear c. 3%, unspecified c. 22%.

Population economically active (2006): total 16,944,000⁷; activity rate of total population 46.4%⁷ (participation rates: ages 15–64, 82.1%⁷; female 46.5%⁷; unemployed [2008] 40%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	74.0	81.2	90.7	100.0	114.5	125.6	158.6

Gross national income (GNI; 2008): U.S.\$29,541,000,000 (U.S.\$770 per capita); purchasing power parity GNI (U.S.\$1,580 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value K Sh '000,000	% of total value	labour force	% of labour force
Agriculture	499,421	23.8	334,600 ⁸	3.9 ⁸
Mining	14,630	0.7	6,000 ⁸	0.1 ⁸
Manufacturing	223,353	10.6	253,800 ⁸	2.9 ⁸
Construction	80,135	3.8	79,900 ⁸	0.9 ⁸
Public utilities	30,805	1.5	19,500 ⁸	0.2 ⁸
Transp. and commun.	214,983	10.2	132,900 ⁸	1.5 ⁸
Trade, hotels	234,535	11.2	185,900 ⁸	2.2 ⁸
Finance, real estate	206,029	9.8	90,400 ⁸	1.0 ⁸
Pub. admin., defense	104,828	5.0		
Services	263,306	12.5	755,400 ⁸	8.7 ⁸
Other	227,774 ⁹	10.8 ⁹	6,814,900 ¹⁰	78.6 ¹⁰
TOTAL	2,099,798⁴	100.0⁴	8,673,300	100.0

Public debt (external, outstanding; 2007): U.S.\$6,122,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 910; remittances (2008) 1,692; foreign direct investment (FDI; 2005–07 avg.) 267; official development assistance (2007) 1,275. Disbursements for (U.S.\$'000,000): tourism (2007) 262; remittances (2008) 16; FDI (2005–07 avg.) 23.

Land use as % of total land area (2007): in temporary crops 9.1%, in permanent crops 0.9%, in pasture 37.4%, forest area 6.1%.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
K Sh '000,000	–99,495	–148,209	–215,566	–278,970	–330,431	–423,789
% of total	21.4%	25.8%	30.2%	36.0%	37.6%	38.2%

Imports (2007): K Sh 605,142,000,000 (petroleum 20.9%, machinery and apparatus 16.1%, chemicals and chemical products 12.8%, motor vehicles 8.5%, food products 6.1%, aircraft 5.6%). **Major import sources:** U.A.E. 14.8%; India 9.4%; China 7.6%; U.S. 7.4%; Japan 6.8%.

Exports (2007): K Sh 274,711,000,000 (tea 17.1%, cut flowers 7.7%, apparel/accessories 5.9%, vegetables 5.7%, petroleum products 4.0%, coffee 3.8%, soda ash, none). **Major export destinations:** Uganda 12.2%; U.K. 10.5%; Tanzania 8.1%; Netherlands 8.0%; U.S. 7.0%.

Transport and communications

Transport. Railroads (2005): route length 1,726 mi, 2,778 km; passenger-km 489,000,000; metric ton-km cargo 1,358,000,000. Roads (2004): total length 39,311 mi, 63,265 km (paved 14%). Vehicles (2004): passenger cars 307,772; trucks and buses 299,317. Air transport (2008)¹²: passenger-km 8,829,000,000; metric ton-km cargo 238,451,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	758	25	PCs	2007	529	14
Telephones				Dailies	2007	320 ¹³	8.5 ¹³
Cellular	2008	16,234 ¹⁴	419 ¹⁴	Internet users	2008	3,360	87
Landline	2008	252	6.5	Broadband	2006	18 ¹⁴	0.5 ¹⁴

Education and health

Educational attainment (1998–99). Percentage of population age 6 and over having: no formal schooling 16.4%; primary education 59.0%; secondary 19.7%; university 1.1%; other/unknown 3.8%. **Literacy** (2000): total population over age 15 literate 73.6%; males literate 77.7%; females literate 70.2%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	153,678 ¹⁵	6,101,390	39.5 ¹⁵	75
Secondary/Voc. (age 12–17)	78,096 ¹⁵	2,583,755	31.6 ¹⁵	43
Tertiary	...	102,798 ¹⁶	...	3 ¹⁶ (age 18–22)

Health: physicians (2007) 6,271 (1 per 5,886 persons); hospital beds (2006) 51,481 (1 per 714 persons); infant mortality rate (2006) 59.0; undernourished population (2002–04) 9,900,000 (31% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 24,120 (army 82.9%, navy 6.7%, air force 10.4%). **Military expenditure as percentage of GDP** (2008): 2.1%; per capita expenditure U.S.\$17.

¹Includes 12 nonelective seats and 2 ex officio members. ²The post of Prime Minister was created per two bills approved by the National Assembly in March 2008. ³Official projection based on 1999 census. ⁴Detail does not add to total given because of rounding. ⁵Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁶Based on 2006 survey that excludes the mostly Muslim North Eastern province. ⁷ILO estimate. ⁸Formally employed only. ⁹Taxes less subsidies and less imputed bank service charges. ¹⁰Includes informally employed, small-scale farmers and pastoralists, unemployed, self-employed, and unpaid family workers. ¹¹Imports c.i.f.; exports f.o.b. ¹²Kenya Airways and African Express. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵2004–05. ¹⁶2003–04.

Internet resources for further information:

- Central Bank of Kenya <http://www.centralbank.go.ke>
- Central Bureau of Statistics <http://www.cbs.go.ke>

Kiribati

Official name: Republic of Kiribati.¹
Form of government: unitary republic with a unicameral legislature (House of Assembly [46²]).

Head of state and government: President.

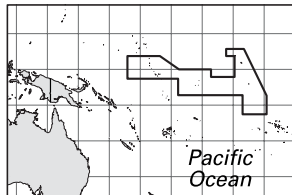
Seats of government: islet villages of Bairiki (executive), Ambo (legislative), Betio (judicial) on South Tarawa.

Official language: English.

Official religion: none.

Monetary unit: Australian dollar (\$A); valuation (Sept. 1, 2009)

1 U.S.\$ = \$A 1.19; 1 £ = \$A 1.94.



Area and population

area ³		population	area ³		population
Island/Atoll Groups	Islands/Atolls ⁴	2005 census	Island/Atoll Groups	Islands/Atolls ⁴	2005 census
Gilbert Group (Kiribati)	285.5 ⁵	83,683	Tamana	4.7	875
Abaiang	17.5	5,502	Tarawa, North	15.3	5,678
Abermama	27.4	3,404	Tarawa, South	15.8	40,311
Aranuka	11.6	1,158	Line and Phoenix Group	525.0 ⁵	8,850
Arorae	9.5	1,256	Northern Line	431.7	8,809
Banaba ⁶	6.3	301	Kiritimati (Christmas)	388.4	5,115
Beru	17.7	2,169	Tabuaeran (Fanning)	33.7	2,539
Butaritari	13.5	3,280	Teraina (Washington)	9.6	1,155
Kuria	15.5	1,082	Southern Line ⁷ and Phoenix Group ⁸	93.4	41
Maiana	16.7	1,908	Kanton (Canton) in Phoenix Group	9.2	41
Makin	7.9	2,385	TOTAL	810.5	92,533
Marakei	14.1	2,741			
Nikunau	19.1	1,912			
Nonouti	19.9	3,179			
Onotoa	15.6	1,644			
Tabiteuea, North	25.8	3,600			
Tabiteuea, South	11.9	1,298			

Demography

Population (2009): 99,000.

Density (2009)⁹: persons per sq mi 353.6, persons per sq km 136.4.

Urban-rural (2005): urban 47.5%; rural 52.5%.

Sex distribution (2007): male 49.64%; female 50.36%.

Age breakdown (2007): under 15, 38.2%; 15–29, 27.7%; 30–44, 18.0%; 45–59, 10.7%; 60–74, 4.5%; 75 and over, 0.9%.

Population projection: (2020) 120,000; (2030) 138,000.

Ethnic composition (2000): Micronesian 98.8%; Polynesian 0.7%; European 0.2%; other 0.3%.

Religious affiliation (2005): Roman Catholic 55.3%; Kiribati Protestant (Congregational) 35.7%; Mormon 3.1%; Bahā'ī 2.2%; other/nonreligious 3.7%.

Major villages (2005): Betio 12,509; Bikenibeu 6,170; Teorareke 3,939; Bairiki 2,766.

Vital statistics

Birth rate per 1,000 population (2007): 30.5 (world avg. 20.3).

Death rate per 1,000 population (2007): 8.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 22.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 4.12.

Life expectancy at birth (2007): male 59.4 years; female 65.7 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 88.1; infectious and parasitic diseases 73.5; diseases of the respiratory system 65.1; diseases of the digestive system 57.7; endocrine and metabolic disorders 51.4.

National economy

Budget (2008). Revenue: \$A 161,700,000 (nontax revenue 24.1%, of which fishing license fees 19.9%; tax revenue 18.4%; grants 57.5%). Expenditures: \$A 183,000,000 (development expenditure 50.9%; current expenditure 49.1%).

Public debt (external, outstanding; 2008): U.S.\$10,100,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 110,000, roots and tubers 8,200 (of which taro 2,200), bananas 5,800; livestock (number of live animals) 12,600 pigs, 480,000 chickens; roundwood, n.a.; fisheries production 21,603 (from aquaculture, negligible); aquatic plants (all seaweed) production 1,112 (from aquaculture 100%). Mining and quarrying: small amounts of salt. Manufacturing: copra (9,135 metric tons produced in 2008), processed fish, clothing, and handicrafts. Energy production (consumption): electricity (kW-hr; 2006) 15,000,000 (15,000,000); petroleum products (metric tons; 2006) none (10,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2001) 3.2; remittances (2008) 9; foreign direct investment (2005–07 avg.) 8; official development assistance (2007) 27. Disbursements for (U.S.\$'000,000): tourism (1999) 2.0; remittances, n.a.

Land use as % of total land area (2007): in temporary crops c. 2%, in permanent crops c. 43%, in pasture, none, forest area c. 3%.

Population economically active (2005): total 36,969; activity rate of total population 38.8% (participation rates: over age 15, 63.4%; female 45.9%; unemployed 6.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index ¹⁰	99.9	102.5	100.6	100.0	99.8	103.6	122.8

Gross national income (GNI; 2008): U.S.\$193,000,000 (U.S.\$2,000 per capita); purchasing power parity GNI (U.S.\$3,660 per capita).

Structure of gross domestic product and labour force

	2008		2005	
	in value \$A '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	41.1	25.8	22,518 ¹¹	60.9 ¹¹
Mining	0.1	0.1		
Manufacturing	8.6	5.4	305	0.8
Construction	3.2	2.0	511	1.4
Public utilities	–0.1	–0.1	293	0.8
Transp. and commun.	17.2	10.8	1,473	4.0
Trade, hotels	9.3	5.8	1,873	5.1
Finance, real estate	29.3	18.4	356	1.0
Pub. admin., defense	25.1	15.7	6,953	18.8
Services	21.9	13.7	433	1.2
Other	3.9 ¹²	2.4 ¹²	2,254 ¹³	6.1 ¹³
TOTAL	159.7 ⁵	100.0	36,969	100.0 ⁵

Household income and expenditure (2006)¹⁴. Average household size 6.3; average annual household income U.S.\$8,745; sources of income: wages 35.4%, rent 13.9%, agriculture 10.9%, remittances 9.6%; expenditure: food 46.8%, housing 16.7%, household operations 15.1%, transportation 6.6%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
\$A '000,000	–85.3	–75.0	–77.4	–94.4	–75.8	–72.0
% of total	87.1%	89.4%	92.0%	89.3%	81.9%	75.5%

Imports (2005): \$A 96,900,000 (food 29.6%, of which rice 10.7%, meat 6.4%; refined petroleum 16.8%; machinery and apparatus 14.6%, of which starting equipment/generators 6.2%; road vehicles 5.7%). **Major import sources** (2007): Fiji 35.1%; Australia 33.5%; Japan 6.3%; New Zealand 5.9%; China 4.3%.

Exports (2007): \$A 11,655,000 (domestic exports 81.0%, of which crude coconut oil 45.7%, copra/copra cake 14.4%, fish 10.7%, seaweed 1.9%; reexports 19.0%). **Major export destinations** (2005): free zones c. 34%; Australia c. 22%; Fiji c. 17%; other Asia (probably Taiwan) c. 14%; Hong Kong c. 8%.

Transport and communications

Transport. Roads (2000): total length 416 mi, 670 km (paved, n.a.). Vehicles (2004)¹⁵: passenger cars 610; trucks and buses 808. Air transport: domestic air service only from 2004.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	4	44	PCs	2005	1	11
Telephones				Dailies	2007 ¹⁶	0	0
Cellular	2008	1.0 ¹⁷	10 ¹⁷	Internet users	2008	2.0	21
Landline	2008	4	41	Broadband	2008	—	—

Education and health

Educational attainment (2005). Percentage of population age 5 and over having: no schooling/unknown 9.2%; primary education 40.3%; secondary 47.6%; higher 2.9%. **Literacy** (2001): population age 15 and over literate 94.0%; males literate 93.0%; females literate 95.0%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	654	16,132	24.7	97 ¹⁸
Secondary/Voc. (age 12–17)	665	11,331	17.0	68
Tertiary ¹⁹	5	300	60.0	... (age 18–22)

Health: physicians (2006) 30 (1 per 3,120 persons); hospital beds (2005) 140 (1 per 681 persons); infant mortality rate per 1,000 live births (2007) 45.9; undernourished population (2002–04) 5,000 (7% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): none; defense assistance is provided by Australia and New Zealand.

¹Ribaberikin Kiribati in Gilbertese (also known as I-Kiribati). ²Includes two nonelite members. ³Includes uninhabited islands in Southern Line and Phoenix Group. ⁴Administratively Kiribati has seven district councils for outlying islands (including four for the Gilberts and one each for Banaba, the Line Islands, and Phoenix Group), a district council for North Tarawa, and an urban council and town council for South Tarawa. ⁵Detail does not add to total given because of rounding. ⁶Banaba is actually an isolated island to the west of the Gilbert Group. ⁷Includes Caroline (Millennium), Malden, Starbuck, Vostok, and Flint islands. Total area is c. 64 sq km. ⁸Includes Birnie, Enderbury, McKean, Manra, Nikumaroro, Orona, Rawaki (Phoenix), and Kanton (Canton) islands. Total area is c. 29 sq km. ⁹Based on inhabited island areas (726 sq km [280 sq mi]) only. ¹⁰Urban Tarawa only. ¹¹Includes 21,582 persons engaged in “village work” (subsistence agriculture or fishing). ¹²Indirect taxes less imputed bank service charges and less subsidies. ¹³Unemployed. ¹⁴Based on the 2006 Household Income and Expenditure Survey, comprising 1,161 households. ¹⁵Registered vehicles in South Tarawa only. ¹⁶3 weeklies only published in 2007. ¹⁷Subscribers. ¹⁸2001–02. ¹⁹2006–07; Kiribati campus, University of the South Pacific.

Internet resources for further information:
 • Key Indicators for Asia and the Pacific
http://www.adb.org/Documents/Books/Key_Indicators/2009
 • Kiribati Statistics Office <http://www.spc.int/prism/Country/KI/Stats>

Korea, North

Official name: Chosŏn Minjujuŭi In'min Konghwaguk (Democratic People's Republic of Korea).

Form of government: unitary single-party republic with one legislative house (Supreme People's Assembly [687]).

Head of state and government: Supreme Leader¹/Chairman of the National Defense Commission.

Capital: P'yŏngyang.

Official language: Korean.

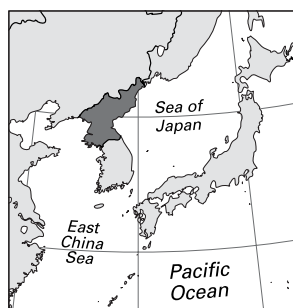
Official religion: none.

Monetary unit: ([old] North Korean)

won (W); valuation (Sept. 1, 2009)

1 U.S.\$ = 143.05 [old] won;

1 £ = 232.11 [old] won².



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2008 preliminary
Chagang-do	Kanggye	6,551	16,968	1,299,982
Kangwŏn-do	Wŏnsan	4,306 ³	11,152 ³	1,477,793 ³
North Hamgyŏng (Hamgyŏng-pukdo)	Ch'ŏngjin	6,784 ⁴	17,570 ⁴	2,327,386 ⁴
North Hwanghae (Hwanghae-pukdo)	Sariwŏn	3,576 ⁵	9,262 ⁵	2,113,693 ⁵
North P'yŏngan (P'yŏngan-pukdo)	Sinŭiju	4,707	12,191	2,728,617
South Hamgyŏng (Hamgyŏng-namdo)	Hamhŭng	7,324	18,970	3,066,141
South Hwanghae (Hwanghae-namdo)	Haeju	3,090	8,002	2,310,462
South P'yŏngan (P'yŏngan-namdo)	P'yŏngsŏng	4,761	12,330	4,051,706
Yanggang-do	Hyesan	5,528	14,317	717,677
Special districts				
Kaesŏng (industrial region)	...	5	5	5
Kŭmgang-san (tourist region)	...	3	3	3
Special cities				
P'yŏngyang	—	772	2,000	3,255,388
Rasŏn (Nasŏn)	—	4	4	4
MILITARY CAMPS				
TOTAL	—	47,399	122,762	24,051,218

Demography

Population (2009): 24,162,000.

Density (2009): persons per sq mi 509.8, persons per sq km 196.8.

Urban-rural (2005): urban 61.6%; rural 38.4%.

Sex distribution (2008): male 48.73%; female 51.27%.

Age breakdown (2007): under 15, 22.1%; 15–29, 23.6%; 30–44, 25.6%; 45–59, 15.5%; 60–74, 11.0%; 75–84, 2.0%; 85 and over, 0.2%.

Population projection: (2020) 25,068,000; (2030) 25,572,000.

Ethnic composition (1999): Korean 99.8%; Chinese 0.2%.

Religious affiliation (2005): mostly nonreligious/atheist; autonomous religious activities almost nonexistent.

Major urban agglomerations (2007): P'yŏngyang 3,300,000; Namp'o 1,127,000; Hamhŭng 773,000; Ch'ŏngjin (1993) 582,480; Kaesŏng (1993) 334,433; Sinŭiju (1993) 326,011.

Vital statistics

Birth rate per 1,000 population (2007): 15.5 (world avg. 20.3).

Death rate per 1,000 population (2007): 10.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 5.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.99.

Marriage/divorce rates per 1,000 population (1987): 9.3/0.2.

Life expectancy at birth (2007): male 60.6 years; female 65.8 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 288; malignant neoplasms (cancers) 90; diseases of the respiratory system 62; injuries, violence, and accidents 62.

National economy

Budget (1999). Revenue: 19,801,000,000 [old] won (turnover tax and profits from state enterprises). Expenditures: 20,018,200,000 [old] won (1994; national economy 67.8%, social and cultural affairs 19.0%, defense 11.6%).

Population economically active (2006): total 12,305,000; activity rate of total population 51.9% (participation rates: ages 15–64, 53.7%; female 44.0%; unemployed, n.a.).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 2,165,000, potatoes 1,900,000, corn (maize) 1,645,000, cabbages 700,000, apples 635,000, soybeans 350,000, sweet potatoes 290,000, dry beans 265,000, wheat 200,000, pears 125,000, peaches and nectarines 120,000, green onions 98,000, garlic 95,000, pumpkins, squash, and gourds 80,000, barley 80,000, cucumbers and gherkins 66,000, tomatoes 65,000, tobacco leaves 63,000, rye 52,000; livestock (number of live animals) 3,300,000 pigs, 2,760,000 goats, 576,000 cattle, 173,000 sheep; roundwood 7,373,000 cu m, of which fuelwood 80%; fisheries production 268,700 (from aquaculture 24%); aquatic plants production 444,300 (from aquaculture 100%). Mining and quarrying (2007): iron ore (metal content) 1,400,000; magnesite 1,000,000; phosphate rock 300,000; zinc (metal content) 70,000; sulfur 42,000; lead (metal content) 13,000; copper (metal content) 12,000; silver 20; gold 2,000 kg. Manufacturing (2007): cement 6,415,000; coke 2,000,000; crude steel 1,279,000; pig iron 900,000; fertilizers 479,000; synthetic fibres 30,000; textile fabrics (2004) 100,000,000 sq m; automobiles 4,700 vehicles. Energy production (consumption): electricity (kW-hr; 2007) 25,460,000,000 ([2006] 22,436,000,000); hard coal (metric tons; 2007) 25,060,000 ([2006] 24,860,000); lignite (metric tons; 2007) 7,000,000 ([2006] 7,946,000); crude petroleum (barrels; 2006) none

(2,690,000); petroleum products (metric tons; 2006) 352,000 (701,000); natural gas, none (none).

Household income and expenditure. Average household size (1999) 4.6.

Public debt (external, outstanding; 2001): U.S.\$12,500,000,000.

Gross national income (2008): U.S.\$24,815,000,000 (U.S.\$1,033 per capita).

Structure of gross domestic product and labour force				
	2007		2004	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	3,688	25.0	3,202,000	27.2
Mining	2,066	14.0	8,549,000	72.8
Public utilities	2,803	19.0		
Manufacturing	1,372	9.3		
Construction	4,819	32.7		
Transp. and commun.	5	—	11,751,000	100.0
Trade				
Finance				
Pub. admin., defense				
Services	14,753	100.0		
Other				
TOTAL				

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; foreign direct investment (2005–07 avg.) –1; official development assistance (2007) 98. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 23.3%, in permanent crops 1.7%, in pasture 0.4%, forest area 49.3%.

Foreign trade

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–790	–837	–817	–1,380	–1,102	–1,104
% of total	34.9%	35.0%	28.6%	34.0%	36.8%	37.5%

Imports (2005): U.S.\$2,718,472,000 ([2002] ⁷food, beverages, and other agricultural products 19.3%, mineral fuels and lubricants 15.5%, machinery and apparatus 15.4%, textiles and clothing 10.4%). **Major import sources:** China 39.8%; South Korea 26.3%; Russia 8.2%; Thailand 7.6%; Singapore 2.7%.

Exports (2005): U.S.\$1,338,281,000 ([2002] ⁷live animals and agricultural products 39.3%, textiles and wearing apparel 16.7%, machinery and apparatus 11.6%, mineral fuels and lubricants 9.5%). **Major export destinations:** China 37.3%; South Korea 25.4%; Japan 9.8%; Thailand 9.3%; Russia 0.6%.

Transport and communications

Transport. Railroads (2007): length 5,242 km. Roads (2007): total length 16,033 mi, 25,802 km (paved [2006] 3%). Vehicles (1990): passenger cars 248,000. Air transport (2004): passenger-km 39,000,000; metric ton-km cargo 6,000,000⁸.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,563	160	PCs	2007	...	...
Telephones				Dailies	2007	4,500	189
Cellular	2008 ⁹	—	—	Internet users	2008	—	—
Landline	2008	1,180	49	Broadband	2008	—	—

Education and health

Educational attainment (1987–88). Percentage of population age 16 and over having attended or graduated from postsecondary-level school: 13.7%. **Literacy (1997):** 95%.

Education (2000)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	...	1,609,865	...	...
Secondary/Voc. (age 10–15)	...	2,181,524	...	...
Tertiary (age 16–20)

Health: physicians (2003) 74,597 (1 per 299 persons); hospital beds, n.a.; infant mortality rate per 1,000 live births (2007) 53.8; undernourished population (2002–04) 7,600,000 (33% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (November 2008): 1,106,000 (army 85.9%, navy 4.2%, air force 9.9%); reserve 4,700,000. **Military expenditure as percentage of GNP (2004):** 8.1%; per capita expenditure U.S.\$80.

¹Per constitutional revision of April 2009. ²Currency revalued on Dec. 1, 2009; as of this date, 100 [old] North Korean won = 1 [new] North Korean won. The approximate value of the won on the black market in February 2009 was about 1 U.S.\$ = 3,500 [old] won; 1 £ = 5,100 [old] won. ³Kangwŏn-do includes Kŭmgang-san special district. ⁴North Hamgyŏng includes Rasŏn. ⁵North Hwanghae includes Kaesŏng special district. ⁶ILO estimates. ⁷Data for commodities (imports U.S.\$1,525,400,000; exports U.S.\$735,000,000) exclude trade with South Korea. ⁸Includes mail and weight of passengers. ⁹The ban on cellular phones, which began in 2004, was lifted in 2008, and service began in January 2009.

Internet resource for further information:

• Ministry of Unification

<http://www.unikorea.go.kr/index.jsp>

Korea, South

Official name: Taehan Min'guk (Republic of Korea).

Form of government: unitary multiparty republic with one legislative house (National Assembly [299]).

Head of state and government:

President, assisted by Prime Minister.

Capital: Seoul.

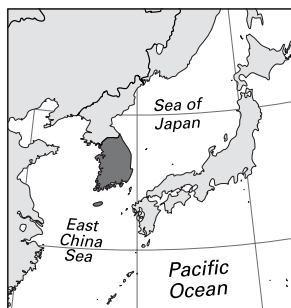
Official language: Korean.

Official religion: none.

Monetary unit: (South Korean) won

(W); valuation (Sept. 1, 2009)

1 U.S.\$ = W 1,241; 1 £ = W 2,013.



Area and population			
	area	population	
	sq km	2005 census ¹	
Provinces			
Cheju	1,849	531,887	
Kangwŏn	16,613	1,464,559	
Kyŏnggi	10,132	10,415,399	
North Chŏlla	8,055	1,784,013	
North Ch'ungch'ŏng	7,432	1,460,453	
North Kyŏngsang	19,026	2,607,641	
South Chŏlla	12,095	1,819,819	
South Ch'ungch'ŏng	8,600	1,889,495	
South Kyŏngsang	10,522	3,056,356	
Metropolitan cities	area	population	
	sq km	2005 census ¹	
Inch'ŏn	1,002	2,531,280	
Kwangju	501	1,417,716	
Pusan	765	3,523,582	
Sŏul (Seoul; special city)	605	9,820,171	
Taegu	884	2,464,547	
Taejŏn	540	1,442,856	
Ulsan	1,057	1,049,177	
TOTAL	99,678	47,278,951	

Demography

Population (2009): 48,333,000.

Density (2009): persons per sq mi 1,255.9, persons per sq km 484.9.

Urban-rural (2008): urban 81.0%; rural 19.0%.

Sex distribution (2008): male 50.23%; female 49.77%.

Age breakdown (2005): under 15, 18.6%; 15–29, 22.5%; 30–44, 26.0%; 45–59, 19.2%; 60–74, 10.7%; 75–84, 2.5%; 85 and over, 0.5%.

Population projection: (2020) 49,475,000; (2030) 49,146,000.

Ethnic composition (2000): Korean 97.7%; Japanese 2.0%; U.S. white 0.1%; Han Chinese 0.1%; other 0.1%.

Religious affiliation (2005): Christian c. 43%, of which Protestant c. 17%, independent Christian c. 16%, Roman Catholic c. 9%; traditional beliefs c. 15%; Buddhist c. 14%; New Religionist c. 14%; Confucianist c. 10%; other c. 4%. **Major cities** (2009): Seoul 10,456,034; Pusan 3,596,076; Inch'ŏn 2,741,217; Taegu 2,512,601; Taejŏn 1,494,951.

Vital statistics

Birth rate per 1,000 population (2008): 9.4 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.0 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.19.

Marriage/divorce rates per 1,000 population (2008): 6.6/2.4.

Life expectancy at birth (2007): male 76.1 years; female 82.7 years.

Major causes of death per 100,000 population (2008): malignant neoplasms (cancers) 139.5; cerebrovascular diseases 56.5; diseases of the heart 43.4; suicide 26.0; diabetes mellitus 20.7.

National economy

Budget (2006). Revenue: W 209,574,000,000,000 (current revenue 99.3%, of which tax revenue 78.9%, nontax revenue 20.4%; capital revenue 0.7%). Expenditures: W 205,928,000,000,000 (current expenditure 84.3%, of which defense 11.4%; capital expenditure 15.7%).

Public debt (June 2009): U.S.\$380,116,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 5,959,500, cabbages 3,000,000, tangerines, mandarins, satsumas 615,000, green onions 535,000, pears 425,000, chilies and peppers 345,000, persimmons 345,000, garlic 325,000, strawberries 200,000; livestock (number of live animals; 2008) 9,087,000 pigs, 2,876,000 cattle, 119,784,000 chickens; roundwood 5,152,100 cu m, of which fuelwood 48%; fisheries production 2,464,328 (from aquaculture 25%); aquatic plants production 811,142 (from aquaculture 98%). Mining and quarrying (2007): zinc (metal content) 674,400; feldspar 398,513; iron ore (metal content) 163,000; silver (metal content) 1,393,935 kg. Manufacturing (value added in U.S.\$'000,000; 2006): televisions, radios, telecommunications equipment, and electronic parts 70,085; transportation equipment 52,349, of which automobiles 20,987, automobile parts 16,175, ship and boat construction 12,771; machinery and apparatus 30,704; chemicals and chemical products 27,076; iron and steel 20,064; food and food products 19,928; fabricated metal products 19,172; textiles and wearing apparel 16,913; refined petroleum products 12,161. Energy production (consumption): electricity (kw-hr; 2008–09) 425,174,000,000 ([2008] 385,100,000,000); hard coal (metric tons; 2008–09) 2,604,000 ([2006] 81,003,000); lignite (metric tons; 2006) none (3,706,000); crude petroleum (barrels; 2006) 329,850 (868,150,000); petroleum products (metric tons; 2006) 94,555,000 (55,248,000); natural gas (cu m; 2007) 640,000,000 (37,000,000,000).

Household income and expenditure (2008). Average household size 2.9; annual income per household W 39,618,000 (U.S.\$31,477); sources of income: wages 64.5%, self-employment 22.4%, transfers 7.9%; expenditure: transportation and communications 19.4%, food and beverages 15.2%, hotels and restaurants 6.1%.

Land use as % of total land area (2007): in temporary crops 16.5%, in permanent crops 1.9%, in pasture 0.6%, forest area 64.5%.

Gross national income (GNI; 2008): U.S.\$1,046,285,000,000 (U.S.\$21,530 per capita); purchasing power parity GNI (U.S.\$28,120 per capita).

Structure of gross domestic product and labour force

	2007		2009 ³	
	in value W '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	23,982	2.7	1,788,000	7.3
Mining and quarrying	2,839	0.3	23,000	0.1
Manufacturing	223,324	24.8	3,761,000	15.3
Construction	71,118	7.9	1,681,000	6.9
Public utilities	18,051	2.0	2,741,000	11.2
Transp. and commun.	57,451	6.4		
Trade, hotels	74,351	8.2	5,495,000	22.4
Finance, real estate	173,077	19.2	8,131,000	33.1
Pub. admin., defense	51,422	5.7		
Services	104,689	11.6	905,000 ⁵	3.7 ⁵
Other	100,885 ⁴	11.2 ⁴		
TOTAL	901,189	100.0	24,525,000	100.0

Population economically active (2009³): total 24,525,000; activity rate 50.7% (participation rates: ages 15 and older 61.1%; female 41.3%; unemployed [September 2008–August 2009] 3.3%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	90.8	93.9	97.3	100.0	102.2	104.8	109.7
Monthly earnings index	77.8	84.5	92.5	100.0	105.7	114.5	115.5

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 5,797; remittances (2008) 3,062; foreign direct investment (FDI; 2005–07 avg.) 3,641. Disbursements for (U.S.\$'000,000): tourism (2007) 20,890; remittances (2008) 3,472; FDI (2005–07 avg.) 7,083.

Foreign trade⁶

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+14,991	+29,382	+23,180	+16,082	+14,643	–13,267
% of total	4.0%	6.1%	4.2%	2.5%	2.0%	1.5%

Imports (2008): U.S.\$435,274,737,000 (mineral fuels 32.7%, of which crude petroleum 24.1%, natural gas 5.7%; machinery and apparatus 23.5%, of which electrical machinery 11.2%; chemicals and chemical products 8.4%; iron and steel 7.7%). **Major import sources:** China 17.7%; Japan 14.0%; U.S. 8.8%; Saudi Arabia 7.8%; U.A.E. 4.4%.

Exports (2008): U.S.\$422,007,328,000 (machinery and apparatus 34.0%, of which telecommunications equipment 11.7%, electrical equipment 11.7%; transportation equipment 21.4%; chemicals and chemical products 10.1%; crude and refined petroleum 9.1%; professional and scientific equipment 6.0%). **Major export destinations:** China 21.7%; U.S. 11.0%; Japan 6.8%; Hong Kong 4.9%; Singapore 3.9%.

Transport and communications

Transport. Railroads (2005): length (2008) 3,381 km; passenger-km 31,004,200,000; metric ton-km cargo 9,336,000,000. Roads (2008): total length 103,029 km (paved 78%). Vehicles (2006): passenger cars 11,607,000; trucks and buses 4,239,200. Air transport (2008): passenger-km 82,236,000,000; metric ton-km cargo 8,786,809,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	22,915	477	PCs	2007	27,736	578
Telephones				Dailies	2007	16,217 ⁷	338 ⁷
Cellular	2008	45,607 ⁸	947 ⁸	Internet users	2008	37,476	778
Landline	2008	21,325	443	Broadband	2008	15,475 ⁸	321 ⁸

Education and health

Educational attainment (2008). Percentage of population ages 15 and older having: no formal schooling through lower secondary education 31.7%; upper secondary/higher vocational 39.2%; college 9.1%; university 20.0%. **Literacy** (2002): total population age 15 and over literate 97.9%; males 99.2%; females 96.6%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	147,728	3,933,186	26.6	98
Secondary/Voc. (age 12–17)	214,228	3,864,005	18.0	96
Tertiary	192,579	3,204,036	16.6	93 (age 18–22)

Health (2008): physicians 95,013 (1 per 507 persons); hospital beds (2006) 417,387 (1 per 114 persons); infant mortality rate 3.4; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 692,000 (army 80.9%, navy 9.8%, air force 9.3%); U.S. military forces (January 2009) 24,655. **Military expenditure as percentage of GDP** (2008): 4.0%; per capita expenditure U.S.\$594.

¹Excludes usual residents who were abroad on census date. ²January 1. ³Data is as of August. ⁴Taxes on products less subsidies. ⁵Unemployed. ⁶Imports c.i.f.; exports f.o.b. ⁷Circulation of daily newspapers. ⁸Subscribers.

Internet resource for further information:
• Statistics Korea <http://kostat.go.kr>

Kosovo

Official name: Republika e Kosovës (Albanian); Republika Kosovo (Serbian) (Republic of Kosovo)¹.

Form of government/Political status: multiparty transitional republic² with one legislative body (Assembly of Kosovo [120³]).

International authority: UN Interim Administrator⁴.

Chief of state: President.

Head of government: Prime Minister.

Capital: Pristina.

Official languages: Albanian; Serbian.

Official religion: none.

Monetary unit: euro (€); valuation

(Sept. 1, 2009) 1 U.S.\$ = €0.70;

1 £ = €1.13.⁵



Area and population

	area	population		area	population
	sq km	2008 estimate ⁷		sq km	2008 estimate ⁷
Regions⁶			Regions⁶		
Ferizaj	1,022	181,501	Pejë	1,367	287,883
Gjakovë	1,237	118,423	Prishtinë (Pristina)	2,165	676,723
Gjilan	1,333	218,982	Prizren	1,730	401,335
Mitrovicë (Mitrovica)	2,053	268,292	TOTAL	10,908⁸	2,153,139

Demography

Population (2009): 1,805,000⁹.

Density (2009): persons per sq mi 428.5, persons per sq km 165.5.

Urban-rural (2006): urban 37%; rural 63%.

Sex distribution (2007): male 50.52%; female 49.48%.

Age breakdown (2003): under 15, 32.2%; 15–59, 58.7%; 60 and over, 9.1%.

Population projection: (2020) 1,933,000⁹; (2030) 2,066,000⁹.

Doubling time: 55 years.

Ethnic composition (2008): Albanian 92.0%; Serb 5.3%; other 2.7%.

Religious affiliation (2006): Muslim (including nominal population) c. 91%;

Orthodox c. 5.5%; Roman Catholic c. 3%; Protestant c. 0.5%.

Major cities (2004)¹⁰: Pristina 165,844; Prizren 107,614; Ferizaj 71,758;

Mitrovicë (Mitrovica) 68,929; Gjakovë 68,645; Pejë 68,551.

Vital statistics

Birth rate per 1,000 population (2008): 16.0 (world avg. 20.3); within marriage 59.8%; outside of marriage 40.2%.

Death rate per 1,000 population (2008): 3.2 (world avg. 8.5).

Infant increase rate per 1,000 population (2008): 12.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2003): 3.0.

Marriage/divorce rates per 1,000 population (2008): 10.0/0.6.

Life expectancy at birth (2004)¹¹: male 69.8 years; female 71.4 years.

Major causes of death per 100,000 population: n.a.

National economy

Budget (2007–08). Revenue: €2,148,400,000 (tax revenue 79.7%, of which border taxes [including customs duties and VAT] 59.8%, domestic taxes [mostly income and corporate taxes] 19.9%; nontax revenue 20.3%). Expenditures: €1,523,000,000 (current expenditure 81.1%; capital expenditure 18.9%).

Public debt (external, outstanding): n.a.

Production (metric tons except as noted). Agriculture, forestry, fishing (2006): wheat 239,464, hay 184,677, corn (maize) 138,248, potatoes 71,245, peppers 62,925, cabbage 25,012, tomatoes 15,195, plums 11,467, onions 11,376, beans 10,627, apples 9,372, grapes 7,463; livestock (number of live animals) 381,995 cattle, 100,814 sheep, 2,337,086 chickens; roundwood 328,154 cu m, of which fuelwood 95%; fisheries production, n.a. Mining and quarrying (2008):¹² Manufacturing (2006): cement, bricks, and tiles for reconstruction of housing; food; beverages. Energy production (consumption): electricity (kW-hr; 2008) 4,506,000,000 (2,941,000,000); hard coal, none (none); lignite (metric tons; 2008) 7,842,000 (n.a.); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).

Gross national income (at current market prices; 2007): U.S.\$3,780,000,000 (U.S.\$2,117 per capita).

Structure of gross domestic product and labour force

	2006		2006 ¹³	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	372.4	11.7	81,100	11.9
Mining	20.4	0.6	5,700	0.8
Manufacturing	411.3	12.9	27,700	4.1
Public utilities			13,600	2.0
Construction	284.2	8.9	30,700	4.5
Trade, hotels	350.5	11.0	72,800	10.7
Transp. and commun.	145.5	4.6	14,000	2.1
Finance, real estate	504.8	15.8	13,300	2.0
Pub. admin., defense	480.1	15.0	24,600	3.6
Services	173.0	5.4	91,300	13.4
Other	449.5 ¹⁴	14.1 ¹⁴	305,200 ¹⁵	44.9 ¹⁵
TOTAL	3,191.7	100.0	680,000	100.0

Population economically active (2007): total c. 633,000¹³; activity rate of total population c. 30% (participation rates: ages 15–64 c. 47%; female c. 28%¹³; unofficially unemployed [2007] 40%).

Price index (December 2005 = 100)

	2003	2004	2005	2006	2007	2008
Consumer price index	102.5	101.3	100.0	100.6	105.0	114.8

Household income and expenditure. Average household size (2003) c. 6.5; average annual income per household, n.a.; sources of income (2007): wages and salaries 56%, self-employment/agriculture 15%, remittances 11%, pensions 8%; expenditure (2007): food 39.9%, housing and energy 32.0%, clothing 5.2%, transportation 5.0%, household furnishings 3.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 42; remittances (2008) 785; foreign direct investment (FDI; 2005–07 avg.) 322. **Disbursements** for (U.S.\$'000,000): tourism (2008) 82; remittances (2006) 126; FDI (2006–08 avg.) 15.

Land use as % of total land area (2005): in temporary crops 12.9%, in permanent crops 0.5%, in pasture 11.2%; overall forest area 41.7%.

Foreign trade¹⁶

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	–937.6	–1,006.8	–1,101.2	–1,195.1	–1,410.5	–1,732.0
% of total	92.9%	89.9%	90.7%	83.7%	81.0%	81.6%

Imports (2008): €1,927,900,000 (food and live animals 24.6%, mineral fuels 20.1%, machinery and apparatus 12.2%, base metals 9.3%, chemical products 7.2%, transport equipment 6.7%). **Major import sources:** Macedonia 18.0%; Serbia 11.1%; Germany 10.2%; Turkey 6.6%; China 6.3%.

Exports (2008): €195,900,000 (iron and steel [all forms] 63.3%¹⁷, food products 11.0%, mineral fuels 9.1%). **Major export destinations:** Belgium 14.3%; Italy 13.0%; India 12.0%; Albania 10.8%; Macedonia 9.9%.

Transport and communications

Transport. Railroads (2007): route length 267 mi, 430 km. Roads (2008): total length 1,196 mi, 1,924 km (paved 87%). Vehicles (2006): passenger cars 146,744; trucks and buses 20,850. Air transport (2007)¹⁸: passenger arrivals 483,330; passenger departures 506,962.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005	...	...	PCs	2007	...	...
Telephones				Dailies	2007	...	...
Cellular	2007	562 ¹⁹	315 ¹⁹	Internet users	2006	50	28
Landline	2006	106	60	Broadband	2005	4.7 ¹⁹	2.3 ¹⁹

Education and health

Educational attainment (2003). Percentage of population ages 25–49 having: no formal schooling c. 3.5%; incomplete/complete primary c. 46.0%; incomplete/complete secondary c. 45.0%; higher c. 5.5%. **Literacy** (2004): total population age 15 and over literate 94.1%; males literate 97.3%; females literate 91.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–15) ²⁰	16,433	322,281	19.6	...
Secondary/Voc. (age 16–19) ²¹	4,857	88,974	18.3	...
Tertiary	1,059	27,274	25.8	... (age 20–24)

Health (2006): physicians 1,534 (1 per 1,368 persons); hospital beds (2005) 5,308 (1 per 387 persons); infant mortality rate per 1,000 live births (2008) 9.7.

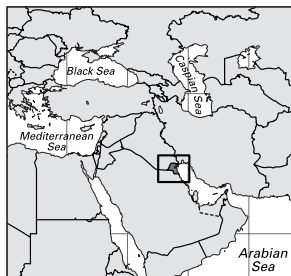
Military

Total active duty personnel (October 2009): NATO-led Kosovo Force 12,631 troops²².

¹Alternate short-form names in Albanian include Kosova and Kosovë. ²Independence was declared Feb. 17, 2008, and the new constitution became effective on June 15, 2008. ³20 seats are reserved for minority communities. ⁴Assisted by the EU special envoy from Feb. 2008. A 2,000-member EU mission to Kosovo (headed by the special envoy) is expected to eventually replace the UN as international administrative authority. ⁵Kosovo uses the euro as its official currency even though it is not a member of the EU. The Serb-populated area of Kosovo uses the Serbian dinar. ⁶Statistical/planning regions; actual local government is based on 30 municipalities. ⁷January 1; official estimate. ⁸Detail does not add to total given because of rounding. ⁹Estimate of U.S. Bureau of the Census International Database (December 2008 update). ¹⁰January 1; unofficial estimate. ¹¹Albanian population only. ¹²Formerly important minerals include lead, zinc, ferronickel, and magnesite; ferronickel mining resumed in late 2007; halloysite is also extracted. ¹³Ages 15–64 only. ¹⁴Taxes on products. ¹⁵Unemployed. ¹⁶Imports c.i.f.; exports f.o.b. ¹⁷Nearly all scrap metal. ¹⁸Pristina airport. ¹⁹Subscribers. ²⁰Includes lower secondary. ²¹Excludes lower secondary. ²²Troops providing security and stability from 32 nations including 8 non-NATO nations.

Internet resources for further information:

- **Statistical Office of Kosovo**
<http://www.ks-gov.net/esk/>
- **Central Bank of the Republic of Kosovo**
<http://www.bqk-kos.org/>



Area and population		area		population
Governorates	Capitals	sq mi	sq km	2005 estimate
		Al-Aḥmadī	Al-Aḥmadī	1,977	5,120	494,715
Al-Aṣīmah	Kuwait (city) (Al-Kuwayt)	77	200	458,548
Al-Farwānīyah	Al-Farwānīyah	73	190	764,601
Hawallī	Hawallī	31	80	607,027
Al-Jahrāʾ	Al-Jahrāʾ	4,336	11,230	349,611
Mubārak al-Kabīr	...	39	100	185,922
Islands ²	—	347	900	6,464 ³
TOTAL		6,880	17,814 ⁴	2,866,888 ⁵

100,000; Hawaii (city) 52,100 (urban agglomeration [2007] 2,000,000).

Gross national income (2007): U.S.\$125,016,000,000 (U.S.\$38,015 per capita).

Structure of gross domestic product and labour force				
	2007			
	in value KD '000,000	% of total value	labour force	% of labour force
Agriculture	70	0.2	35,600	1.7
Mining	39	0.1		
Oil and natural gas	17,348	54.6	6,300	0.3
Manufacturing	1,584 ⁸	5.0 ⁸	115,100	5.5
Construction	582	1.8	169,500	8.1
Public utilities	372	1.2	12,600	0.6
Transp. and commun.	2,185	6.9	62,800	3.0
Trade, hotels	1,315	4.1	311,800	14.9
Finance, real estate	5,574	17.6	100,400	4.8
Pub. admin., defense				
Services	4,109	13.0	973,000	46.5
Other	-1,428 ⁹	-4.5 ⁹	305,400 ¹⁰	14.6 ¹⁰
TOTAL	31,750	100.0	2,092,500	100.0

Population economically active (2007): total 2,092,509, of which Kuwaiti 15.5%, non-Kuwaiti 84.5%; activity rate of total population 61.6% (participation rates: ages 15–64 [2005] 70.8%¹¹; female [2005] 25.2%¹¹; unemployed [2006] 4.0%¹²).

Price index (2005 = 100)	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.9	94.9	96.0	100.0	103.0	108.7	120.2

Land use as % of total land area (2007): in temporary crops 0.8%, in permanent crops 0.2%, in pasture 7.6%, forest area 0.3%.

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
KD '000,000	+2,203	+3,551	+5,430	+9,558	+12,857	+12,237
% of total	30.9%	37.6%	44.1%	53.5%	60.7%	55.0%

Transport. Railroads: none. Roads (2004): total length 3,572 mi, 5,749 km (paved 85%). Vehicles (2004): passenger cars 858,055; trucks and buses 180,940. Air transport (2008)¹⁵: passenger-km 7,447,000,000; metric ton-km cargo 280,346,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,040	392	PCs	2007	779	237
Telephones				Dailies	2007	550 ¹⁶	167 ¹⁶
Cellular	2008	2,907 ¹⁷	850 ¹⁷	Internet users	2008	1,000	292
Landline	2008	541	158	Broadband	2005	25 ¹⁷	8.7 ¹⁷

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling: illiterate 6.2%, literate 37.9%; primary education 12.7%; lower secondary 20.8%; upper secondary 11.7%; some higher 4.1%; completed undergraduate 6.6%. *Literacy* (2005): total population age 15 and over literate 84.4%; males literate 85.7%; females literate 82.8%.

Education (2005–06)			student/ teacher ratio	enrollment rate (%)
	teachers	students		
Primary (age 6–10)	20,056	203,423	10.1	83
Secondary/Voc. (age 11–17)	24,442	236,410	9.7	77
Tertiary	1,986	37,521	18.9	18 (age 18–22)

Health (2006): physicians 4,775 (1 per 646 persons); hospital beds 5,760 (1 per 535 persons); infant mortality rate per 1,000 live births (2008) 9.2; under-nourished population (2002–04) 120,000 (5% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Total active duty personnel (November 2008): 15,500 (army 71.0%, navy/coast guard 12.9%, air force 16.1%); reserve 23,700; U.S. troops for Iraqi support (May 2009) c. 15,000. *Military expenditure as percentage of GDP* (2008): 2.8%; per capita expenditure U.S.\$1,441.

Internet resources for further information:
 • Central Bank of Kuwait <http://www.cbk.gov.kw>

- Central Statistical Office <http://mopweb4.mop.gov.kw>

Kyrgyzstan

Official name: Kyrgyz Respublikasy (Kyrgyz); Respublika Kirgizstan (Russian) (Kyrgyz Republic).

Form of government: unitary multiparty republic with one legislative house (Supreme Council [90]).

Head of state and government:

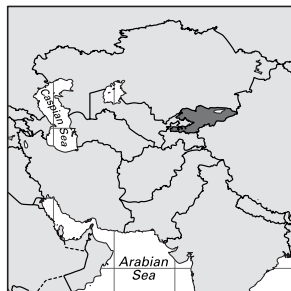
President assisted by Prime Minister.

Capital: Bishkek.

Official languages: Kyrgyz; Russian.

Official religion: none.

Monetary unit: Kyrgyzstan som (KGS); valuation (Sept. 1, 2009) 1 U.S.\$ = KGS 44.08; 1 £ = KGS 71.52.



Area and population		area ¹		population
Provinces	Capitals	sq mi	sq km	2008 ² estimate
Batken	Batken	6,564	17,000	423,700
Chüy	Bishkek ³	7,799	20,200	761,400
Jalal-Abad	Jalal-Abad	13,012	33,700	980,700
Naryn	Naryn	17,452	45,200	269,400
Osh	Osh	11,274 ⁴	29,200 ⁴	1,070,700
Talas	Talas	4,401	11,400	218,000
Ysyk-Köl	Ysyk-Köl	16,641	43,100	434,900
City Districts				
Bishkek ³	—	39	100	839,600
Osh		4	4	253,600
TOTAL		77,182	199,900	5,252,000

Demography

Population (2009): 5,345,000.

Density (2009): persons per sq mi 69.3; persons per sq km 26.7.

Urban-rural (2007): urban 34.7%; rural 65.3%.

Sex distribution (2008): male 49.34%; female 50.66%.

Age breakdown (2005): under 15, 31.3%; 15–29, 29.3%; 30–44, 19.9%; 45–59, 12.2%; 60–74, 5.2%; 75–84, 1.9%; 85 and over, 0.2%.

Population projection: (2020) 6,005,000; (2030) 6,380,000.

Doubling time: 41 years.

Ethnic composition (2005): Kyrgyz 67.4%; Uzbek 14.2%; Russian 10.3%; Hui 1.1%; Uighur 1.0%; other 6.0%.

Religious affiliation (2000): Muslim (mostly Sunni) 60.8%; Christian 10.4%, of which Russian Orthodox 7.7%; nonreligious 21.6%; atheist 6.3%; other 0.9%.

Major cities (2006): Bishkek 794,300; Osh 224,300; Jalal-Abad 85,100; Karakol 61,900; Tokmok 54,900.

Vital statistics

Birth rate per 1,000 population (2008): 24.1 (world avg. 20.3); (1994) within marriage 83.2%; outside of marriage 16.8%.

Death rate per 1,000 population (2008): 7.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 17.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 2.69.

Marriage/divorce rates per 1,000 population (2006): 8.4/1.3.

Life expectancy at birth (2007): male 63.6 years; female 72.2 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 354.5; diseases of the respiratory system 77.4; malignant neoplasms (cancers) 59.1; diseases of the digestive system 50.3; accidents 49.7.

National economy

Budget (2008). Revenue: KGS 45,479,000,000 (tax revenue 79.0%, of which VAT 36.4%, customs duties 10.2%, personal income tax 8.6%; nontax revenue 17.9%; grants 3.1%). Expenditures: KGS 36,944,000,000 (education 26.0%; general administration 18.3%; defense/public order 14.8%; social security 12.6%; health 11.8%).

Public debt (external, outstanding; 2008): U.S.\$1,918,000,000.

Population economically active (2006): total 2,285,000; activity rate of total population 44.1% (participation rates: ages 15–64, 70.4%; female 42.4%; unemployed [November 2007] 8.2%).

Price and earnings indexes (2005 = 100)		2002	2003	2004	2005	2006	2007	2008
Consumer price index		89.4	92.0	95.8	100.0	105.6	116.3	144.8
Average earnings index		63.0	74.3	85.8	100.0	119.0	155.0	211.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 1,373,800, wheat 708,900, corn (maize) 460,700, tomatoes 183,000, apples 125,700, tobacco leaves 14,400; livestock (number of live animals) 3,198,000 sheep, 1,117,000 cattle, 350,600 horses; roundwood 27,300 cu m, of which fuelwood 66%; fisheries production 141 (from aquaculture 76%). Mining and quarrying (2007): mercury 250; gold 10,636 kg. Manufacturing (value of production in KGS '000,000; 2008): base metals and fabricated metal products 36,360; food and tobacco products 11,186; cement, bricks, and ceramics 8,505; textiles and wearing apparel 5,935. Energy production (consumption): electricity (kW-hr; 2008) 11,223,000,000⁵ ([2006] 14,561,000,000); hard coal (metric tons; 2008) 58,000⁵ ([2006] 818,000); lignite (metric tons; 2008) 364,000⁵ ([2006] 436,000); crude petroleum (barrels; 2008) 480,000⁵ ([2006] 516,000); petroleum products (metric tons; 2006) 83,000 (547,000); natural gas (cu m; 2008) 16,000,000⁵ ([2006] 769,000,000).

Household income and expenditure. Average household size (2004) 4.3; income per capita of household (2003) KGS 9,270 (U.S.\$212); sources of income

(1999): wages and salaries 29.2%, self-employment 25.6%, other 45.2%; expenditure (2005): food and nonalcoholic beverages 46.4%; transport 10.4%; alcohol, tobacco products, and narcotics 9.5%; clothing and footwear 9.0%; housing and energy 8.0%; household furnishings 3.4%.

Gross national income (GNI; 2008): U.S.\$3,932,000,000 (U.S.\$740 per capita); purchasing power parity GNI (U.S.\$2,130 per capita).

Structure of gross domestic product and labour force

	2008		2005	
	in value KGS '000,000	% of total value	labour force	% of labour force
Agriculture	47,801	25.8	799,600	35.4
Mining	832	0.4	12,400	0.5
Manufacturing	20,852	11.3	163,900	7.3
Public utilities	4,121	2.2	35,200	1.6
Construction	5,789	3.1	153,700	6.8
Transp. and commun.	15,458	8.4	115,700	5.1
Trade, hotels	36,854	19.9	350,500	15.5
Finance, real estate	6,364	3.4	42,300	1.9
Public admin., defense	7,860	4.2	102,300	4.5
Services	24,438 ⁶	13.2 ⁶	301,500 ⁷	13.3
Other			183,500 ⁷	8.1 ⁷
TOTAL	185,014⁸	100.0⁸	2,260,600	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 346; remittances (2008) 1,232; foreign direct investment (FDI; 2005–07 avg.) 144; official development assistance (2007) 274. Disbursements for (U.S.\$'000,000): tourism (2007) 90; remittances (2008) 196.

Land use as % of total land area (2007): in temporary crops 6.7%, in permanent crops 0.4%, in pasture 48.9%, forest area 4.6%.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−135.3	−222.2	−435.8	−924.1	−1,282.8	−2,454.9
% of total	10.4%	13.4%	24.5%	36.8%	36.1%	43.1%

Imports (2007): U.S.\$2,417,000,000 (refined petroleum 25.2%, machinery and apparatus 14.4%, food products 11.6%, chemicals and chemical products 10.6%, road vehicles/parts 4.8%). **Major import sources:** Russia 40.5%; China 14.7%; Kazakhstan 12.9%; Uzbekistan 5.0%; U.S. 4.0%.

Exports (2007): U.S.\$1,134,200,000 (refined petroleum 20.8%, gold 19.8%, machinery and apparatus 6.2%, women's/girls' outerwear 5.5%, vegetables 4.2%, glass 3.5%, portland cement 3.5%). **Major export destinations:** Russia 20.7%; Switzerland 19.9%; Kazakhstan 18.0%; Afghanistan 10.4%; Uzbekistan 7.6%.

Transport and communications

Transport. Railroads (2007): route length (2008) 470 km; passenger-km 59,900,000; metric ton-km cargo 853,700,000. Roads (2000): total length 18,500 km (paved 91%). Vehicles (2005): passenger cars 201,430; trucks and buses, n.a. Air transport (2008): passenger-km 585,000,000; metric ton-km cargo 2,314,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	955	185	PCs	2007	99	19
Telephones				Dailies	2007	65 ¹⁰	12 ¹⁰
Cellular	2008	3,394 ¹¹	643 ¹¹	Internet users	2008	850	161
Landline	2008	494	94	Broadband	2008	2.9 ¹¹	0.5 ¹¹

Education and health

Educational attainment (1999). Percentage of population age 15 and over having: primary education 6.3%; some secondary 18.3%; completed secondary 50.0%; some postsecondary 14.9%; higher 10.5%. **Literacy** (2006): total population age 15 and over literate 98.7%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	16,824	407,669	24.2	84
Secondary/Voc. (age 11–17)	52,614	713,613	13.6	81
Tertiary	13,468	239,380	17.8	43 (age 18–22)

Health (2006): physicians 12,710 (1 per 406 persons); hospital beds 26,339 (1 per 196 persons); infant mortality rate per 1,000 live births (2007) 30.6; undernourished population (2002–04) 200,000 (4% of total population based on the consumption of a minimum daily requirement of 1,930 calories).

Military

Total active duty personnel (November 2008): 10,900 (army 78.0%, air force 22.0%)¹². **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$7.

¹Rounded areas in sq km are converted to precise areas in sq mi. ²January 1. ³Bishkek is the capital of Chüy province, even though it is not part of the province. ⁴Osh province includes Osh city district. ⁵Excludes September production. ⁶Taxes on products. ⁷Unemployed. ⁸Detail does not add to total given because of rounding. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²Russian troops (November 2008) 500.

Internet resource for further information:

• **National Bank of Kyrgyz Republic**
<http://www.nbkr.kg>

Laos

Official name: Sathalanalat Paxathipatai Paxaxón Lao (Lao People's Democratic Republic).

Form of government: unitary single-party people's republic with one legislative house (National Assembly [115]).

Chief of state: President.

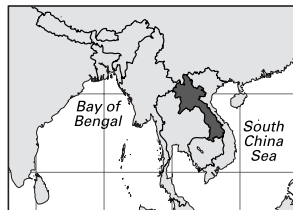
Head of government: Prime Minister.

Capital: Vientiane (Viangchan).

Official language: Lao.

Official religion: none.

Monetary unit: kip (KN); valuation (Sept. 1, 2009) 1 U.S.\$ = KN 8,477; 1 £ = KN 13,755.



Area and population					
	area	population		area	population
		2005			2005
Provinces	sq km	census	Provinces	sq km	census
Attapu	10,320	112,120	Viangchan ¹	15,927	388,895
Bòkèo	6,196	145,263	Xaignabouli	16,389	338,669
Bolikhamxai	14,863	225,301	Xékong	7,665	84,995
Champasak	15,415	607,370	Xiangkhoang	15,880	229,596
Houaphan	16,500	280,938			
Khammouan	16,315	337,390	Municipality		
Louangnamtha	9,325	145,310	Vientiane		
Louangphrabang	16,875	407,039	(Viangchan)	3,920	698,318
Oudomxay	15,370	265,179	Special zone		
Phongsali	16,270	165,947	Xaisomboun ¹	7,105	39,423
Salavan	10,691	324,327	TOTAL	236,800	5,621,982
Savannakhet	21,774	825,902			

Demography

Population (2009): 6,320,000.

Density (2009): persons per sq mi 69.1, persons per sq km 26.7.

Urban-rural (2007): urban 29.7%; rural 70.3%.

Sex distribution (2007): male 49.86%; female 50.14%.

Age breakdown (2007): under 15, 38.7%; 15–29, 28.9%; 30–44, 17.0%; 45–59, 9.7%; 60–74, 4.3%; 75 and over, 1.4%.

Population projection: (2020) 7,651,000; (2030) 8,854,000.

Doubling time: 30 years.

Ethnic composition (2005): Lao 54.6%; Khmou 10.9%²; Hmong 8.0%; Tai 3.8%³; Phu Tai (Phouthay) 3.3%³; Lue 2.2%³; Katang 2.1%²; Makong 2.1%²; other 13.0%.

Religious affiliation (2005): traditional beliefs c. 49%; Buddhist c. 43%; Christian c. 2%; nonreligious/other c. 6%.

Major cities (2003): Vientiane 194,200 (urban agglomeration [2007] 745,000); Savannakhet 58,200; Pakxé 50,100; Xam Nua 40,700; Muang Khammouan 27,300; Louangphrabang 26,400.

Vital statistics

Birth rate per 1,000 population (2008): 34.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 11.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 23.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 4.50.

Life expectancy at birth (2008): male 54.1 years; female 58.4 years.

Major causes of death per 100,000 population (2002): communicable diseases 673; cardiovascular diseases 210; injuries, accidents, and violence 112; malignant neoplasms (cancers) 73; chronic respiratory diseases 58.

National economy

Budget (2007–08). Revenue: KN 7,035,000,000,000 (tax revenue 80.0%, of which turnover tax 17.5%, excise tax 16.9%, tax on mining sector 11.4%, import duties 9.6%; nontax revenue 11.5%; grants 8.5%). Expenditures: KN 7,952,000,000,000 (current expenditure 58.1%; capital expenditure 41.9%).

Public debt (external, outstanding; 2007): U.S.\$2,446,000,000.

Population economically active (2005): total 2,778,000; activity rate of total population 66.6% (participation rates: ages 15–64, 81.3%; female 50.2%; unofficially unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	73.1	84.5	93.3	100.0	106.8	111.6	120.1

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 2,870,000, corn (maize) 450,000, sugarcane 220,000, cassava 175,000, sweet potatoes 120,000, bananas 48,000, pineapples 37,000, potatoes 36,000, peanuts (groundnuts) 30,000, oranges 28,000, coffee 28,000, tobacco 25,000, natural rubber (hectares; 2006) 11,778; livestock (number of live animals) 2,260,000 pigs, 1,337,000 cattle, 1,120,000 water buffalo, 21,900,000 chickens; roundwood 6,137,200 cu m, of which fuelwood 97%; fisheries production 104,925 (from aquaculture 74%). Mining and quarrying (2007): gypsum 775,000, limestone 750,000, copper (metal content) 99,040; tin (metal content) 450; gold 4,161 kg. Manufacturing (2007): plastic products 7,383; nails 2,168; plywood 952,000,000 sheets; bricks 244,000,000 units; cigarettes 124,000,000 packs; garments 47,000,000 pieces; beer 1,029,000 hectolitres. Energy production (consumption): electricity (kW-hr; 2008) 3,705,000,000 ([2006] 1,021,000,000); hard coal (metric tons; 2008) 392,000 ([2006] 305,000); lignite (metric tons; 2006) 319,000 (96,000); crude petroleum, none (none);

petroleum products (metric tons; 2006) none (133,000); natural gas, none (none).

Gross national income (GNI; 2008): U.S.\$4,674,000,000 (U.S.\$750 per capita); purchasing power parity GNI (U.S.\$2,060 per capita).

Structure of gross domestic product and labour force				
	2007		2003	
	in value KN '000,000,000	% of total value	labour force ⁴	% of labour force ⁴
Agriculture	12,168	30.8	589,000	21.5
Mining	4,406	11.2		
Manufacturing	3,408	8.6		
Construction	1,441	3.7		
Public utilities	1,000	2.5		
Transp. and commun.	1,919	4.9		
Trade, hotels	8,704	22.0		
Finance, real estate	1,983	5.0		
Pub. admin., defense	1,707	4.3		
Services	843	2.1		
Other	1,913 ⁵	4.9 ⁵		
TOTAL	39,492	100.0	2,739,000	100.0

Household income and expenditure. Average household size (2005) 5.9; average annual income per household (1995) KN 3,710 (U.S.\$371); sources of income: n.a.; expenditure (2002–03): food and nonalcoholic beverages 37.0%, transportation and communications 16.5%, housing 12.1%, household furnishings 5.7%, energy 5.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 275; remittances (2008) 1.0; foreign direct investment (2005–07 avg.) 180; official development assistance (2007) 396. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances (2007) 1.0.

Land use as % of total land area (2007): in temporary crops 5.1%, in permanent crops 0.4%, in pasture 3.8%, forest area 69.3%.

Foreign trade

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–314.2	–520.4	–573.6	–456.7	–835.4	–1,177.5
% of total	25.0%	32.7%	29.2%	16.8%	24.0%	26.4%

Imports (2008): U.S.\$2,816,100,000 (capital goods 41.6%, petroleum 15.0%, materials for garment assembly 5.1%). **Major import sources:** Thailand 68.6%; China 11.3%; Vietnam 4.7%; South Korea 2.5%; Japan 2.5%.

Exports (2008): U.S.\$1,638,600,000 (copper 37.9%, garments 11.6%, timber 8.0%, gold 7.3%, electricity 7.2%). **Major export destinations:** Thailand 34.7%; Vietnam 13.2%; China 8.6%; South Korea 4.5%; U.K. 3.3%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 22,904 mi, 36,831 km (paved 13%). Vehicles (2002): passenger cars 315,000⁷. Air transport (2007): passenger-km 245,400,000; metric ton-km cargo 200,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	321	59	PCs	2007	110	18
Telephones				Dailies	2007	25 ⁸	4.1 ⁸
Cellular	2008	1,822 ⁹	294 ⁹	Internet users	2008	130	21
Landline	2008	98	16	Broadband	2007	3.6 ⁹	0.6 ⁹

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling 32.8%; incomplete primary education 21.6%; complete primary 18.2%; lower secondary 11.4%; upper secondary 6.2%; higher 9.8%. **Literacy** (2005): total population age 15 and over literate 72.7%; males literate 82.5%; females literate 63.2%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	28,741	891,881	31.0	84
Secondary/Voc. (age 11–16)	15,987	395,382	24.7	35
Tertiary	2,533	56,716	22.4	9 (age 17–21)

Health (2005): physicians 5,000 (1 per 1,129 persons); hospital beds (2007) 6,955¹⁰ (1 per 838 persons); infant mortality rate per 1,000 live births 79.5; undernourished population (2002–04) 1,100,000 (19% of total population based on the consumption of a minimum daily requirement of 1,730 calories).

Military

Total active duty personnel (November 2008): 29,100 (army 88.0%, air force 12.0%). **Military expenditure as percentage of GDP** (2007): 0.4%; per capita expenditure U.S.\$2.

¹Xaisomboun special zone merged with Viangchan province in 2006. ²A principal ethnic group of the Lao-Theung (Mon-Khmer) peoples. ³A principal ethnic group of the Lao-Tai (tribal Tai) peoples. ⁴Excludes registered unemployed. ⁵Taxes/import duties less imputed bank service charges. ⁶Per an expenditure and consumption survey of 8,100 households. ⁷Includes trucks and buses. ⁸Circulation of daily newspapers. ⁹Subscribers. ¹⁰Includes 2,337 beds in dispensaries.

Internet resources for further information:

- National Statistics Centre <http://www.nsc.gov.la>
- Bank of the Lao PDR <http://www.bol.gov.la>

Latvia

Official name: Latvijas Republika (Republic of Latvia).

Form of government: unitary multiparty republic with a single legislative body (Parliament, or Saeima [100]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Riga.

Official language: Latvian.

Official religion: none.

Monetary unit: lats (Ls; plural lati); valuation (Sept. 1, 2009)

1 Ls = U.S.\$2.03 = £1.25.



Area and population

area		population		area		population	
		2009 ¹ estimate				2009 ¹ estimate	
Cities				Districts			
	sq km				sq km		
Daugavpils	73	104,857		Jelgava	1,605	37,410	
Jelgava	60	65,419		Krāslava	2,288	32,100	
Jūrmala	100	55,870		Kuldīga	2,500	35,128	
Liepāja	60	84,747		Liepāja	3,593	42,943	
Rēzekne	18	35,526		Limbaži	2,602	36,991	
Rīga	307	713,016		Ludza	2,412	30,309	
Ventspils	55	42,963		Madona	3,349	41,662	
Districts				Ogre	1,843	65,102	
Aizkraukle	2,567	39,530		Preiļi	2,042	37,212	
Alūksne	2,245	23,926		Rēzekne	2,809	39,349	
Balvi	2,381	26,410		Rīga (Rīga)	3,132	173,116	
Bauska	1,881	50,544		Saldus	2,182	36,118	
Cēsis	2,973	56,001		Talsi	2,748	45,954	
Daugavpils	2,526	37,883		Tukums	2,457	54,428	
Dobele	1,632	37,415		Valka	2,441	30,908	
Gulbene	1,876	25,496		Valmiera	2,373	57,583	
Jēkabpils	2,997	51,610		Ventspils	2,462	13,768	
				TOTAL	64,589²	2,261,294	

Demography

Population (2009): 2,256,000.

Density (2009): persons per sq mi 90.5, persons per sq km 34.9.

Urban-rural (2009¹): urban 67.8%; rural 32.2%.

Sex distribution (2009¹): male 46.13%; female 53.87%.

Age breakdown (2009¹): under 15, 13.7%; 15–29, 22.6%; 30–44, 20.8%; 45–59, 20.6%; 60–74, 15.0%; 75–89, 6.9%; 90 and over, 0.4%.

Population projection: (2020) 2,158,000; (2030) 2,054,000.

Ethnic composition (2009¹): Latvian 59.3%; Russian 27.8%; Belarusian 3.6%; Ukrainian 2.5%; Polish 2.4%; Lithuanian 1.3%; other 3.1%.

Religious affiliation (2005): Orthodox c. 29%, of which Russian c. 16%; Roman Catholic c. 19%; Lutheran c. 14%; nonreligious c. 26%; atheist/other c. 12%.

Major cities (2009¹): Riga 713,016; Daugavpils 104,857; Liepāja 84,747; Jelgava 65,419; Jūrmala 55,870.

Vital statistics

Birth rate per 1,000 population (2008): 10.6 (world avg. 20.3); within marriage 56.9%; outside of marriage 43.1%.

Death rate per 1,000 population (2008): 13.7 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 1.45.

Marriage/divorce rates per 1,000 population (2008): 5.7/2.7.

Life expectancy at birth (2008): male 67.2 years; female 77.9 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 728.7; neoplasms 261.7; accidents, poisoning, and violence 107.9; diseases of the digestive system 49.0.

National economy

Budget (2008–09). Revenue: Ls 5,203,700,000 (taxes on products 29.4%; social security contributions 25.3%; income taxes 24.7%; VAT 17.4%). Expenditures: Ls 6,602,100,000 (wages and salaries 28.5%; social security and welfare 23.3%; transfers 12.5%).

Public debt (external, outstanding; June 2009): U.S.\$4,308,600,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): wheat 989,600, potatoes 673,000, barley 277,000, rapeseed 198,500, rye 194,900, oats 141,500, cabbages (2007) 56,600; livestock (number of live animals; 2009¹) 384,000 pigs, 380,000 cattle; roundwood (2007) 12,172,900 cu m, of which fuelwood 8%; fisheries production 158,500 (from aquaculture, negligible). Mining and quarrying (2008): peat 865,500; limestone 515,900; gypsum 349,100. Manufacturing (value added in Ls '000,000; 2008): food products 313.6; wood products (excluding furniture) 270.1; fabricated metal products 131.0; printing and publishing 105.1; cement, bricks, and ceramics 104.0. Energy production (consumption): electricity (kW-hr; 2008–09) 4,895,000,000 (7,276,000,000); coal (metric tons; 2008–09) none (137,000); crude petroleum, none (none); petroleum products (metric tons; 2008–09) none (1,377,000); natural gas (cu m; 2008–09) none (1,573,000,000).

Household income and expenditure. Average household size (2009¹) 2.5; annual disposable income per household (2007) Ls 7,164 (U.S.\$14,917); sources of income (2007): wages and salaries 76.7%, pensions and transfers 17.9%, self-employment 3.7%; expenditure (2008): food, beverages, and tobacco 28.7%, transportation and communications 19.3%, housing and energy 11.9%, clothing and footwear 7.8%, household furnishings 6.2%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 671; remittances (2008) 601; foreign direct investment (FDI; 2005–07 avg.) 1,517. Disbursements for (U.S.\$'000,000): tourism (2007) 927; remittances (2008) 58; FDI (2005–07 avg.) 178.

Gross national income (GNI; 2008): U.S.\$26,883,000,000 (U.S.\$11,860 per capita); purchasing power parity GNI (U.S.\$16,740 per capita).

Structure of gross domestic product and labour force

	2008			
	in value Ls '000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	453,709	2.8	89,100	7.3
Mining and quarrying	59,461	0.4	2,800	0.2
Manufacturing	1,538,682	9.4	171,000	14.1
Public utilities	411,075	2.5	21,300	1.8
Construction	1,298,382	8.0	125,500	10.3
Transp. and commun.	1,567,654	9.6	105,800	8.7
Trade, restaurants	2,766,239	17.0	217,000	17.9
Finance, real estate	3,484,216	21.4	87,700	8.0
Pub. admin., defense	1,180,864	7.3	86,600	7.1
Services	1,859,651	11.4	202,500	16.7
Other	1,654,563 ³	10.2 ³	96,500 ⁴	7.9 ⁴
TOTAL	16,274,496	100.0	1,215,800	100.0

Population economically active (2008): total 1,215,800; activity rate of total population 53.7% (participation rates: ages 15–74, 67.7%; female 48.9%; unemployed [July 2008–June 2009] 12.3%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	85.7	88.2	93.7	100.0	106.6	117.3	135.4
Annual earnings index	72.0	78.6	86.3	100.0	121.5	158.3	190.5

Land use as % of total land area (2008): in temporary crops 18.8%, in permanent crops 0.1%, in pasture 10.4%, forest area 47.2%.

Foreign trade⁵

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
Ls '000,000	–1,339	–1,655	–1,979	–3,085	–3,740	–3,099
% of total	28.8%	27.8%	25.5%	31.9%	31.6%	25.9%

Imports (2008): Ls 7,527,687,000 (machinery and apparatus 18.3%; mineral fuels 15.6%, of which diesel oil 5.3%; food products and beverages 13.7%; transportation equipment 10.7%; base and fabricated metals 10.3%; chemical products 9.7%). **Major import sources:** Lithuania 16.5%; Germany 13.0%; Russia 10.6%; Poland 7.2%; Estonia 7.1%.

Exports (2008): Ls 4,428,945,000 (food products and beverages 16.7%; base and fabricated metals 16.7%; wood products 16.6%; machinery and apparatus 12.5%; chemical products 8.4%; textiles and wearing apparel 5.5%). **Major export destinations:** Lithuania 16.7%; Estonia 14.0%; Russia 10.0%; Germany 8.1%; Sweden 6.6%.

Transport and communications

Transport. Railroads (2008): length (2009¹) 2,263 km; passenger-km 951,000,000; metric ton-km cargo 19,581,000,000. Roads (2009¹): total length 51,300 km (paved 39%). Vehicles (2009¹): passenger cars 932,800; trucks and buses 140,300. Air transport (2008): passenger-km 3,498,000,000; metric ton-km cargo 15,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,992	857	PCs	2005	566	245
Telephones				Dailies	2007	436 ⁶	192 ⁶
Cellular	2008	2,234 ⁷	989 ⁷	Internet users	2007	1,252	552
Landline	2008	644	285	Broadband	2007	146 ⁷	64 ⁷

Education and health

Educational attainment (2007). Percentage of population age 15–74 having: none/unknown through complete primary education 26.1%; secondary 25.5%; vocational 30.1%; higher 18.3%. **Literacy** (2007): total population age 15 and over literate 99.8%; males literate 99.8%; females literate 99.8%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	6,699	78,796	11.8	90 ⁸
Secondary/Voc. (age 11–17)	25,202	258,432	10.3	...
Tertiary	6,188	131,125	21.2	74 (age 18–22)

Health (2009¹): physicians 8,437 (1 per 268 persons); hospital beds 17,001 (1 per 133 persons); infant mortality rate per 1,000 live births (2008) 6.7; undernourished population (2002–04) 70,000 (3% of total population based on the consumption of a minimum daily requirement of 1,960 calories).

Military

Total active duty personnel (November 2008): 5,187 (army 29.4%, navy 13.5%, air force 9.3%, headquarters/administrative/other 47.8%); reserve 11,204; national guard (paramilitary) 11,034. **Military expenditure as percentage of GDP** (2008): 1.6%; per capita expenditure U.S.\$226.

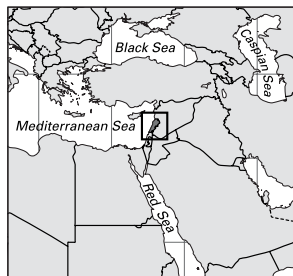
¹January 1; administrative reorganization begun in 2009 to be completed in 2010. ²Total area per more recent survey is 64,559 sq km (24,926 sq mi). ³Indirect taxes less subsidies. ⁴Includes 91,600 unemployed. ⁵Imports c.i.f.; exports f.o.b. ⁶Circulation of daily newspapers. ⁷Subscribers. ⁸2004–05.

Internet resources for further information:

- Bank of Latvia <http://www.bank.lv/eng/main/all>
- Central Statistical Bureau of Latvia <http://www.csb.lv/avidus.cfm?lng=en>

Lebanon

Official name: Al-Jumhūrīyah al-Lubnānīyah (Lebanese Republic).
Form of government: unitary multiparty republic with one legislative house (National Assembly [128]¹).
Chief of state: President.
Head of government: Prime Minister.
Capital: Beirut.
Official language: Arabic².
Official religion: none.
Monetary unit: Lebanese pound (LBP); valuation (Sept. 1, 2009) 1 U.S.\$ = LBP 1,507³; 1 £ = LBP 2,446.



Area and population		area		population
Governorates	Capitals	sq mi	sq km	2004 estimate
'Akkār ⁴	Halba	300	776	5
Baalbek-Hermel ⁴	Baalbek	6	16	6
Beirut	Beirut (Bayrūt)	7	18	389,700
Al-Biqā'	Zahlāh	1,653 ⁶	4,280 ⁶	471,100 ⁶
Jabal Lubnān	B'abāḍ	753	1,950	1,501,300
Al-Janūb	Sidon (Saydā)	364	943	401,100
An-Nabatiyah	An-Nabatiyah	408	1,058	221,900
Ash-Shamāl	Tripoli (Tarābulus)	465	1,205	768,700 ⁵
WATER AREA		66	170	—
TOTAL		4,016	10,400	3,753,800

Demography

Population (2009): 4,224,000⁷.
Density (2009): persons per sq mi 1,051, persons per sq km 406.2.
Urban-rural (2005): urban 86.6%; rural 13.4%.
Sex distribution (2008): male 48.97%; female 51.03%.
Age breakdown (2005): under 15, 27.6%; 15–29, 27.1%; 30–44, 21.7%; 45–59, 13.6%; 60–74, 7.7%; 75–84, 2.0%; 85 and over, 0.3%.
Population projection: (2020) 4,587,000; (2030) 4,858,000.
Doubling time: 47 years.
Ethnic composition (2000): Arab 84.5%, of which Lebanese 71.2%, Palestinian 12.1%; Armenian 6.8%; Kurd 6.1%; other 2.6%.
Religious affiliation (c. 2005): Muslim c. 56%, of which Shī'ī c. 28%, Sunnī c. 28%; Maronite (Eastern-rite Roman Catholic) c. 22%; Greek Orthodox c. 8%; Druze c. 5%; Greek Catholic c. 4%; other c. 5%.
Major cities (2003): Beirut 395,000 (urban agglomeration [2007] 1,846,000); Tripoli 212,900; Sidon 149,000; Tyre (Ṣūr) 117,100; An-Nabatiyah 89,400.

Vital statistics

Birth rate per 1,000 population (2008): 20.2 (world avg. 20.3).
Death rate per 1,000 population (2008): 5.0 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): 15.2 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2007): 2.21.
Marriage/divorce rates per 1,000 population (2008): 9.0/1.3.
Life expectancy at birth (2007): male 69.9 years; female 74.2 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 305; injuries, accidents, and violence 87; malignant neoplasms (cancers) 67; communicable diseases 64; chronic respiratory diseases 33.

National economy

Budget (2007). Revenue: LBP 8,390,000,000,000 (tax revenue 66.7%, of which taxes on goods and services 34.8%, customs duties 6.7%; nontax revenue 26.5%; grants 5.9%; social contributions 0.9%). Expenditures: LBP 12,599,000,000,000 (public debt 37.3%; fuel/electricity 11.2%; defense 9.2%; social protection 7.5%; education 6.9%; health 2.2%).
Public debt (external, outstanding; July 2009): U.S.\$21.294,000,000.
Gross national income (GNI; 2008): U.S.\$26,297,000,000 (U.S.\$6,350 per capita); purchasing power parity GNI (U.S.\$10,880 per capita).

Structure of gross domestic product and labour force				
	2005		2001	
	in value LBP '000,000,000	% of total value	labour force	% of labour force
Agriculture	1,690	5.2	320,000	20.0
Mining	...	...
Manufacturing	3,786	11.6		
Construction	2,669	8.2		
Public utilities	~188	~0.6		
Transp. and commun.	2,360	7.3	1,120,000	70.0
Trade, hotels	7,534	23.2		
Finance				
Real estate and business services	10,924	33.6		
Services				
Pub. admin., defense	3,722	11.5	160,000	10.0
TOTAL	32,497	100.0	1,600,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 490,000, tomatoes 255,000, oranges 195,000, cucumbers and gherkins 125,000, lemons and limes 110,000, grapes 100,000, apples 98,000, olives 83,000, almonds 27,000, cherries 24,000; livestock (number of live animals) 495,000 goats, 340,000 sheep, 77,000 cattle, 35,000 chickens; roundwood 87,250 cu m, of which fuelwood 92%; fisheries production 4,614 (from aquaculture 17%). Mining and quarrying (2007): ⁸. Manufacturing (value added in U.S.\$'000,000; 1998): food and food products 345; cement, bricks, and ceramics 212; wood and wood products 188;

fabricated metal products 185; paints, soaps, and pharmaceuticals 94; wearing apparel 91. Energy production (consumption): electricity (kW-hr; 2008) 11,188,000,000 ([2007] 10,590,000,000); coal (metric tons; 2006) none (200,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (4,009,000); natural gas, none (none).
Population economically active (2007): total 1,228,800; activity rate of total population 32.7% (participation rates: ages 15–64, 47.6%; female 25.0%; unemployed 9.2%).

Price index (December 2005 = 100)							
	2001	2002	2003	2004	2005	2006	2007
Consumer price index ⁹	94.0	98.0	101.0	102.7	100.0	105.6	115.4

Household income and expenditure. Average household size (2004) 4.3; sources of income: n.a.; expenditure (2007)¹⁰: food and nonalcoholic beverages 19.9%, housing 16.2%, transportation 12.3%, energy 9.5%, education 7.7%, health 6.8%, clothing 6.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,993; remittances (2008) 6,000; foreign direct investment (FDI; 2005–07 avg.) 2,792; official development assistance (2007) 939. Disbursements for (U.S.\$'000,000): tourism (2007) 3,114; remittances (2008) 3,022; FDI (2005–07 avg.) 142.

Land use as % of total land area (2007): in temporary crops 13.1%, in permanent crops 14.0%, in pasture 39.1%, forest area 13.6%.

Foreign trade

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−5,267	−6,708	−6,467	−6,613	−8,005	−12,659
% of total	65.7%	64.2%	60.0%	59.3%	55.6%	64.5%

Imports (2008): U.S.\$16,137,000,000 (mineral products [significantly petroleum] 26.5%, food and live animals 13.2%, transportation equipment 10.6%, electrical equipment 10.5%). **Major import sources:** U.S. 11.5%; China 8.6%; France 8.3%; Italy 6.9%; Germany 6.4%; Turkey 4.3%.

Exports (2008): U.S.\$3,478,000,000 (precious metal jewelry and stones [significantly gold and diamonds] 16.5%, electrical equipment 15.4%, base and fabricated metals [significantly scrap] 15.2%, chemicals and chemical products 12.5%). **Major export destinations:** U.A.E. 10.0%; Switzerland 9.5%; Iraq 7.7%; Syria 6.4%; Saudi Arabia 6.0%; Turkey 5.9%.

Transport and communications

Transport. Railroads: ¹¹. Roads (2005): total length 6,970 km (paved, n.a.). Vehicles (2001): passenger cars 1,370,897; trucks and buses 102,394. Air transport (2008)¹²: passenger-km 2,748,000,000; metric ton-km cargo 38,524,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,269	320	PCs	2007	433	104
Telephones				Dailies	2007	240 ¹³	58 ¹³
Cellular	2008	1,430 ¹⁴	341 ¹⁴	Internet users	2008	2,190	522
Landline	2008	714	170	Broadband	2007	200 ¹⁴	48 ¹⁴

Education and health

Educational attainment (2004). Percentage of population age 4 and over having: no formal education or unknown 13.7%; incomplete primary education 3.2%; primary 54.2%; secondary/vocational 15.5%; upper vocational 1.7%; higher 11.7%. **Literacy** (2005): total population age 15 and over literate 88.3%; males literate 93.6%; females literate 83.4%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	32,412	450,566	13.9	83
Secondary/Voc. (age 12–17)	40,919	368,359	9.0	73
Tertiary	21,778	187,055	8.6	52 (age 18–22)

Health (2005): physicians 10,538 (1 per 387 persons); hospital beds (2006) 12,037 (1 per 343 persons); infant mortality rate per 1,000 live births 23.6; undernourished population (2002–04) 120,000 (3% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2008): 56,000 (army 96.2%, navy 2.0%, air force 1.8%); estimated strength of Hizbullah (November 2008) 2,000. UN peacekeeping troops (March 2009) 12,261. **Military expenditure as percentage of GDP** (2008): 3.1%; per capita expenditure U.S.\$179.

¹By law one-half of the membership is Christian and one-half Muslim/Druze. ²A law determines French usage per article 11 of the constitution. In 2004 c. 20% of the population spoke French in their daily lives. ³Rounded pegged rate. ⁴Created in 2003; actual effective implementation of local government unclear in mid-2009. ⁵Ash-Shamāl includes 'Akkār. ⁶Al-Biqā' includes Baalbek-Hermel. ⁷Includes about 425,000 registered Palestinian refugees, of whom about 225,000 live in refugee camps. ⁸Lebanon has between 300 and 400 rock and sand quarries (many of which are unlicensed). ⁹As of December. ¹⁰Weights of consumer price index components. ¹¹The 401 km network was unusable in 2009. ¹²Middle East Airlines. ¹³Circulation of daily newspapers. ¹⁴Subscribers.

Internet resources for further information:

- Central Administration for Statistics <http://www.cas.gov.lb>
- Central Bank of Lebanon <http://www.bdl.gov.lb>

Lesotho

Official name: *Musa oa Lesotho* (Sotho); Kingdom of Lesotho (English).

Form of government: constitutional monarchy with 2 legislative houses (Senate [33 nonelected seats]; National Assembly [120]).

Chief of state: King.

Head of government: Prime Minister.

Capital: Maseru.

Official languages: Sotho; English.

Official religion: Christianity.

Monetary unit: loti (plural maloti [M]); valuation (Sept. 1, 2009) 1 U.S.\$ = M 7.79; 1 £ = M 12.64¹.



Area and population		area		population
District Councils ²	Capitals	sq mi	sq km	2006 census ³
Berea	Teyateyaneng	858	2,222	256,496
Butha-Buthe	Butha-Buthe	682	1,767	109,529
Leribe	Hlotse	1,092	2,828	298,352
Mafeteng	Mafeteng	818	2,119	193,682
Maseru	Maseru	1,652 ⁴	4,279 ⁴	201,943
Mohale's Hoek	Mohale's Hoek	1,363	3,530	174,924
Mokhotlong	Mokhotlong	1,573	4,075	96,340
Qacha's Nek	Qacha's Nek	907	2,349	71,876
Quthing	Quthing	1,126	2,916	120,502
Thaba-Tseka	Thaba-Tseka	1,649	4,270	129,137
Municipal Council²				
Maseru		4	4	227,880
TOTAL		11,720	30,355	1,880,661

Demography

Population (2009): 2,067,000⁵.

Density (2009): persons per sq mi 176.4, persons per sq km 68.1.

Urban-rural (2006)³: urban 23.8%; rural 76.2%.

Sex distribution (2006)³: male 48.72%; female 51.28%.

Age breakdown (2006)³: under 15, 36.2%; 15–29, 31.0%; 30–44, 15.9%; 45–59, 9.9%; 60–74, 5.0%; 75 and over, 2.0%.

Population projection⁵: (2020) 2,244,000; (2030) 2,359,000.

Doubling time: over 100 years.

Ethnic composition (2000): Sotho 80.3%; Zulu 14.4%; other 5.3%.

Religious affiliation (2000): Christian 91.0%, of which Roman Catholic 37.5%, unaffiliated Christian 23.9%, Protestant (mostly Reformed and Anglican) 17.7%, independent Christian 11.8%; traditional beliefs 7.7%; other 1.3%.

Major urban centres (2006): Maseru 116,300; Mafeteng 61,600; Hlotse 50,900; Mohale's Hoek 44,500; Maputsoe 32,800.

Vital statistics

Birth rate per 1,000 population (2008): 24.4 (world avg. 20.3).

Death rate per 1,000 population (2008): 22.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 2.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.13.

Life expectancy at birth (2008): male 41.0 years; female 39.3 years.

Adult population (ages 15–49) *living with HIV* (2007): 23.2%⁶ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 1,624; cardiovascular diseases c. 205; lower respiratory infections c. 89; diarrheal diseases c. 84.

National economy

Budget (2007–08). Revenue: M 7,169,700,000 (tax revenue 88.3%, of which customs receipts 57.2%, VAT 11.8%, income tax 11.0%; nontax revenue 9.3%; grants 2.4%). Expenditures: M 5,334,400,000 (wages and salaries 33.2%; grants 14.5%; transfers 6.2%; debt service 5.5%; social benefits 4.2%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 96,000, corn (maize) 50,800, vegetables 20,000, sorghum 11,200, wheat 10,400, dry beans 5,500; livestock (number of live animals) 1,025,000 sheep, 715,000 goats, 695,000 cattle, 66,000 pigs, 55,000 horses; roundwood 2,068,300 cu m, of which fuelwood 100%; fisheries production 179 (from aquaculture 73%). Mining and quarrying (2008): diamonds 216,546 carats. Manufacturing (value added in M '000,000; 2007): textiles and clothing 376.8; food and beverages 59.4; leather and footwear 30.8. Energy production (consumption): electricity (kW-hr; 2006) 200,000,000 (226,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2003) none (100,000); natural gas, none (none).

Population economically active (2008): total 788,541; activity rate of total population 38.5% (participation rates: ages 15 and older, 63.5%; female 55.3%; unemployed 22.7%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	86.3	92.1	96.7	100.0	106.0	114.6	126.8
Monthly earnings index ⁷	...	...	96.6	100.0	103.6	112.2	120.7

Household income and expenditure (2002–03)⁸. Average household size (2004) 4.1; sources of income: wages and salaries 40.3%, agriculture 25.4%, remittances 10.7%; expenditure: food and nonalcoholic beverages 44.3%, clothing and footwear 15.3%, transportation and communications 9.7%, household furnishings 8.6%.

Land use as % of total land area (2007): in temporary crops 9.9%, in permanent crops 0.1%, in pasture 65.9%, forest area 0.3%.

Gross national income (GNI; 2008): U.S.\$2,179,000,000 (U.S.\$1,080 per capita); purchasing power parity GNI (U.S.\$2,000 per capita).

Structure of gross domestic product and labour force

	2008		1996	
	in value M '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	789	6.7	105,250	18.4
Mining and quarrying	764	6.5	102,037 ⁹	17.8 ⁹
Manufacturing	2,015	17.1	21,087	3.7
Construction	575	4.9	19,202	3.4
Public utilities	497	4.2	2,486	0.4
Transp. and commun.	593	5.0	14,690	2.6
Trade, hotels	1,591	13.5	14,891	2.6
Finance, real estate	1,958	16.6	3,829	0.7
Pub. admin., defense	1,153	9.8	130,684	22.8
Services	1,238	10.5		
Other	605 ¹⁰	5.1 ¹⁰	158,908 ¹¹	27.7 ¹¹
TOTAL	11,778	100.0¹²	573,064¹³	100.0^{12, 13}

Public debt (external, outstanding; January 2009): U.S.\$619,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 43; remittances (2008) 443; foreign direct investment (2005–07 avg.) 85; official development assistance (2007) 130. Disbursements for (U.S.\$'000,000): tourism (2007) 16; remittances (2008) 21.

Foreign trade¹⁴

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
M '000,000	–3,917	–3,727	–4,176	–4,519	–5,629	–5,981
% of total	35.5%	28.7%	33.5%	32.3%	33.2%	29.2%

Imports (2008): M 13,237,230,000 ([2006] assorted manufactured goods c. 40%, food c. 24%, chemicals and chemical products c. 13%, machinery and transport equipment c. 13%). **Major import sources** (2007): other Southern African Customs Union (SACU) countries 76.5%; Asia 21.4%.

Exports (2008): M 7,256,070,000 (textiles and wearing apparel 50.4%; diamonds 24.0%; machinery and transportation equipment 14.0%; food, beverages, and tobacco 6.6%). **Major export destinations:** other SACU countries 37.7%; North America (mostly U.S.) 35.0%; European Union 24.0%.

Transport and communications

Transport. Railroads (2001): length 1.6 mi, 2.6 km. Roads (2006): total length 2,370 km (paved 57%). Vehicles (1996): passenger cars 12,610; trucks and buses 25,000. Air transport (1999): passenger-km, negligible (less than 500,000); metric ton-km cargo, negligible.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	80	41	PCs	2005	1	0.5
Telephones				Dailies	2008	0	0
Cellular	2008	581 ¹⁵	284 ¹⁵	Internet users	2008	73	36
Landline	2008	65	32	Broadband	2005	0.05 ¹⁵	0.02 ¹⁵

Education and health

Educational attainment (2004)¹⁶. Percentage of population age 25 and over having: no formal education/unknown 18%; incomplete primary education 44%; complete primary 15%; secondary 20%; vocational and higher 3%. **Literacy** (2007): total population age 15 and over literate 86.5%; males literate 77.1%; females literate 95.6%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	10,513	424,855	40.4	72
Secondary/Voc. (age 13–17)	3,725	93,996	25.2	24
Tertiary	638	8,500	13.3	4 (age 18–22)

Health: physicians (2005) 124 (1 per 16,089 persons); hospital beds (2006) 2,618 (1 per 769 persons); infant mortality rate per 1,000 live births (2008) 78.6; undernourished population (2002–04) 250,000 (13% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2008): 2,000 (army 100%). **Military expenditure as percentage of GDP** (2007): 2.3%; per capita expenditure U.S.\$20.

¹The loti is pegged to the South African rand at 1 to 1; the rand is accepted as legal tender within Lesotho. ²New effective local government system introduced in 2005.

³De jure figure including usual residents abroad (significantly absentee miners working in South Africa). ⁴Maseru District Council includes Maseru Municipal Council.

⁵Estimate of United Nations *World Population Prospects: The 2008 Revision*.

⁶Statistically derived midpoint of range. ⁷Minimum wage. ⁸Data for 2002–03 based on the Household Budget Survey comprising 5,992 households. ⁹Includes 94,190 mine workers in South Africa; the number of mine workers in South Africa in late 2005 equaled 51,900. ¹⁰Indirect taxes less subsidies and less imputed bank service charges.

¹¹Includes 101,599 not adequately defined and military personnel and 57,309 unemployed, not previously employed. ¹²Detail does not add to total given because of rounding. ¹³Includes 132,609 workers outside Lesotho (nearly all in South Africa). ¹⁴Imports are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹⁵Subscribers.

¹⁶Based on 2004 Lesotho Demographic and Health Survey of 32,747 people.

Internet resources for further information:

• **Central Bank of Lesotho** <http://www.centralbank.org.ls>

• **Lesotho Bureau of Statistics** <http://www.bos.gov.ls>

Liberia

Official name: Republic of Liberia.
Form of government: multiparty republic with two legislative bodies (Liberian Senate [30]; House of Representatives [64]).
Head of state and government: President.
Capital: Monrovia.
Official language: English.
Official religion: none.
Monetary unit: Liberian dollar (L\$); valuation (Sept. 1, 2009) 1 U.S.\$ = L\$71.55; 1 £ = L\$116.10.



Area and population		area		population
Counties	Capitals	sq mi	sq km	2008 census
Bomi	Tubmanburg	750	1,942	84,119
Bong	Gbarnga	3,386	8,769	333,481
Gbarpolu	Bopulu	3,739	9,685	83,388
Grand Bassa	Buchanan	3,063	7,932	221,693
Grand Cape Mount	Robertson	1,992	5,160	127,076
Grand Gedeh	Zwedru	4,046	10,480	125,258
Grand Kru	Barclayville	1,503	3,894	57,913
Lofa	Voinjama	3,853	9,978	276,863
Margibi	Kakata	1,010	2,615	209,923
Maryland	Harper	886	2,296	135,938
Montserrado	Bensonville	737	1,908	1,118,241
Nimba	Sanniquellie	4,458	11,546	462,026
River Cess	River Cess	2,159	5,592	71,509
River Gee	Fish Town	1,973	5,110	66,789
Sinoe	Greenville	3,912	10,133	102,391
TOTAL		37,466¹	97,036¹	3,476,608

Demography

Population (2009): 3,955,000².
Density (2009): persons per sq mi 105.6, persons per sq km 40.8.
Urban-rural (2008): urban 47.0%; rural 53.0%.
Sex distribution (2008): male 50.05%; female 49.95%.
Age breakdown (2008): under 15, 41.9%; 15–29, 29.1%; 30–44, 16.7%; 45–59, 7.4%; 60–74, 3.4%; 75–84, 1.0%; 85 and over, 0.5%.
Population projection: (2020) 5,253,000; (2030) 6,470,000.
Doubling time: 32 years.
Ethnic composition (2008): Kpelle 20.3%; Bassa 13.4%; Grebo 10.0%; Gio (Dan) 8.0%; Mano 7.9%; Kru 6.0%; Loma (Lorma) 5.1%; Kissi 4.8%; Gola 4.4%; Krahn 4.0%; Vai 4.0%; other 12.1%.
Religious affiliation (2005): traditional beliefs c. 40%; Christian (mostly Protestant/independent Christian) c. 40.3%; Muslim c. 20%.
Major urban areas (2008): Monrovia 1,010,970; Ganta 41,106; Buchanan 34,270; Gbarnga 34,046; Kakata 33,945.

Vital statistics

Birth rate per 1,000 population (2007): 43.8 (world avg. 20.3).
Death rate per 1,000 population (2007): 22.2 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 21.6 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2007): 5.94.
Life expectancy at birth (2007): male 38.9 years; female 41.9 years.

National economy

Budget (2007). Revenue: L\$10,222,400,000 (customs and excise duties 44.3%; direct taxes 32.1%; indirect taxes 12.6%; maritime revenue 7.6%; petroleum sales tax 2.4%; other 1.0%). Expenditures: L\$9,498,000,000 (general administration 41.5%; social and community services 19.8%; economic services 6.9%; other 31.8%).
Population economically active (2006): total 1,324,000⁴; activity rate 37.0%⁴ (participation rates: ages 15–64, 70.7%⁴; female 39.8%⁴; unemployed [2007] c. 80%).

Price index (2005 = 100)						
	2002	2003	2004	2005	2006	2007
Consumer price index	81.8	90.3	93.5	100.0	107.2	119.4

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 550,000, sugarcane 265,000, oil palm fruit 183,000, rice 154,800, bananas 120,000, natural rubber (2008) 87,901, plantains 43,000, taro 25,000, yams 19,000, sweet potatoes 19,000, peanuts (groundnuts) 5,300, coffee 3,600, cacao beans (2008) 3,285, coffee 124; livestock (number of live animals) 261,600 goats, 230,340 sheep, 173,000 pigs, 5,920,000 chickens; roundwood 6,623,400 cu m, of which fuelwood 95%; fisheries production 16,245 (from aquaculture, none). Mining and quarrying (2008): diamonds 60,536 carats; gold 624 kg. Manufacturing (value of sales in L\$'000; 2007): cement 1,308,767; beer 1,023,734; carbonated beverages 429,776; mattresses 200,391; paints and varnishes 41,313; candles 32,163. International maritime licensing (registration fees earned; 2007): more than U.S.\$12,000,000. Energy production (consumption): electricity (kW-hr; 2006) 351,000,000 (351,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (230,000); natural gas, none (none).

Household income and expenditure. Average household size (2008) 5.1; income per household: n.a.; sources of income: n.a.; expenditure (2005)⁵: food 45.2%, housing and energy 12.0%, clothing 7.8%, transportation 6.1%, household furnishings 5.3%, restaurants and hotels 4.6%.

Gross national income (GNI; 2008): U.S.\$634,000,000 (U.S.\$170 per capita); purchasing power parity GNI (U.S.\$300 per capita).

Structure of gross domestic product and labour force				
	2008			
	in value U.S.\$'000,000 ⁶	% of total value	labour force ⁷	% of labour force ⁷
Agriculture	182.5	36.0	176,326	59.7
Rubber	31.2	6.2		
Forestry	97.5	19.2		
Mining	0.8	0.2	2,508	0.8
Manufacturing	64.3	12.7	2,785	0.9
Construction	16.1	3.2	4,300	1.5
Public utilities	3.8	0.7	...	...
Transp. and commun.	34.8	6.9	11,178	3.8
Trade, hotels	36.7	7.2	18,928	6.4
Finance	11.9	2.3	18,321	6.2
Pub. admin., defense	11.3	2.2	47,681	16.2
Services	16.2	3.2	13,327	4.5
TOTAL	507.1	100.0	295,354⁸	100.0

Public debt (external, outstanding; 2007): U.S.\$910,000,000.
Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism, n.a.; remittances (2007) 303; foreign direct investment (2005–07 avg.) –517; official development assistance (2007) 696. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances (2007) 139; foreign direct investment (2005–07 avg.) 382.

Land use as % of total land area (2007): in temporary crops 4.0%, in permanent crops 2.2%, in pasture 20.8%, forest area 31.5%.

Foreign trade

Balance of trade (current prices)					
	2004	2005	2006	2007	2008 ⁹
U.S.\$'000,000	–233	–179	–309	–301	–559
% of total	52.9%	40.5%	49.5%	42.9%	53.9%

Imports (2008): U.S.\$798,000,000⁹ (food 25.7%, of which rice 15.8%; machinery and transport equipment 25.6%; petroleum products 19.5%; assorted manufactures 12.4%). **Major import sources** (2008): South Korea c. 27%; Singapore c. 25%; Japan c. 12%; China c. 11%.

Exports (2008): U.S.\$239,000,000⁹ (rubber 86.1%; gold 5.1%; diamonds 4.1%; cocoa beans/coffee 1.2%). **Major export destinations** (2008): Malaysia c. 38%; U.S. c. 16%; Poland c. 12%; Germany c. 9%; Belgium c. 6%.

Transport and communications

Transport. Railroads (2009)¹⁰: route length, none. Roads (2007): total length, n.a. Vehicles (2002): passenger cars 17,100; trucks and buses 12,800. Air transport: n.a.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2001	69	25	PCs	2007	...
Telephones	...	...	...	Dailies	2007	55 ¹¹
Cellular	2008	732 ¹²	193 ¹²	Internet users	2008	20
Landline	2008	2.0	0.5	Broadband	2008	...

Education and health

Educational attainment (2008). Percentage of population age 25 and over having: no formal schooling 55.3%; incomplete primary education 7.5%; complete primary 3.3%; incomplete secondary 16.2%; complete secondary 11.3%; vocational 1.2%; higher 5.2%. **Literacy** (2008): total population age 15 and over literate 54.0%; males literate 65.6%; females literate 42.6%.

Education (2007–08)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	22,610	538,842	23.8	31
Secondary/Voc. (age 12–17)	...	159,402 ¹³	...	17 ¹⁴
Tertiary ¹⁵	443	6,120	13.8	... (age 18–22)

Health: physicians (2009) 122 (1 per 32,418 persons); hospital beds (2001) 2,751 (1 per 1,075 persons); infant mortality rate per 1,000 live births (2007) 149.7; undernourished population (2002–04) 1,700,000 (50% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2008): 2,400; UN peacekeeping troops (August 2009) 10,046. **Military expenditure as percentage of GDP** (2003): c. 11%; per capita expenditure U.S.\$16.

¹Detail does not add to total given because of rounding. ²Per United Nations *World Population Prospects: The 2008 Revision*. ³Sometimes combined with traditional beliefs. ⁴ILO estimate. ⁵Weights of consumer price index components. ⁶At constant prices of 1992. ⁷Formal employment only. ⁸Excludes informal sector employment equaling 487,000 and an unknown number of unofficially unemployed. ⁹Excludes December. ¹⁰No railway lines were operational in early 2009. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³Excludes vocational. ¹⁴1999–2000. ¹⁵University of Liberia, two Monrovia-based colleges, and a Kakata-based college only.

Internet resource for further information:

• Central Bank of Liberia
<http://www.cbl.org.lr>

Libya

Official name: Al-Jamāhīriyah al-'Arabiyyah al-Libiyah ash-Sha'biyah al-Ishtirakiyyah al-'Uzmā (Great Socialist People's Libyan Arab Jamahiriya).

Form of government: authoritarian with one policy-making body (General People's Congress [468]).

Chief of state (de facto): Revolutionary Leader Muammar al-Qaddafi.

Head of government: Secretary of the General People's Committee (prime minister).

Capital: Tripoli².

Official language: Arabic.

Official religion: Islam.

Monetary unit: Libyan dinar (LD); valuation (Sept. 1, 2009) 1 U.S.\$ = LD 1.24; 1 £ = LD 2.00.



Area and population

		area	population			area	population
		sq km	2006 census			sq km	2006 census
Municipalities				Municipalities			
Banghāzī	...	670,797	...	Marzūq	...	78,621	...
Al-Buṭnān	...	159,536	...	Misrātah	...	550,938	...
Darnah	...	163,351	...	Nālūt	...	93,224	...
Ghāt	...	23,518	...	An-Nuqāt al-Khams	...	287,662	...
Al-Jabal al-Akhdar	...	203,156	...	Sabḥā	...	212,694	...
Al-Jabal al-Gharbī	...	304,159	...	Surt	...	193,720	...
Al-Jifārah	...	453,198	...	Tripoli (Tarābulus)	...	1,065,405	...
Al-Jufrah	...	...	...	Wādī al-Hayāt	...	76,858	...
Al-Kufrah	...	50,104	...	Wādī ash-Shāṭī	...	...	...
Al-Marj	...	185,848	...	Al-Wahāt	...	177,047	...
Al-Marqab	...	432,202	...	Az-Zāwiyah	...	290,993	...
				TOTAL		1,777,060	5,673,031³

Demography

Population (2009): 6,420,000⁴.

Density (2009): persons per sq mi 9.4, persons per sq km 3.6.

Urban-rural (2005): urban 84.8%; rural 15.2%.

Sex distribution (2006): male 51.93%; female 48.07%.

Age breakdown (2005): under 15, 30.1%; 15–29, 32.2%; 30–44, 19.8%; 45–59, 11.4%; 60–74, 5.3%; 75–84, 1.0%; 85 and over, 0.2%.

Population projection⁴: (2020) 7,699,000; (2030) 8,519,000.

Doubling time: 30 years.

Ethnic composition (2000): Arab 87.1%, of which Libyan 57.2%, Bedouin 13.8%, Egyptian 7.7%, Sudanese 3.5%, Tunisian 2.9%; Amazigh (Berber) 6.8%, of which Arabized 4.2%; other 6.1%.

Religious affiliation (2000): Muslim (nearly all Sunnī) 96.1%; Orthodox 1.9%; Roman Catholic 0.8%; other 1.2%.

Major cities/urban agglomerations (2006/2007): Tripoli (Tarābulus) 1,065,405/2,189,000; Banghāzī 670,797/(2005) 1,113,000; Misrātah (2003) 121,669.

Vital statistics

Birth rate per 1,000 population (2005): 26.8 (world avg. 20.3).

Death rate per 1,000 population (2005): 3.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2005): 23.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 3.34.

Marriage/divorce rates per 1,000 population (2002): 6.0/0.3.

Life expectancy at birth (2005): male 74.3 years; female 78.8 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 185, of which ischemic heart disease 98; infectious and parasitic diseases 72; malignant neoplasms (cancers) 44; accidents, injuries, and violence 43; chronic respiratory diseases 16.

National economy

Budget (2008). Revenue: LD 72,741,200,000 (oil revenues 88.6%, other 11.4%). Expenditures: LD 44,115,000,000 (development expenditures 65.5%; administrative expenditures 26.9%).

Public debt (external outstanding; 2005): U.S.\$3,900,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): watermelons 268,000, potatoes 196,000, tomatoes 190,000, dry onions 181,000, dates 175,000, olives 165,000, wheat 100,000, almonds 25,000; livestock (number of live animals) 4,500,000 sheep, 1,265,000 goats, 130,000 cattle, 47,000 camels, 25,000,000 chickens; roundwood 1,029,600 cu m, of which fuelwood 89%; fisheries production 32,161 (from aquaculture 1%). Mining and quarrying (2006): lime 250,000; gypsum 175,000; salt 40,000. Manufacturing (value of production in LD '000,000; 1996): base metals 212, electrical equipment 208, petrochemicals 175, food products 79, cement and other building materials 68. Energy production (consumption): electricity (kW-hr; 2006) 23,992,000,000 (24,025,000,000); coal (metric tons; 2002) none (4,000); crude petroleum (barrels; 2008) 643,800,000 ([2006] 114,800,000); petroleum products (metric tons; 2008) 15,860,000 (10,244,000); natural gas (cu m; 2006) 14,413,000,000 (6,223,000,000).

Household income and expenditure. Average household size (2006) 5.9; income per household: n.a.; sources of income: n.a.; expenditure: n.a.

Population economically active (2003): total 2,137,000⁵; activity rate of total population 37.9%⁵ (participation rates: ages 15 to 64, 56.7%⁵; female 24.7%⁵; unemployed [2004] 30.0%).

Price index (2000 = 100)

	2001	2002	2003	2004	2005	2006	2007
Consumer price index	91.1	82.1	80.4	78.6	80.2	82.9	88.4

Gross national income (GNI; 2008): U.S.\$72,735,000,000 (U.S.\$11,590 per capita); purchasing power parity GNI (U.S.\$15,630 per capita).

Structure of gross domestic product and labour force

2007			
	in value LD '000,000 ⁶	% of total value	% of labour force
Agriculture	1,905	2.0	135,700
Petroleum and natural gas ⁷	69,275	71.6	32,800
Other mining	1,162	1.2	23,700
Manufacturing ⁸	4,198	4.3	141,800
Construction	1,019	1.1	23,700
Public utilities	3,202	3.3	42,400
Transp. and commun.	3,296	3.4	56,400
Trade, hotels	6,017	6.2	140,800
Finance, insurance, real estate	6,629	6.9	195,100
Pub. admin., defense	96,701 ⁹	100.0	41,200
Services			290,400
TOTAL			1,794,500

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 74; remittances (2008) 16; foreign direct investment (2005–07 avg.) 1,864; official development assistance (2007) 19. Disbursements for (U.S.\$'000,000): tourism (2007) 888; remittances (2008) 762.

Land use as % of total land area (2007): in temporary crops 1.0%, in permanent crops 0.2%, in pasture 7.7%, forest area 0.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+2,309	+7,325	+11,832	+19,235	+25,275	+27,122
% of total	13.5%	33.7%	40.3%	46.9%	47.8%	43.8%

Imports (2004): U.S.\$8,768,000,000 (machinery and transport equipment 48.0%; food and live animals 14.1%; chemicals and chemical products 4.0%). **Major import sources** (2006): Europe 58.7%, of which Italy 9.9%, Germany 8.5%, U.K. 3.7%; Arab countries 11.3%; Japan 5.7%.

Exports (2004): U.S.\$20,600,000,000 (hydrocarbons [mostly crude petroleum] 95.7%; remainder 4.3%). **Major export destinations** (2006): Europe 82.3%, of which Italy 42.5%, Germany 9.8%, Spain 8.5%, France 4.8%; Asian countries 5.4%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 83,200 km (paved 57%). Vehicles (2005): passenger cars 1,356,987; trucks and buses 145,935. Air transport (2003): passenger-km 825,000,000; metric ton-km cargo (2001) 259,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	717	133	PCs	2005	130	21
Telephones				Dailies	2005	...	...
Cellular	2008	4,828 ¹⁰	767 ¹⁰	Internet users	2008	323	51
Landline	2008	1,033	164	Broadband	2006	9.6 ¹⁰	1.6 ¹⁰

Education and health

Educational attainment: n.a. **Literacy** (2006): percentage of total population age 15 and over literate 88.1%; males literate 93.0%; females literate 83.1%.

Education (2002–03)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	755,338 ¹¹	...	...
Secondary/Voc. (age 12–18)	...	732,614 ¹¹	...	...
Tertiary	15,711	375,028	23.8	56 (age 19–23)

Health: physicians (2004) 7,405 (1 per 775 persons); hospital beds (2002) 21,400 (1 per 256 persons); infant mortality rate per 1,000 live births (2005) 24.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 76,000 (army 65.6%, navy 10.5%, air force 23.7%). **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$113.

¹No formal titled office exists. ²Tripoli was made the capital in the early 1970s. By 2005 most ministries had relocated to Surt (near Qaddafi's place of birth) and other cities as part of a radical decentralization plan. The policy-making body (General People's Congress) meets annually in Surt. ³Final census results include 349,040 foreigners. ⁴Per United Nations *World Population Prospects: The 2008 Revision*. ⁵Estimate of the ILO Employment Trends Unit. ⁶At current factor cost. ⁷Includes refined petroleum. ⁸Excludes refined petroleum. ⁹Detail does not add to total given because of rounding. ¹⁰Subscribers. ¹¹2005–06.

Internet resource for further information:

• **Central Bank of Libya**
<http://www.cbl.gov.ly/en>

Liechtenstein

Official name: Fürstentum Liechtenstein (Principality of Liechtenstein).

Form of government: constitutional monarchy with one legislative house (Diet [25]).

Chief of state: Prince¹.

Head of government: Head of the Government (Prime Minister).

Capital: Vaduz.

Official language: German.

Official religion: 2.

Monetary unit: Swiss franc (CHF); valuation (Sept. 1, 2009) 1 U.S.\$ = CHF 1.06; 1 £ = CHF 1.72.



Area and population		area	population
Regions			2009 ³
Communes	sq mi	sq km	estimate
Oberland (Upland)			23,102
Balzers	7.6	19.7	4,513
Planken	2.0	5.3	421
Schaan	10.4	26.9	5,761
Triesen	10.2	26.5	4,758
Triesenberg	11.5	29.7	2,538
Vaduz	6.7	17.3	5,111
Unterland (Lowland)			12,491
Eschen	4.0	10.4	4,150
Gamprin	2.4	6.2	1,524
Maurer	2.9	7.5	3,836
Ruggell	2.9	7.4	1,939
Schellenberg	1.4	3.6	1,042
TOTAL	62.0	160.5	35,593

Demography

Population (2009): 35,700.

Density (2009): persons per sq mi 575.8, persons per sq km 222.4.

Urban-rural (2005): urban 14.3%; rural 85.7%.

Sex distribution (2008³): male 49.35%; female 50.65%.

Age breakdown (2008³): under 15, 16.8%; 15–29, 19.9%; 30–44, 22.5%; 45–59, 22.6%; 60–74, 13.1%; 75–84, 3.8%; 85 and over, 1.3%.

Population projection: (2020) 38,000; (2030) 39,000.

Ethnic composition (2007³): Liechtensteiner 66.1%; Swiss 10.3%; Austrian 5.8%; Italian 3.4%; German 3.4%; other 11.0%.

Religious affiliation (2002): Christian 83.9%, of which Roman Catholic 76.0%, Protestant 7.0%, Orthodox 0.8%; Muslim 4.1%; nonreligious/other/unknown 12.0%.

Major cities (2008³): Schaan 5,690; Vaduz 5,109; Triesen 4,713; Balzers 4,509; Eschen 4,137.

Vital statistics

Birth rate per 1,000 population (2008): 9.9 (world avg. 20.3); within marriage 86.0%; outside of marriage 14.0%.

Death rate per 1,000 population (2008): 5.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 4.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.40.

Marriage/divorce rates per 1,000 population (2008): 5.8/2.8.

Life expectancy at birth (2006): male 78.9 years; female 83.1 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 230.3; malignant neoplasms (cancers) 153.5; diseases of the respiratory system 51.2; accidents, violence, and suicide 22.7; diseases of the digestive system 19.9.

National economy

Budget (2007). Revenue: CHF 1,010,300,000 (current revenue 98.2%, of which taxes and duties 75.7%, investment income 16.5%, charges and fees 4.0%; capital revenue 1.7%). Expenditures: CHF 1,029,200,000 (current expenditure 89.7%, of which wages and salaries 18.2%, financial affairs 17.1%, depreciation on portfolio securities 7.2%; capital expenditure 10.3%).

Public debt: none.

Tourism (2007): 59,603 tourist arrivals; receipts from visitors, n.a.

Selected balance of payments data: n.a.

Population economically active (2008³): total 16,193⁴; activity rate of total population 45.3% (participation rates: age 15 and over [2006³] 54.3%; female [2004³] 41.4%; unemployed [2007] 2.7%).

Price index (2000 = 100)							
	2001	2002	2003	2004	2005	2006	2007
Consumer price index ⁵	101.0	101.6	102.3	103.1	104.3	105.4	106.2

Household income and expenditure. Average household size (2003) 2.5.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): milk 13,137; grapes 200; significantly market gardening, other crops include cereals and apples; livestock (number of live animals) 6,037 cattle, 3,683 sheep, 1,735 pigs; roundwood 22,167 cu m, of which fuelwood 19%; fisheries production, n.a. Mining and quarrying: n.a. Manufacturing (2007): small-scale precision manufacturing includes optical lenses, electron microscopes, electronic equipment, and high-vacuum pumps; metal manufacturing, construction machinery, and ceramics are important; dairy products and wine are also produced. Energy production (consumption): electricity (kW-hr; 2007) 72,273,000 (379,013,000); coal (metric tons; 2004) none ([2003] 13); petroleum products (metric tons; 2004) none (50,000); natural gas, none (none).

Gross national income (GNI; 2008): n.a.; purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force				
	2006		2007 ³	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry	45	1.3	398	1.3
Mining	87	2.4	45	0.1
Public utilities			207	0.7
Manufacturing	672	18.8	10,813	34.8
Construction	198	5.5	2,504	8.0
Transportation and communications	230	6.4	1,123	3.6
Trade, public accommodation	557	15.6	3,216	10.3
Finance, insurance, real estate			5,177	16.7
Consulting, trust management			2,390	7.7
Pub. admin., defense	1,840	51.4	1,479	4.8
Services			3,722	12.0
Other	–49 ⁶	–1.4 ⁶	—	—
TOTAL	3,580	100.0	31,074 ⁷	100.0

Land use as % of total land area (2007): in temporary crops 25%, in permanent crops, n.a., in pasture 13%, forest area 43%.

Foreign trade^{8, 9}

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
CHF '000,000	+1,441	+1,387	+1,323	+1,318	+1,440	+1,766
% of total	34.3%	31.8%	26.0%	25.7%	25.0%	26.8%

Imports (2007): CHF 2,416,000,000 (fabricated metals/iron and steel 36.8%, machinery and electronic goods 31.9%, mineral fuels/chemical products 15.2%, glass/ceramics/textiles 8.5%). **Major import sources:** Germany 40.2%; Austria 36.9%; Italy 5.2%; U.S. 1.8%; France 1.8%.

Exports (2007): CHF 4,182,000,000 (machinery and electronic goods 34.0%, fabricated metals/precision tools 33.2%, transport equipment/parts 8.6%, glass and ceramic products [including lead crystal and specialized dental products]/textiles 7.3%). **Major export destinations:** Germany 20.0%; U.S. 14.3%; Austria 11.5%; France 9.9%; Italy 6.3%.

Transport and communications

Transport. Railroads¹⁰ (2006): length 11.5 mi, 18.5 km; passenger and cargo traffic, n.a. Roads (2007): total length 235 mi, 380 km (paved 100%). Vehicles (2007): passenger cars 24,368; trucks and buses 7,532. Air transport: the nearest scheduled airport service is through Zürich, Switzerland.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	17	510	PCs	2005	...	...
Telephones				Dailies	2007	18 ¹¹	510 ¹¹
Cellular	2008	34 ¹²	954 ¹²	Internet users	2008	23	646
Landline	2008	20	550	Broadband	2007	14 ¹²	396 ¹²

Education and health

Educational attainment (2000)¹³. Percentage of population age 25 and over having: incomplete compulsory education (schooling to age 16) 3.0%; complete compulsory 22.9%; lower vocational 44.5%; higher vocational, teacher training 13.8%; university 6.6%; unknown 9.2%. **Literacy:** virtually 100%.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	268	2,247	8.4	88 ¹⁴
Secondary/Voc. (age 11–17)	352	3,190	9.1	65 ¹⁴
Tertiary	...	636	...	25 ¹⁴ (age 18–22)

Health: physicians (2005) 79 (1 per 441 persons); hospital beds (1997) 108 (1 per 288 persons); infant mortality rate per 1,000 live births (2006) 5.5; undernourished population, n.a.

Military

Total active duty personnel: none; Liechtenstein has had no standing army since 1868; defense is the responsibility of Switzerland. **Military expenditure as percentage of GDP:** none.

¹In August 2004 the prince turned over most official day-to-day responsibilities to his son but did not rescind the role of chief of state. ²The designation of "state church" for Roman Catholicism per article 37 of the constitution was under review in 2008. ³January 1. ⁴Residents employed within Liechtenstein only (including 10,145 Liechtensteiner residents in Liechtenstein and 6,048 other nationalities resident in Liechtenstein); 16,242 inward commuters are excluded along with 1,382 outward commuters. ⁵Figures are derived from statistics for Switzerland. ⁶Taxes less imputed bank service charges and subsidies. ⁷Residents employed within Liechtenstein only plus inward commuters. ⁸Excludes trade with Switzerland and transshipments through Switzerland. ⁹Liechtenstein has formed a customs union with Switzerland since 1923. ¹⁰Administered by Austrian Federal Railway. ¹¹Circulation of two leading daily newspapers only. ¹²Subscribers. ¹³Based on 14,211 Liechtensteiner and 8,855 foreigners. ¹⁴2003–04.

Internet resource for further information:
• Liechtenstein Office of Economic Affairs
<http://www.as.llv.li>

Lithuania

Official name: Lietuvos Respublika (Republic of Lithuania).

Form of government: unitary multi-party republic with single legislative body (Seimas, or Parliament [141]).

Head of state: President.

Head of government: Prime Minister.

Capital: Vilnius.

Official language: Lithuanian.

Official religion: none.

Monetary unit: litas (LTL); valuation (Sept. 1, 2009) 1 U.S.\$ = LTL 2.41; 1 £ = LTL 3.92.



Area and population

Counties	Capitals	area		population
		sq mi	sq km	2009 ¹ estimate
Alytus	Alytus	2,095	5,425	175,149
Kaunas	Kaunas	3,123	8,089	670,546
Klaipėda	Klaipėda	2,011	5,209	378,221
Marijampolė	Marijampolė	1,723	4,463	179,886
Panevėžys	Panevėžys	3,043	7,881	281,241
Siauliai	Siauliai	3,297	8,540	346,098
Tauragė	Tauragė	1,703	4,411	126,056
Telšiai	Telšiai	1,680	4,350	172,438
Utena	Utena	2,780	7,201	170,422
Vilnius	Vilnius	3,757	9,731	849,815
TOTAL		25,212	65,300	3,349,872

Demography

Population (2009): 3,339,000.

Density (2009): persons per sq mi 132.4, persons per sq km 51.1.

Urban-rural (2009¹): urban 66.9%; rural 33.1%.

Sex distribution (2009¹): male 46.55%; female 53.45%.

Age breakdown (2009¹): under 15, 15.1%; 15–29, 22.7%; 30–44, 21.1%; 45–59, 20.4%; 60–74, 13.8%; 75–84, 5.7%; 85 and over, 1.2%.

Population projection: (2020) 3,204,000; (2030) 3,068,000.

Ethnic composition (2009¹): Lithuanian 84.1%; Polish 6.1%; Russian 4.9%; Belarusian 1.1%; Ukrainian 0.6%; Jewish 0.1%; other/unknown 3.1%.

Religious affiliation (2007): Roman Catholic 80.2%; Orthodox 4.9%, of which Old Believers 0.8%; Lutheran/Reformed 0.8%; other Christian c. 3%; Jewish 0.1%; Muslim 0.1%; nonreligious/other 10.9%.

Major cities (2009¹): Vilnius 558,165; Kaunas 352,279; Klaipėda 183,433; Siauliai 126,215; Panevėžys 112,619; Alytus 67,505.

Vital statistics

Birth rate per 1,000 population (2008): 10.4 (world avg. 20.3); within marriage 71.5%; outside of marriage 28.5%.

Death rate per 1,000 population (2008): 13.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): –2.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.47.

Marriage/divorce rates per 1,000 population (2008): 7.2/3.1.

Life expectancy at birth (2008): male 66.3 years; female 77.6 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 694.5; malignant neoplasms (cancers) 246.2; diseases of the digestive system 75.8; diseases of the respiratory system 50.1.

National economy

Budget (2007). Revenue: LTL 30,067,000,000 (tax revenue 58.4%, of which tax on goods and services 36.8%, individual income tax 13.0%; social security contributions 30.4%; grants 5.8%; nontax revenue 5.4%). Expenditures: LTL 30,933,000,000 (social security and welfare 33.1%; general administration 23.7%; health 11.4%; economic affairs 11.1%; education 6.9%; defense 5.8%).

Gross national income (GNI; 2008): U.S.\$39,866,000,000 (U.S.\$11,870 per capita); purchasing power parity GNI (U.S.\$18,210 per capita).

Structure of gross national product and labour force

	2008			
	in value LTL '000,000	% of total value	labour force	% of labour force
Agriculture, forestry	4,500	4.0	119,800	7.4
Mining	400	0.4	4,100	0.3
Manufacturing	18,600	16.7	260,400	16.1
Construction	10,000	9.0	166,500	10.3
Public utilities	3,200	2.9	35,500	2.2
Transp. and commun.	12,700	11.4	120,800	7.5
Trade, restaurants	18,000	16.1	309,000	19.1
Finance, real estate	15,600	14.0	118,200	7.3
Pub. admin., defense	6,400	5.7	83,100	5.2
Services	10,500	9.4	302,700	18.8
Other	11,600	10.4	94,300 ²	5.8 ²
TOTAL	111,500	100.0	1,614,200³	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,390,700, barley 1,013,700, sugar beets 799,900, potatoes 576,100, rapeseed 311,900, triticale 227,600, rye 165,200, oats 119,500, cabbages 92,796, carrots 62,712, apples 40,619, currants 4,392; livestock (number of live animals) 1,127,100 pigs, 838,800 cattle; roundwood 5,855,000 cu m, of which fuelwood 22%; fisheries production 190,890 (from aquaculture 2%). Mining and quarrying (2006): limestone 1,776,300; peat 471,400. Manufacturing (value added in U.S.\$'000,000; 2006): food and beverages 664, of which dairy products 170; wood products 372, of which furniture 213⁴; bricks, tiles, and

ceramics 192; plastics 190; wearing apparel 189; refined petroleum 174. Energy production (consumption): electricity (kW-hr; 2008) 13,101,000,000 ([2006] 12,054,000,000); coal (metric tons; 2006) none (399,000); crude petroleum (barrels; 2008) 938,000 ([2006] 58,800,000); petroleum products (metric tons; 2006) 7,957,000 (2,486,000); natural gas (cu m; 2006) none (2,926,000,000).

Public debt (December 2008): U.S.\$7,099,000,000.

Population economically active (2007): total 1,603,100; activity rate of total population 47.6% (participation rates: ages 15–64, 67.9%; female 49.3%; registered unemployed [2008] 5.8%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.4	96.3	97.4	100.0	103.7	109.7	121.7
Annual earnings index	87.1	89.8	93.1	100.0	116.9	141.6	166.6

Household income and expenditure (2008). Average household size 2.4; average annual per capita disposable household income LTL 11,748 (U.S.\$4,984); sources of income: wages and salaries 61.6%, transfers 24.3%, self-employment 10.4%; expenditure: food and nonalcoholic beverages 34.8%, housing and energy 12.6%, transportation 9.8%, clothing and footwear 8.5%, hotels and cafés 5.5%, household furnishings 5.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,153; remittances (2008) 1,537; foreign direct investment (FDI; 2005–07 avg.) 1,602. Disbursements for (U.S.\$'000,000): tourism (2007) 1,143; remittances (2008) 567; FDI (2005–07 avg.) 411.

Land use as % of total land area (2007): in temporary crops 29.3%, in permanent crops 0.5%, in pasture 13.2%, forest area 34.0%.

Foreign trade⁵

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–2,641	–3,077	–3,634	–5,253	–7,283	–7,365
% of total	15.6%	14.2%	13.1%	15.7%	17.5%	13.4%

Imports (2007): U.S.\$24,445,000,000 (machinery and apparatus 18.1%; mineral fuels 16.2%, of which crude petroleum 9.2%; road vehicles 14.5%; chemicals and chemical products 12.6%). **Major import sources:** Russia 18.0%; Germany 15.0%; Poland 10.6%; Latvia 5.5%; Netherlands 4.3%.

Exports (2007): U.S.\$17,162,000,000 (food 14.0%; machinery and apparatus 12.8%; refined petroleum 11.6%; road vehicles/parts 8.5%; furniture/parts 5.1%; fertilizers 4.9%; apparel/clothing accessories 4.3%; plastics in primary forms 4.2%). **Major export destinations:** Russia 15.0%; Latvia 12.9%; Germany 10.5%; Poland 6.3%; Estonia 5.8%.

Transport and communications

Transport. Railroads (2007): length 1,350 mi, 2,180 km; passenger-km 408,710,000; metric ton-km cargo 14,372,677,000. Roads (2007): total length 50,154 mi, 80,715 km (paved 88%). Vehicles (2007): passenger cars 1,587,903; trucks and buses 140,995. Air transport (2007): passenger-km 1,521,700,000; metric ton-km cargo 5,777,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,785	519	PCs	2007	618	183
Telephones				Dailies	2007	654 ⁶	194 ⁶
Cellular	2008	5,023 ⁷	1,496 ⁷	Internet users	2008	1,777	529
Landline	2008	785	234	Broadband	2008	590 ⁷	176 ⁷

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no schooling through complete primary education 14.7%; lower secondary 18.0%; higher secondary 28.2%; vocational/technical 19.3%; higher 19.8%. **Literacy** (2007): total population age 15 and over literate 99.7%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	11,024	150,422	13.6	89
Secondary/Voc. (age 11–18)	42,303	410,507	9.7	92
Tertiary	13,382	198,868	14.9	76 (age 19–23)

Health (2009¹): physicians 13,403 (1 per 250 persons); hospital beds 27,362 (1 per 122 persons); infant mortality rate per 1,000 live births (2008) 4.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 8,850⁸ (army 83.4%, navy 5.3%, air force 11.3%). **Military expenditure as percentage of GDP** (2008): 1.1%; per capita expenditure U.S.\$149.

¹January 1. ²Unemployed. ³Detail does not add to total given because of rounding. ⁴Includes metal furniture. ⁵Imports c.i.f.; exports f.o.b. ⁶Circulation of daily newspapers. ⁷Subscribers. ⁸Excludes 14,600 in paramilitary.

Internet resources for further information:

- Lithuanian Department of Statistics <http://www.stat.gov.lt>
- Bank of Lithuania <http://www.lb.lt/home/default.asp?lang=en>

Luxembourg

Official names¹: Groussherzogtum Lëtzebuerg (Luxembourgish); Grand-Duché de Luxembourg (French); Grossherzogtum Luxemburg (German) (Grand Duchy of Luxembourg).

Form of government: constitutional monarchy with one legislative body (Chamber of Deputies [60])².

Chief of state: Grand Duke.

Head of government: Prime Minister.

Capital: Luxembourg.

Official languages: ¹.

Official religion: none.

Monetary unit: € (euro); valuation

(Sept. 1, 2009) 1 U.S.\$ = €0.70;

1 £ = €1.13.



Area and population				
Districts	Administrative centres	area		population
		sq mi	sq km	2009 ³ estimate
Diekirch	Diekirch	447	1,157	76,140
Grevenmacher	Grevenmacher	203	525	59,157
Luxembourg	Luxembourg	349	904	358,203
TOTAL		999	2,586	493,500

Demography

Population (2009): 498,000.

Density (2009): persons per sq mi 498.5, persons per sq km 192.6.

Urban-rural (2008): urban 82.0%; rural 18.0%.

Sex distribution (2009³): male 49.61%; female 50.39%.

Age breakdown (2009³): under 15, 17.9%; 15–29, 18.7%; 30–44, 24.0%; 45–59, 20.6%; 60–74, 12.2%; 75–84, 5.2%; 85 and over, 1.4%.

Population projection: (2020) 567,000; (2030) 634,000.

Ethnic composition (nationality; 2009³): Luxembourgish 56.3%; Portuguese 16.2%; French 5.8%; Italian 3.9%; Belgian 3.4%; German 2.4%; other 12.0%.

Religious affiliation (2005): Roman Catholic (including non-practicing) c. 90%; Protestant c. 3%; Muslim c. 2%; Orthodox c. 1%; other c. 4%.

Major communes/urban agglomerations (2008³): Luxembourg 85,467/125,594; Esch-sur-Alzette 29,515/72,437; Pétange 15,151/22,379; Differdange 20,443; Dudelange 18,052.

Vital statistics

Birth rate per 1,000 population (2008): 11.3 (world avg. 20.3); within marriage 69.8%; outside of marriage 30.2%.

Death rate per 1,000 population (2008): 7.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 4.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.60.

Marriage/divorce rates per 1,000 population (2008): 3.9/2.0.

Life expectancy at birth (2007): male 77.6 years; female 82.7 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 234.4; malignant neoplasms (cancers) 160.8; accidents and violence 47.1; diseases of the respiratory system 40.7.

National economy

Budget (2008)⁵. Revenue: €15,864,000,000 (indirect taxes 33.2%; direct taxes 29.7%; social contributions 27.0%). Expenditures: €14,920,300,000 (social benefits 47.7%; development expenditure 9.7%).

Public debt (2007): negligible.

Gross national income (GNI; 2008): U.S.\$41,406,000,000 (U.S.\$84,890 per capita); purchasing power parity GNI (U.S.\$64,320 per capita).

Structure of gross domestic product and labour force				
	2008		2007	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture	119.8	0.3	5,000	1.5
Mining	37.4	0.1	300	0.1
Manufacturing	3,090.9	7.9	35,100	10.2
Construction	1,951.7	5.0	36,800	10.7
Public utilities	379.4	1.0	1,700	0.5
Transp. and commun.	3,224.5	8.2	26,700	7.8
Trade, restaurants	3,924.7	10.0	59,800	17.4
Finance ⁶ , insurance	10,306.2	26.2	38,400	11.2
Real estate	7,111.5	18.1	54,900	16.0
Pub. admin., defense	1,724.1	4.4	17,400	5.1
Services	3,686.1	9.4	57,100	16.7
Other	3,790.47	9.67	9,600 ⁸	2.8 ⁸
TOTAL	39,348.49	100.0 ⁹	342,800 ¹⁰	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 70,400, barley 44,600, potatoes (2008) 21,756, triticale 20,600, grapes 16,900, rapeseed (2008) 16,493, rye 6,800, oats 5,600, apples 4,000; livestock (number of live animals; 2008) 195,661 cattle, 81,374 pigs; roundwood 290,822 cu m, of which fuelwood 7%; fisheries production, n.a. Mining and quarrying (2007): limited quantities of limestone and slate. Manufacturing (value added in €'000,000; 2008): base metals 1,031.9; rubber and plastic products 320.8; fabricated metal products 304.9; cement, bricks, and ceramics 259.5; agricultural and food products 253.0; nonelectrical machinery and apparatus 212.7; electrical machinery and electronics 189.2. Energy production (consumption): electricity (kW-hr; 2008–09) 3,508,000,000 [(2006]

7,890,000,000); coal (metric tons; 2006) none (153,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (2,498,000); natural gas (cu m; 2007) none (1,403,300,000).

Population economically active (2008): total 218,100¹¹; activity rate of total population 44.6% (participation rates: ages 15–64, 67.0%; female 43.5%; unemployed [September 2008–August 2009] 5.2%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.5	95.4	97.6	100.0	102.7	105.0	108.6
Annual earnings index	93.0	94.8	97.0	100.0	103.9	108.8	114.1

Household income and expenditure. Average household size (2005) 2.5; income per household (2002) €61,800 (U.S.\$55,600); sources of income (1992): wages and salaries 67.1%, transfer payments 28.1%, self-employment 4.8%; expenditure (2007): housing and energy 22.3%, transportation and communications 21.0%, food, beverages, and tobacco 17.9%, entertainment and culture 7.5%, hotels and restaurants 7.3%, household goods and furniture 6.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,009; remittances (2008) 1,737; foreign direct investment (2005–07 avg.) –670. Disbursements for (U.S.\$'000,000): tourism (2007) 3,552; remittances (2008) 10,922; foreign direct investment (2005–07 avg.) 21,446.

Land use as % of total land area (2007): in temporary crops 23.6%, in permanent crops 0.8%, in pasture 26.3%, forest area 33.5%.

Foreign trade¹²

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
€'000,000	–3,275	–3,923	–3,868	–4,337	–4,482	–5,400
% of total	15.6%	16.7%	15.8%	16.1%	16.0%	18.5%

Imports (2008): €17,290,280,000 (transportation equipment 15.5%; mineral fuels 15.2%; machinery and apparatus 14.1%; base and fabricated metals 11.2%; chemicals and chemical products 9.8%; food and live animals 7.0%).

Major import sources: Belgium 34.8%; Germany 29.8%; France 12.7%; Netherlands 6.1%; U.S. 2.4%.

Exports (2008): €11,890,410,000 (base and fabricated metals 36.2%; machinery and apparatus 15.9%; chemicals and chemical products 7.1%; transportation equipment 7.0%; food and live animals 5.0%). **Major export destinations**: Germany 27.5%; France 17.2%; Belgium 12.8%; Netherlands 6.2%; U.K. 4.9%.

Transport and communications

Transport. Railroads (2008): route length 275 km; passenger-km 316,000,000; metric ton-km cargo 294,000,000. Roads (2008): total length 2,894 km (paved 100%). Vehicles (2009³): passenger cars 329,038; trucks and buses 30,116. Air transport (2008)¹³: passenger-km 1,368,000,000; metric ton-km cargo, negligible.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	70	156	PCs	2005	290	634
Telephones				Dailies	2007	134 ¹⁴	279 ¹⁴
Cellular	2008	707 ¹⁵	1,471 ¹⁵	Internet users	2008	387	805
Landline	2008	261	542	Broadband	2008	143 ¹⁵	298 ¹⁵

Education and health

Educational attainment (2007). Percentage of population age 25–64 having: no formal schooling through primary education 18%; lower secondary 9%; upper secondary/higher vocational 47%; higher 26%. **Literacy** (2008): virtually 100% literate.

Education (2005–06)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	3,191	35,431	11.1	97
Secondary/Voc. (age 12–18)	3,667	37,009	10.1	84
Tertiary	...	2,692	...	10 (age 19–23)

Health (2007): physicians 1,672 (1 per 287 persons); hospital beds 2,743 (1 per 175 persons); infant mortality rate per 1,000 live births (2008) 2.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 900 (army 100%). **Military expenditure as percentage of GDP** (2007): 0.7%; per capita expenditure U.S.\$750.

¹Luxembourgish is the national language; German and French are both languages of administration. ²In addition, the 22-member Council of State (a 21-member body of unelected citizens appointed by the Grand Duke plus the hereditary Grand Duke) serves in an advisory capacity to the government. ³January 1. ⁴Within Esch-sur-Alzette urban agglomeration. ⁵General government (consolidated) budget figures. ⁶In early 2009 total banking assets (at 152 banks) exceeded U.S.\$1,313,300,000,000. ⁷Taxes less subsidies. ⁸Unemployed. ⁹Detail does not add to total given. ¹⁰In 2007 included c. 195,800 Luxembourgish, c. 10,700 resident foreigners, and c. 136,300 workers from neighbouring countries. ¹¹Luxembourgish and resident foreigners only. ¹²Imports c.i.f.; exports f.o.b. ¹³Luxair only. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers.

Internet resources for further information:

- Central Bank of Luxembourg <http://www.bcl.lu/en/index.php>
- Le Portail des Statistiques du Luxembourg <http://www.statistiques.public.lu/fr>

Macau

Official name: Aomen Tebie Xingzhengqu (Chinese); Região Administrativa Especial de Macau (Portuguese) (Macau Special Administrative Region).

Political status: special administrative region (China) with one legislative house (Legislative Assembly [29¹]).

Chief of state: President of China.

Head of government: Chief Executive.

Capital: Macau.

Official languages: Chinese; Portuguese.

Official religion: none.

Monetary unit: pataca (MOP)²; valuation (Sept. 1, 2009) 1 U.S.\$ = MOP 7.98; 1 £ = MOP 12.95.



Area and population

	area		population
	sq mi	sq km	2006 census
Geographic areas			
Macau peninsula	3.6	9.3	433,730
islands (formerly separate)	5.5	14.3	66,585
Coloane	2.9	7.6	3,292
Taipa	2.6	6.7	63,293
CoTai ³ reclamation area	2.2	5.6	—
marine	—	—	1,798
TOTAL	11.3	29.2	502,113

Demography

Population (2009): 543,000.

Density (2009): persons per sq mi 48,053; persons per sq km 18,596.

Urban-rural (2008): urban, virtually 100%⁴.

Sex distribution (2009⁵): male 49.07%; female 50.93%.

Age breakdown (2009⁵): under 15, 12.8%; 15–29, 25.7%; 30–44, 25.7%; 45–59, 24.8%; 60–74, 7.4%; 75 and over, 3.6%.

Population projection: (2020) 583,000; (2030) 606,000.

Ethnic composition by place of birth (2006): mainland China 47.1%; Macau 42.5%; Hong Kong 3.7%; Philippines 2.0%; Portugal 0.3%; other 4.4%.

Religious affiliation (2006): Buddhist c. 80%; Roman Catholic c. 4%; Protestant c. 1%; other/nonreligious c. 15%.

Major city (2006): Macau 502,133.

Vital statistics

Birth rate per 1,000 population (2008): 8.5 (world avg. 20.3); (2004) within marriage 82.7%; outside of marriage 17.3%.

Death rate per 1,000 population (2008): 3.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 5.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 0.90.

Marriage/divorce rates per 1,000 population (2008): 5.0/1.2.

Life expectancy at birth (2005–08): male 79.0 years; female 84.8 years.

Major causes of death per 100,000 population (2008): malignant neoplasms (cancers) 100.3; diseases of the circulatory system 89.3; diseases of the respiratory system 44.2; accidents, poisoning, and violence 22.1; endocrine, nutritional, and metabolic diseases 20.6.

National economy

Budget (2008). Revenue: MOP 51,077,000,000 (revenue from gambling tax 82.0%; other 18.0%). Expenditures: MOP 25,943,000,000 (current expenditure 85.7%; capital expenditure 14.3%).

Land use as % of total land area (2008): “green area” 22.7%.

Gross national income (at current market prices; 2008): U.S.\$23,230,000,000 (U.S.\$42,730 per capita).

Structure of gross domestic product and labour force

	2007		2008	
	in value MOP '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	...	...	600	0.2
Mining, quarrying	9	—	—	—
Manufacturing	3,266	2.1	24,600	7.4
Construction	16,192	10.7	38,400	11.5
Public utilities	1,239	0.8	900	0.3
Transportation and communications	4,327	2.8	16,000	4.8
Trade, hotels	13,684	9.0	80,900	24.3
Finance, real estate	26,627	17.5	31,300	9.4
Public administration	—	—	20,200	6.1
Services	56,006	36.8	43,700 ⁶	13.1 ⁶
Gaming activities	—	—	66,500	20.0
Other	30,675 ⁷	20.2 ⁷	10,100 ⁸	3.0 ⁸
TOTAL	152,025	100.0⁹	333,000⁹	100.0⁹

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): small production of chicken eggs, pig meat, and vegetables; roundwood, n.a.; fisheries production (2007) 1,500 (from aquaculture, none). Quarrying: n.a. Manufacturing (value added in MOP '000,000; 2007): wearing apparel 1,287; textiles 311; food and beverages 286; cement, bricks, and ceramics 255. Energy production (consumption): electricity (kW-hr; 2008) 1,211,000,000 ([2006] 2,633,000,000); petroleum products (metric tons; 2006) none (725,000); natural gas (cu m; 2008) none (66,000,000).

Public debt (2008): none.

Population economically active (2008): total 333,000; activity rate of total population 62.2% (participation rates: ages 14–64, 75.7%; female 46.6%; unemployed 3.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	96.4	94.8	95.9	100.0	105.2	111.0	120.6
Monthly earnings index	81.0	83.3	89.5	100.0	116.2	135.3	...

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 13,612; remittances (2008) 398; foreign direct investment (FDI; 2005–07 avg.) 1,658. Disbursements for (U.S.\$'000,000): tourism (2007) 456; remittances (2008) 838; FDI (2005–07 avg.) 503.

Household income and expenditure. Average household size (2006) 3.0; average annual income per household (2007–08) MOP 303,000 (U.S.\$37,743); sources of income: n.a.; expenditure (2002–03)¹⁰: food and nonalcoholic beverages 31.4%, housing and energy 29.9%, education, health, and other services 19.2%, transportation and communications 9.8%, clothing and footwear 5.3%, household durable goods 3.2%.

Foreign trade

Balance of trade (current prices)

	2005	2006	2007	2008
MOP '000,000	−11,517	−16,066	−22,683	−27,009
% of total	22.5%	28.2%	35.7%	45.7%

Imports (2008): MOP 43,034,000,000 (raw materials and semi-manufactures 21.5%; capital goods 19.3%; fuels and lubricants 13.2%; food, beverages, and tobacco products 11.9%). **Major import sources:** China 39.3%; EU 16.5%; Hong Kong 10.1%; Japan 8.5%; United States 5.5%.

Exports (2008): MOP 16,025,000,000 (domestic exports 59.8%, of which garments 51.1% [including knitted or crocheted garments 30.0%]; reexports 40.2%). **Major export destinations:** U.S. 39.9%; Hong Kong 19.7%; China 12.3%; EU 9.9%.

Transport and communications

Transport. Railroads: none. Roads (2008): total length 251 mi, 404 km (paved 100%). Vehicles (2008): passenger cars 77,327; trucks and buses 5,649. Air transport (2007)¹¹: passenger-km 3,026,000,000; metric ton-km cargo 185,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	130	292	PCs	2005	160	338
Telephones	—	—	—	Dailies	2007	190 ¹²	361 ¹²
Cellular	2008	933 ¹³	1,715 ¹³	Internet users	2008	259	476
Landline	2008	176	324	Broadband	2008	121 ¹³	223 ¹³

Education and health

Educational attainment (2006). Population age 25 and over having: no formal schooling 6.2%; incomplete primary education 10.7%; completed primary 22.5%; incomplete secondary 24.9%; completed secondary 21.4%; higher technical 1.7%; university 12.6%. **Literacy** (2006): percentage of population age 15 and over literate 93.5%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	1,618	32,932	20.4	93
Secondary/Voc. (age 12–17)	2,210	45,410	20.5	78
Tertiary	1,725	23,868	13.8	57 (age 18–22)

Health (2008): physicians 1,250 (1 per 435 persons); hospital beds 1,030 (1 per 528 persons); infant mortality rate per 1,000 live births 3.2; undernourished population, n.a.

Military

Total active duty personnel (2007): up to 500 Chinese troops within Macau; another 500 troops are stationed in nearby Zhuhai, China. Macau residents are prohibited from entering military service. **Military expenditure as percentage of GDP:** n.a.

¹Includes 12 directly elected seats, 7 seats appointed by the chief executive, and 10 seats appointed by business and special-interest groups. ²Pegged to the Hong Kong dollar at a rate of 1 HK\$ = MOP 1.03. ³Name of landfilled casino and tourism district linking Coloane and Taipa. ⁴About 0.4% of Macau's population live on sampans and other vessels. ⁵January 1. ⁶Excludes gaming. ⁷Taxes less imputed bank service charge. ⁸Unemployed. ⁹Detail does not add to total given because of rounding. ¹⁰Weights of consumer price index components. ¹¹Air Macau only. ¹²Circulation of daily newspapers. ¹³Subscribers.

Internet resources for further information:

- Macau Census and Statistics Service
<http://www.dsec.gov.mo>
- Monetary Authority of Macao
<http://www.amcm.gov.mo>

Macedonia

Official name¹: Republika Makedonija (Macedonian); Republika e Maqedonisë (Albanian) (Republic of Macedonia).

Form of government: unitary multiparty republic with a unicameral legislature (Assembly [120]).

Head of state: President.

Head of government: Prime Minister.

Capital: Skopje.

Official languages: Macedonian; Albanian.

Official religion: none.

Monetary unit: denar (MKD); valuation (Sept. 1, 2009) 1 U.S.\$ = MKD 42.90; 1 £ = MKD 69.61.



Area and population

Statistical regions ²	Principal municipalities	area		population
		sq mi	sq km	2008 estimate
East	Štip	1,617	4,188	200,946
North-East	Kumanovo	890	2,306	174,415
Pelagonia	Bitola	1,822	4,719	234,659
Polog	Tetovo	957	2,479	313,110
Skopje	³	702	1,818	597,914
South-East	Strumica	1,058	2,741	172,485
South-West	Ohrid	1,266	3,280	222,064
Vardar	Veles	1,292	3,346	133,026
"non-statistical areas" —		323	836	—
TOTAL		9,928 ⁴	25,713	2,048,619

Demography

Population (2009): 2,052,000.

Density (2009): persons per sq mi 206.7, persons per sq km 79.8.

Urban-rural (2005): urban 68.9%; rural 31.1%.

Sex distribution (2005): male 49.95%; female 50.05%.

Age breakdown (2005): under 15, 20.5%; 15–29, 23.8%; 30–44, 21.8%; 45–59, 18.8%; 60–74, 11.5%; 75–84, 3.2%; 85 and over, 0.4%.

Population projection: (2020) 2,056,000; (2030) 2,025,000.

Ethnic composition (2002): Macedonian 64.2%; Albanian 25.2%; Turkish 3.9%; Rom (Gypsy) 2.7%; Serbian 1.8%; Bosniac 0.8%; other 1.4%.

Religious affiliation (2005): Orthodox c. 65%⁵; Sunni Muslim c. 32%⁵; Roman Catholic c. 1%; other (mostly Protestant) c. 2%.

Major city/municipalities (2008): Skopje (city) 486,600; Bitola 73,300; Kumanovo 71,700; Prilep 66,000; Tetovo 54,500.

Vital statistics

Birth rate per 1,000 population (2008): 11.2 (world avg. 20.3); within marriage 87.8%; outside of marriage 12.2%.

Death rate per 1,000 population (2008): 9.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 1.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.46.

Marriage/divorce rates per 1,000 population (2008): 7.2/0.6.

Life expectancy at birth (2007): male 71.1 years; female 75.9 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 527.7; malignant neoplasms (cancers) 157.6; accidents, violence, and poisoning 35.4; endocrine, nutrition, and immunity disorders 34.2; ill-defined conditions 65.6.

National economy

Budget (2008). Revenue: MKD 136,412,000,000 (tax revenue 84.4%, of which social contributions 28.1%, VAT 26.5%, income and profit tax 12.7%, excise taxes 10.5%; nontax revenue 15.6%). Expenditure: MKD 140,265,000,000 (current expenditure 85.7%, of which transfers 55.6%, wages and salaries 14.5%, interest 1.9%; capital expenditure 14.3%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 385,290, grapes 225,000, potatoes 192,500, wheat 157,400, tomatoes 120,000, green chilies and green peppers 108,000, apples 78,000, tobacco leaves 20,600; livestock (number of live animals) 817,500 sheep, 253,800 cattle; roundwood 752,000 cu m, of which fuelwood 78%; fisheries production 1,218 (from aquaculture 90%). Mining and quarrying (2007): lead (metal content) 32,000; zinc (metal content) 20,000; copper (metal content) 7,300. Manufacturing (value added in U.S.\$'000,000; 2006): food and beverages 297; cement, bricks, and glass products 177; iron and steel (including ferromanganese) 103; clothing/accessories 96; cigarettes 61; refined petroleum 53. Energy production (consumption): electricity (kW-hr; 2006) 7,006,000,000 (8,801,000,000); hard coal (metric tons; 2006) none (57,000); lignite (metric tons; 2006) 6,639,000 (6,823,000); crude petroleum (barrels; 2006) none (7,821,000); petroleum products (metric tons; 2006) 1,026,000 (893,000); natural gas (cu m; 2006) none (80,000,000).

Population economically active (2006): total 891,679; activity rate 55.1% (participation rates: ages 15–64, 61.4%; female 39.5%; unemployed 36.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.8	98.9	99.8	100.0	103.3	107.0	114.7
Monthly earnings index	89.5	93.9	97.5	100.0	107.3	115.8	127.7

Household income and expenditure. Average household size (2002) 3.6; income per household (2000) U.S.\$3,798; sources of income (2000): wages and

salaries 54.2%, transfers 22.6%, other 23.2%; expenditure (2007): food 38.4%, transportation and communications 12.3%, housing and energy 10.1%, clothing and footwear 7.0%.

Gross national income (GNI; 2008): U.S.\$8,432,000,000 (U.S.\$4,140 per capita); purchasing power parity GNI (U.S.\$9,950 per capita).

Structure of gross domestic product and labour force

	2006		2007 ⁶	
	in value MKD '000,000	% of total value	labour force	% of labour force
Agriculture	33,320	11.0	95,384	10.6
Mining	1,772	0.6	4,254	0.5
Manufacturing	47,800	15.8	127,980	14.2
Construction	15,079	5.0	39,206	4.3
Public utilities	10,639	3.5	15,535	1.7
Transp. and commun.	25,407	8.4	33,544	3.7
Trade, hotels	46,000	15.2	96,280	10.7
Finance, real estate	17,787	5.9	26,349	2.9
Pub. admin., defense	22,975	7.6	41,531	4.6
Services	26,954	8.9	97,307	10.8
Other	55,574 ⁷	18.3 ⁷	325,218 ⁸	36.0 ⁸
TOTAL	303,305 ⁴	100.0 ⁴	902,588	100.0

Public debt (external, outstanding; 2007): U.S.\$1,520,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 186; remittances (2008) 408; foreign direct investment (2005–07 avg.) 280; official development assistance (2007) 213. Disbursements for (U.S.\$'000,000): tourism (2007) 102; remittances (2008) 25.

Land use as % of total land area (2007): in temporary crops 16.9%, in permanent crops 1.4%, in pasture 23.9%, forest area 35.6%.

Foreign trade⁹

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–880	–939	–1,256	–1,187	–1,362	–1,875
% of total	28.3%	25.6%	27.3%	22.5%	22.1%	22.1%

Imports (2006): U.S.\$3,763,000,000 (crude petroleum 14.3%, machinery and apparatus 12.2%, iron and steel 9.9%, food 9.8%, chemicals and chemical products 9.7%). **Major import sources**: Russia 15.1%; Germany 9.8%; Greece 8.5%; Serbia 7.5%; Bulgaria 6.6%; Italy 6.0%.

Exports (2006): U.S.\$2,401,000,000 (iron and steel 27.8%, of which flat-rolled products 9.1%, ferromanganese 8.4%; clothing and accessories 21.2%, of which female outerwear 11.9%; refined petroleum 8.4%; food 8.0%; tobacco [all forms] 4.7%). **Major export destinations**: Serbia 23.2%; Germany 15.6%; Greece 15.0%; Italy 9.9%; Bulgaria 5.4%.

Transport and communications

Transport. Railroads (2007): length (2004) 699 km; passenger-km 109,000,000; metric ton-km cargo 799,000,000. Roads (2007): length 13,840 km (paved [2000] 58%). Vehicles (2007): passenger cars 248,774; trucks and buses 28,842. Air transport (2005)¹⁰: passenger-km 266,000,000; metric ton-km cargo 111,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	507	250	PCs	2005	451	221
Telephones				Dailies	2007	225 ¹¹	144 ¹¹
Cellular	2008	2,502 ¹²	123 ¹²	Internet users	2008	876	429
Landline	2008	457	224	Broadband	2008	179 ¹²	88 ¹²

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: less than full primary education 18.1%; primary 35.0%; secondary 36.9%; postsecondary and higher 10.0%. **Literacy** (2003): total population age 10 and over literate 96.1%; males literate 98.2%; females literate 94.1%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–10)	5,684	110,149	19.4	92
Secondary/Voc. (age 11–18)	14,550	214,005	14.7	81
Tertiary	2,922	49,364	16.9	30 (age 19–23)

Health: physicians (2006) 5,134 (1 per 397 persons); hospital beds (2006) 9,343 (1 per 218 persons); infant mortality rate per 1,000 live births (2008) 9.7; undernourished population (2003–05) less than 5% of the total population.

Military

Total active duty personnel (November 2008): 10,890 (army 89.6%, air force 10.4%). **Military expenditure as percentage of GDP** (2008): 2.0%; per capita expenditure U.S.\$80.

¹Member of the United Nations under the name The Former Yugoslav Republic of Macedonia (FYROM). ²Actual first-order administration is based on 84 municipalities.

³Includes the 10 municipalities forming (at least in part) the city of Skopje. ⁴Detail does not add to total given because of rounding. ⁵Includes nominal practitioners. ⁶First quarter. ⁷Rent and taxes on production less imported bank service charges. ⁸Includes 323,287 unemployed. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Macedonian Airlines. ¹¹Circulation of daily newspapers. ¹²Subscribers.

Internet resources for further information:

- National Bank of the Republic of Macedonia <http://www.nbrm.gov.mk>
- State Statistical Office http://www.stat.gov.mk/english/glavna_eng.asp

Madagascar

Official name: 1.

Form of government: transitional regime².

Heads of state and government:

President of High Authority of Transition assisted by Prime Minister.

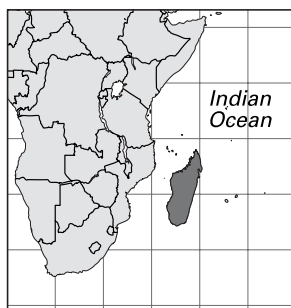
Capital: Antananarivo.

Official languages: Malagasy; French³; English⁴.

Official religion: none.

Monetary unit: ariary⁵ (MGA);

valuation (Sept. 1, 2009) 1 U.S.\$ = MGA 1,919; 1 £ = MGA 3,114.



Population (2004 estimate)

Regions ⁶	population	Regions ⁶	population	Regions ⁶	population
Alaotra Mangoro	877,700	Atsinanana	1,117,100	Melaky	175,500
Amoron'i Mania	693,200	Betsiboka	236,500	Menabe	390,800
Analamanga	2,811,500	Boeny	543,200	Sava	805,300
Analanjiroro	860,800	Bongolava	326,600	Sofia	940,800
Androy	476,600	Diana	485,800	Vakinankaratra	1,589,800
Anosy	544,200	Haute Matsiatra	1,128,900	Vatovavy	
Atsimo-Andrefana	1,018,500	Ihorombe	189,200	Fitovinany	1,097,700
Atsimo-Atsinanana	621,200	Itasy	643,000	TOTAL	17,573,900

Demography

Area: 226,662 sq mi, 587,051 sq km.

Population (2009): 19,625,000.

Density (2009): persons per sq mi 86.6, persons per sq km 33.4.

Urban-rural (2006): urban 27.3%; rural 72.7%.

Sex distribution (2005): male 49.72%; female 50.28%.

Age breakdown (2006): under 15, 44.1%; 15–29, 27.1%; 30–44, 15.7%; 45–59, 8.4%; 60–74, 3.7%; 75–84, 0.9%; 85 and over, 0.1%.

Population projection (2020) 25,687,000; (2030) 31,528,000.

Doubling time: 23 years.

Ethnic composition (2000): Malagasy 95.9%, of which Merina 24.0%, Betsimisaraka 13.4%, Betsileo 11.3%, Tsimihety 7.0%, Sakalava 5.9%; Makua 1.1%; French 0.6%; Comorian 0.5%; Reunionese 0.4%; other 1.5%.

Religious affiliation (2005): traditional beliefs c. 42%; Protestant (significantly Lutheran) c. 27%; Roman Catholic c. 20%; Sunni Muslim c. 2%; other c. 9%.

Major cities (2001): Antananarivo 1,403,449; Toamasina 179,045; Antsirabe 160,356; Fianarantsoa 144,225; Mahajanga 135,660.

Vital statistics

Birth rate per 1,000 population (2006): 38.8 (world avg. 20.3).

Death rate per 1,000 population (2006): 8.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 30.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.29.

Life expectancy at birth (2006): male 59.9 years; female 63.7 years.

National economy

Budget (2007). Revenue: MGA 2,251,000,000,000 (tax revenue 67.76%; grants 31.1%; nontax revenue 1.3%). Expenditures: MGA 2,818,000,000,000 (current expenditure 50.1%; capital expenditure 49.9%).

Public debt (external, outstanding; 2007): U.S.\$1,425,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): paddy rice 3,596,000, sugarcane 2,700,000, cassava 2,400,000, sweet potatoes 870,000, corn (maize) 500,000, bananas 290,000, potatoes 225,000, mangoes 210,000, taro 200,000, coffee 62,000, peanuts (groundnuts) 61,500, cloves (whole and stem) 10,000, vanilla 2,600; livestock (number of live animals) 9,600,000 cattle, 1,610,000 pigs, 3,000,000 geese; roundwood 13,345,450 cu m, of which fuelwood 98%; fisheries production 159,035 (from aquaculture 7%). Mining and quarrying (2007): chromite ore 95,000; graphite 15,000; sapphires 4,700 kg; rubies 920 kg; gold 210 kg (illegally smuggled, c. 2,000 kg). Manufacturing (value in U.S.\$'000,000; 2004): beverages 107; wearing apparel 57; fabricated metal products 35; food products 29. Energy production (consumption): electricity (kW-hr; 2006) 1,065,000,000 (1,065,000,000); coal (metric tons; 2006) none (10,000); crude petroleum (barrels; 2006) none⁸ (3,518,000); petroleum products (metric tons; 2006) 325,000 (746,000); natural gas, none (none).

Population economically active (2005): total 9,844,100; activity rate of total population 52.8% (participation rates: ages 15–64, 88.1%; female 49.6%; unemployed 2.8%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	75.1	74.1	84.4	100.0	110.8	122.2	133.5

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 262; remittances (2008) 11; foreign direct investment (2005–07 avg.) 459; official development assistance (2007) 892. Disbursements for (U.S.\$'000,000): tourism (2007) 94; remittances (2008) 21.

Household income and expenditure. Average household size (2003–04) 4.6; expenditure (2000): food, beverages, and tobacco 50.1%, housing and energy 18.2%, transportation 8.0%, clothing 7.0%, household furnishings 4.6%.

Gross national income (GNI; 2008): U.S.\$7,766,000,000 (U.S.\$410 per capita); purchasing power parity GNI (U.S.\$1,040 per capita).

Structure of gross domestic product and labour force

	2004		2005	
	in value FMG '000,000,000	% of total value	labour force	% of labour force
Agriculture	9,857	26.2	7,844,300	79.7
Manufacturing			267,500	2.7
Mining	5,456	14.5	18,800	0.2
Public utilities			27,500	0.3
Construction	794	2.1	13,000	0.1
Transp. and commun.	5,796	15.4	86,300	0.9
Trade, hotels	4,316	11.5	534,400	5.4
Finance	324	0.9	4,100	—
Services	5,644	15.0	572,100	5.8
Pub. admin., defense	2,281	6.0	202,400	2.1
Other	3,184 ¹⁰	8.4 ¹⁰	273,700 ¹¹	2.8 ¹¹
TOTAL	37,651 ¹²	100.0	9,844,100	100.0

Land use as % of total land area (2007): in temporary crops 5.1%, in permanent crops 1.0%, in pasture 64.1%, forest area 21.9%.

Foreign trade¹³

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	+1.8	+65.5	–339.1	–680.7	–850.0	–752.1
% of total	0.1%	5.2%	14.8%	26.0%	33.7%	27.2%

Imports (2006): U.S.\$1,760,300,000 (refined petroleum 17.7%; machinery and apparatus 12.8%; food 11.4%, of which cereals 4.3%; fabrics 9.3%; chemicals and chemical products 8.6%; road vehicles 5.0%; wool 4.8%). *Major import sources:* China 17.8%; Bahrain 16.4%; France 13.2%; South Africa 5.7%; U.S. 3.6%.

Exports (2006): U.S.\$1,008,200,000 (food/spices 32.4%, of which shrimp 12.0%, vanilla 4.7%, fish 4.4%, cloves 2.7%; apparel/clothing accessories 25.0%; refined petroleum 7.9%; precious/semiprecious stones 2.6%). *Major export destinations:* France 39.5%; U.S. 15.0%; Germany 6.0%; Italy 4.2%; U.K. 3.0%.

Transport and communications

Transport. Railroads: route length (2003) 560 mi, 901 km¹⁴; (2000) passenger-km 24,471,000; (2000) metric ton-km cargo 27,200,000. Roads (2000): total length 30,968 mi, 49,827 km (paved 12%). Vehicles (1998): passenger cars 64,000; trucks and buses 9,100. Air transport (2007): passenger-km 1,248,000,000; metric ton-km cargo (2006) 18,768,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	410	25	PCs	2005	102	5.5
Telephones				Dailies	2007	110 ¹⁵	10 ¹⁵
Cellular	2008	4,835 ¹⁶	253 ¹⁶	Internet users	2008	316	17
Landline	2008	165	8.6	Broadband	2008	6.2 ¹⁶	0.3 ¹⁶

Education and health

Educational attainment (2003–04)¹⁷. Percentage of population age 25–59 (male) and 25–49 (female) having: no formal schooling 20.4%; incomplete primary education 33.6%; complete primary 13.2%; incomplete secondary 23.0%; complete secondary 6.4%; higher 3.4%. *Literacy* (2006): percentage of total population age 15 and over literate 70.7%; males 76.5%; females 65.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	78,743	3,837,343	48.7	98
Secondary/Voc. (age 11–17)	33,551	831,617	24.8	17 ¹⁸
Tertiary	3,032	58,313	19.2	3 (age 18–22)

Health (2004): physicians 1,861 (1 per 9,998 persons); hospital beds 9,303 (1 per 2,000 persons); infant mortality rate (2006) 58.5; undernourished population (2002–04) 6,600,000 (38% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 13,500 (army 92.6%, navy 3.7%, air force 3.7%). *Military expenditure as percentage of GDP* (2007): 1.1%; per capita expenditure U.S.\$4.

¹Republikan'i Madagasikara (Malagasy); République de Madagascar (French); Republic of Madagascar (English). ²From March 2009; Senate and National Assembly are dissolved. ³Per decision announced in 2000 by High Constitutional Court. ⁴Per confirmation of referendum results in April 2007 by the High Constitutional Court. ⁵The ariary (MGA), the precolonial currency of Madagascar, officially replaced the Malagasy franc (FMG) in August 2003 at a rate of 1 MGA = FMG 5. ⁶The 22 regions may become the effective first-order subdivisions in 2010 replacing the 6 provinces (which may be abolished per a constitutional referendum passed in April 2007). ⁷Legal export volume. ⁸The discovery of offshore and on-land petroleum was announced in September 2005. ⁹Weights of consumer price index components. ¹⁰Indirect taxes less subsidies and less imputed bank charges. ¹¹Unemployed. ¹²Detail does not add to total given because of rounding. ¹³Imports c.i.f.; exports f.o.b. ¹⁴Railroad infrastructure was either inoperable or in poor condition in June 2003. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷Based on demographic survey of 6,629 persons (5,029 females, 1,600 males). ¹⁸2005–06.

Internet resource for further information:

• Institut National de la Statistique <http://www.instat.mg>

Malawi

Official name: Republic of Malawi^{1,2}
Form of government: multiparty republic with one legislative house (National Assembly [193]).

Head of state and government: President.

Capital: Lilongwe³.

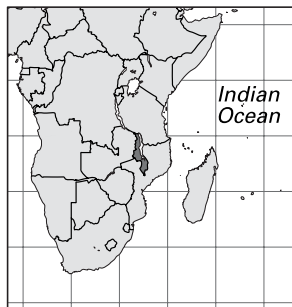
Official language: 1.

Official religion: none.

Monetary unit: Malawian kwacha (MK); valuation (Sept. 1, 2009)

1 U.S.\$ = MK 140.61;

1 £ = MK 228.15.



Area and population

	area	population		area	population
Regions			Districts/Cities		
Districts/Cities	sq km	2008 census ⁴	Districts/Cities	sq km	2008 census ⁴
Central	35,592	5,491,034	Southern	31,753	5,876,784
Dedza	3,624	623,789	Balaka	2,193	316,748
Dowa	3,041	556,678	Blantyre (rural)	1,792	338,047
Kasungu	7,878	616,085	Blantyre (city)	220	661,444
Lilongwe (rural)	5,703	1,228,146	Chikwawa	4,755	438,895
Lilongwe (city)	456	669,021	Chiradzulu	767	290,946
Mchinji	3,356	456,558	Machinga	3,771	488,996
Nkhota kota	4,259	301,868	Mangochi	6,273	803,602
Ntcheu	3,424	474,464	Mulanje	2,056	525,429
Ntchisi	1,655	224,098	Mwanza	826	94,476
Salima	2,196	340,327	Neno	1,469	108,897
Northern	26,931	1,698,502	Nsanje	1,942	238,089
Chitipa	4,288	179,072	Phalombe	1,394	313,227
Karonga	3,355	272,789	Thyolo	1,715	587,455
Likoma	18	10,445	Zomba (rural)	2,541	583,167
Mzimba	10,382	724,873	Zomba (city)	39	87,366
Mzuzu (city)	48	128,432	TOTAL LAND AREA	94,276	
Nkhata Bay	4,071	213,779	INLAND WATER	24,208	
Rumphi	4,769	169,112	TOTAL	118,484	13,066,320

Demography

Population (2009): 15,029,000⁵.

Density (2009)⁶: persons per sq mi 412.9, persons per sq km 159.4.

Urban-rural (2008): urban 15.0%; rural 85.0%.

Sex distribution (2008): male 48.72%; female 51.28%.

Age breakdown (2007): under 15, 45.7%; 15–29, 28.4%; 30–44, 14.1%; 45–59, 7.6%; 60–74, 3.5%; 75–84, 0.6%; 85 and over, 0.1%.

Population projection (2020) 20,204,000; (2030) 25,639,000.

Doubling time: 26 years.

Ethnic composition (2000): Chewa 34.7%; Maravi 12.2%; Ngoni 9.0%; Yao 7.9%; Tumbuka 7.9%; Lomwe 7.7%; Ngonde 3.5%; other 17.1%.

Religious affiliation (2005): Protestant/independent Christian c. 55%; Roman Catholic c. 20%; Muslim c. 20%; traditional beliefs c. 3%; other c. 2%.

Major cities (2008): Lilongwe 669,021; Blantyre 661,444; Mzuzu 128,432; Zomba 87,366; Kasungu 42,351.

Vital statistics

Birth rate per 1,000 population (2008): 42.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 14.9 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 5.67.

Life expectancy at birth (2008): male 48.4 years; female 49.5 years.

Adult population (ages 15–49) *living with HIV* (2007): 11.9%⁷ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 729; lower respiratory infections c. 244; cardiovascular diseases c. 175; malaria c. 169; diarrheal diseases c. 164.

National economy

Budget (2008–09). Revenue: MK 187,402,000,000 (tax revenue 62.4%, of which VAT 21.0%, excises 9.7%, corporate tax 8.1%; grants 29.3%; nontax revenue 6.9%; remainder 1.4%). Expenditures: MK 223,502,000,000 (current expenditure 82.0%; capital expenditure 18.0%).

Public debt (external, outstanding; March 2009): U.S.\$664,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 3,444,700, sugarcane 2,500,000, cassava 2,150,000, potatoes 1,900,000, bananas 385,000, plantains 300,000, peanuts (groundnuts) 150,000, tobacco leaves 118,000, rice 91,500, dry beans 85,000, pigeon peas 79,000, sorghum 63,700, seed cotton 42,000, tea 39,000, sunflower seeds 5,913; live-stock (number of live animals) 1,900,000 goats, 752,000 cattle, 458,000 pigs; roundwood 5,760,100 cu m, of which fuelwood 91%; fisheries production 68,000 (from aquaculture 2%). Mining and quarrying (2007): limestone 31,490; gemstones (including rubies and sapphires) 3,710 kg. Manufacturing (value added in U.S.\$'000,000; 2001): food products 62; beverages 28; chemicals and chemical products 11; wearing apparel 7. Energy production (consumption): electricity (kW-hr; 2006) 1,556,000,000 (1,546,000,000); hard coal (metric tons; 2007) 58,550 ([2006] 50,000); petroleum products (metric tons; 2006) none (263,000).

Land use as % of total land area (2007): in temporary crops 31.9%, in permanent crops 1.3%, in pasture 19.7%, forest area 35.5%.

Population economically active (2006): total 5,585,000⁸; activity rate 41.2%⁸ (participation rates: ages 15–64, 77.1%⁸; female 50.2%⁸; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71.0	77.8	86.6	100.0	114.0	123.0	133.8

Household income and expenditure. Average household size (2008) 4.4; average annual household income MK 50,904 (U.S.\$467)⁹; expenditure⁹: food 55.6%, housing and energy 20.6%, transportation and communications 6.6%, clothing and footwear 4.3%.

Gross national income (GNI; 2008): U.S.\$4,107,000,000 (U.S.\$290 per capita); purchasing power parity GNI (U.S.\$830 per capita).

Structure of gross domestic product and labour force

	2008		1998	
	in value MK '000,000 ¹⁰	% of total value ¹⁰	labour force	% of labour force
Agriculture	136,432	32.9	3,765,827	83.6
Mining	3,589	0.9	2,499	0.1
Manufacturing	33,095	8.0	118,483	2.6
Construction	18,833	4.5	73,402	1.6
Public utilities	6,178	1.5	7,319	0.2
Transp. and commun.	28,365	6.8	32,623	0.7
Trade, hotels	58,018	14.0	257,389	5.7
Finance, real estate	43,550	10.5	13,957	0.3
Public administration	13,478	3.3	101,433	2.2
Services	51,309	12.4	85,996	1.9
Other	21,393	5.2	50,362	1.1
TOTAL	414,240	100.0	4,509,290	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 27; remittances (2008) 1.0; foreign direct investment (2005–07 avg.) 37; official development assistance (2007) 735. Disbursements for (U.S.\$'000,000): tourism (2007) 73; remittances (2008) 1.0.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
MK '000,000	−24,400	−33,889	−58,850	−69,734	−42,151	−65,981
% of total	22.4%	23.7%	32.8%	32.1%	15.9%	22.0%

Imports (2007): MK 192,833,000,000 (chemical products 27.8%, of which fertilizers 13.7%; refined petroleum 13.1%; machinery and apparatus 11.8%; road vehicles 10.4%; food products 5.9%). **Major import sources:** South Africa 29.1%; Mozambique 12.2%; U.A.E. 7.0%; U.K. 5.0%; India 5.0%.

Exports (2007): MK 121,567,000,000 (unmanufactured tobacco 48.7%; corn (maize) 11.5%; raw sugar 7.0%; tea 6.4%; sunflower seeds 3.7%; apparel/clothing accessories 3.7%). **Major export destinations:** Zimbabwe 15.2%; South Africa 14.8%; Belgium 8.0%; U.K. 6.6%; Germany 5.8%.

Transport and communications

Transport. Railroads (2007): route length 495 mi, 797 km; (2004) passenger-km 29,523,000; metric ton-km cargo 18,438,000. Roads (2003): total length 9,600 mi, 15,451 km (paved 45%). Vehicles (2001): passenger cars 22,500; trucks and buses 57,600. Air transport (2007)¹²: passenger-km 165,000,000; metric ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	65	5.2	PCs	2007	28	2.0
Telephones				Dailies	2007	22 ¹³	1.5 ¹³
Cellular	2008	1,781 ¹⁴	122 ¹⁴	Internet users	2008	316	22
Landline	2008	236	16	Broadband	2007	1.6 ¹⁴	0.1 ¹⁴

Education and health

Educational attainment (2004)¹⁵. Percentage of population age 25 and over having: no formal education/unknown 33.5%; incomplete primary education 24.2%; complete primary 27.9%; secondary and university 14.4%. **Literacy** (2007): total population age 15 and over literate 65.9%; males literate 78.1%; females literate 53.9%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	2,943,248	...	87
Secondary/Voc. (age 12–17)	11,360 ¹⁶	574,003	45.6 ¹⁶	24
Tertiary	861	6,458	7.5	17 (age 18–22)

Health: physicians (2008) 260 (1 per 56,246 persons); hospital beds (2007) 15,658 (1 per 909 persons); infant mortality rate (2008) 88.1; undernourished population (2002–04) 4,200,000 (35% of total population based on the consumption of a minimum daily requirement of 1,790 calories).

Military

Total active duty personnel (November 2008): 5,300 (army 100%). **Military expenditure as percentage of GDP** (2007): 1.7%; per capita expenditure U.S.\$3.

¹No official language is stated in the constitution. English is the official language of instruction. ²Dziko la Malaŵi in Chewa, the principal national language. ³Judiciary meets in Blantyre. ⁴Preliminary results. ⁵June 2009 update of the U.S. Bureau of the Census International Database. ⁶Based on land area. ⁷Statistically derived mid-point of range. ⁸ILO estimate. ⁹Based on the Malawi Integrated Household Survey 2004–05, comprising 10,777 households. ¹⁰At constant prices of 2005. ¹¹Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹²Air Malawi only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Based on the Malawi Demographic and Household Survey 2004, comprising 13,664 households. ¹⁶2001–02. ¹⁷Less than 0.5.

Internet resources for further information:

- National Statistical Office of Malawi <http://www.nso.malawi.net>
- Reserve Bank of Malawi <http://www.rbm.mw>

Malaysia

Official name: Malaysia.

Form of government: federal constitutional monarchy with two legislative houses (Senate [70¹]; House of Representatives [222]).

Chief of state: Paramount Ruler.

Head of government: Prime Minister.

Capital: Kuala Lumpur².

Administrative centre: Putrajaya³.

Official language: Malay.

Official religion: Islam.

Monetary unit: ringgit (RM); valuation (Sept. 1, 2009) 1 U.S.\$ = RM 3.53; 1 £ = RM 5.72.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2008 estimate
East Malaysia				
Sabah	Kota Kinabalu	28,426	73,622	3,131,600
Sarawak	Kuching	48,050	124,450	2,452,800
West Malaysia (Peninsular Malaysia)				
Johor	Johor Bahru	7,331	18,987	3,312,400
Kedah	Alor Setar	3,639	9,425	1,958,100
Kelantan	Kota Bharu	5,799	15,020	1,595,000
Melaka	Melaka	638	1,652	753,500
Negeri Sembilan	Seremban	2,570	6,657	995,600
Pahang	Kuantan	13,886	35,965	1,513,100
Perak	Ipoh	8,110	21,005	2,351,300
Perlis	Kangar	307	795	236,200
Pulau Pinang	George Town	398	1,030	1,546,800
Selangor	Shah Alam	3,062	7,930	5,071,100 ⁴
Terengganu	Kuala Terengganu	5,002	12,955	1,094,300
Federal Territories				
Kuala Lumpur	—	94	243	1,629,400
Labuan ⁵	—	35	91	87,600
Putrajaya	—	19	49	—
TOTAL		127,366	329,876	27,728,700⁶

Demography

Population (2009): 27,468,000.

Density (2009): persons per sq mi 215.7; persons per sq km 83.3.

Urban-rural (2008): urban 63.5%; rural 36.5%.

Sex distribution (2008): male 50.90%; female 49.10%.

Age breakdown (2008): under 15, 32.0%; 15–29, 26.6%; 30–44, 20.4%; 45–59, 14.0%; 60–74, 5.6%; 75 and over, 1.4%.

Population projection: (2020) 32,017,000; (2030) 35,275,000.

Ethnic composition (2008): Malay 50.8%; other indigenous 11.0%; Chinese 22.9%; Indian 6.9%; other citizen 1.2%; noncitizen 7.2%.

Religious affiliation (2000): Muslim 60.4%; Buddhist 19.2%; Christian 9.1%; Hindu 6.3%; Chinese folk religionist 2.6%; animist 0.8%; other 1.6%.

Major cities (2006): Kuala Lumpur 1,482,400; Subang Jaya 954,300; Klang 936,700; Johor Bahru 838,900; Ipoh 692,200; Putrajaya 55,000.

Vital statistics

Birth rate per 1,000 population (2008): 17.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 4.2 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 2.57.

Life expectancy at birth (2008): male 72.1 years; female 76.8 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 149; infectious and parasitic diseases 101; malignant neoplasms (cancers) 83; accidents and violence 43; chronic respiratory diseases 40.

National economy

Budget (2008). Revenue: RM 159,793,000,000 (tax revenue 70.7%, of which corporate taxes 23.6%, taxes on petroleum 15.1%, income tax 9.4%; nontax revenue 29.3%). Expenditures: RM 196,346,000,000 (current expenditure 78.2%, of which wages and salaries 20.9%; development expenditure 21.8%).

Population economically active (2008): total 11,028,100; activity rate 40.8% (participation rates: ages 15–64, 62.6%; female 35.8%; unemployed [April 2008–March 2009] 3.4%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.7	95.7	97.1	100.0	103.6	105.7	111.5

Production (metric tons except as noted). Agriculture, forestry, fishing (2008–09): oil palm fruit⁸ 77,700,000, rice 2,389,000, natural rubber 894,600, sugarcane⁸ 800,000, coconuts⁸ 568,000, bananas⁸ 530,000, cacao beans 24,427; livestock (number of live animals) 133,000 buffalo; roundwood (2007) 25,149,200 cu m, of which fuelwood 12%; fisheries production 1,783,739 (from aquaculture 19%). Mining and quarrying (2008–09): iron ore 1,023,434; tin (metal content) 2,646; gold 2,427 kg. Manufacturing (value added in RM '000,000; 2006): electrical machinery and electronics 32,017; chemical products 19,035; petroleum and coal products 16,577; transport equipment 6,796. Energy production (consumption): electricity (kW-hr; 2008–09) 103,734,200–000 (92,662,100,000); coal (metric tons; 2008–09) 1,433,341 ([2006] 11,143–000); crude petroleum (barrels; 2008–09) 248,239,000 ([2006] 185,607,500); petroleum products (metric tons; 2008–09) 23,380,000 ([2006] 23,718,000); natural gas (cu m; 2008–09) 56,794,675,000 ([2007] 32,900,000,000).

Gross national income (GNI; 2008): U.S.\$188,061,000,000 (U.S.\$6,970 per capita); purchasing power parity GNI (U.S.\$13,740 per capita).

Structure of gross domestic product and labour force

	2008			
	in value RM '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	76,219	10.3	1,487,700	13.5
Mining and quarrying	127,277	17.2	54,500	0.5
Manufacturing	195,027	26.3	1,944,700	17.6
Construction	19,519	2.6	998,000	9.1
Public utilities	17,345	2.3	60,500	0.6
Transp. and commun.	45,608	6.2	583,400	5.3
Trade, hotels	97,785	13.2	2,513,000	22.8
Finance, real estate	87,135	11.8	829,200	7.5
Pub. admin., defense	54,337	7.3	751,100	6.8
Services	33,026	4.5	1,437,400	13.0
Other	-12,555 ⁹	-1.7 ⁹	368,500 ¹⁰	3.3 ¹⁰
TOTAL	740,721⁶	100.0	11,028,100⁶	100.0

Public debt (external, outstanding; 2007): U.S.\$18,441,000,000.

Household income and expenditure. Average household size (2008) 4.4; gross income per household (2002) RM 36,132 (U.S.\$9,508); expenditure (2005)¹¹: food and nonalcoholic beverages 31.4%, housing and energy 21.4%, transportation 15.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 12,905; remittances (2008) 1,920; foreign direct investment (FDI; 2006–08 avg.) 7,256; official development assistance (2007) 200. Disbursements for (U.S.\$'000,000): tourism (2007) 5,252; remittances (2008) 6,385; FDI (2005–07 avg.) 6,667.

Land use as % of total land area (2007): in temporary crops 5.5%, in permanent crops 17.6%, in pasture 0.9%, forest area 62.7%.

Foreign trade¹²

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
RM '000,000	+50,905	+66,200	+77,696	+100,176	+108,367	+100,420
% of total	7.7%	9.6%	8.8%	10.4%	10.1%	9.1%

Imports (2006): RM 481,000,000,000 (microcircuits/transistors 23.9%, petroleum 8.3%, office machines/computers/parts 7.8%, chemical products 7.8%, base metals 6.8%). **Major import sources:** Japan 13.2%; U.S. 12.5%; China 12.1%; Singapore 11.7%; Thailand 5.5%; Taiwan 5.5%.

Exports (2006): RM 589,367,000,000 (computers/office machines/parts 17.4%, microcircuits/transistors 15.9%, petroleum 8.9%, telecommunications equipment 5.7%, natural gas 4.8%, palm oil 3.2%). **Major export destinations:** U.S. 18.8%; Singapore 15.4%; Japan 8.9%; China 7.2%; Thailand 5.3%.

Transport and communications

Transport. Railroads (2008–09): route length (2008) 1,849 km; passenger-km 1,466,892,000; metric ton-km cargo 1,267,935,000. Roads (2006): total length 90,127 km (paved 79%). Vehicles (2007¹³): passenger cars 7,024,043; trucks and buses 896,570. Air transport (2008–09): passenger-km 32,297,000,000; metric ton-km cargo 2,142,483,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	5,480	222	PCs	2006	6,106	234
Telephones				Dailies	2007	4,967 ¹⁴	187 ¹⁴
Cellular	2008	27,743 ¹⁵	1,027 ¹⁵	Internet users	2008	16,903	626
Landline	2008	4,292	159	Broadband	2008	1,302 ¹⁵	48 ¹⁵

Education and health

Educational attainment (2002). Percentage of population age 25–64 having: no formal schooling/unknown 8.4%; primary education 28.7%; lower secondary 20.7%; upper secondary 31.1%; higher 11.1%. **Literacy** (2007): total population age 15 and over literate 91.9%; males 94.2%; females 89.6%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	189,521	3,202,008	16.9	100
Secondary/Voc. (age 12–18)	146,503	2,489,117	17.0	69
Tertiary	45,246	696,760	15.4	29 (age 19–23)

Health (2008): physicians 25,102 (1 per 1,076 persons); hospital beds (2007) 47,784 (1 per 556 persons); infant mortality rate 6.7; undernourished population (2002–04) 600,000 (3% of total population based on the consumption of a minimum daily requirement of 1,850 calories).

Military

Total active duty personnel (November 2008): 109,000 (army 73.4%, navy 12.8%, air force 13.8%). **Military expenditure as percentage of GDP** (2008): 1.9%¹⁶; per capita expenditure U.S.\$146¹⁶.

¹Includes 44 appointees of the Paramount Ruler; the remaining 26 are indirectly elected. ²Location of the first royal palace and both houses of parliament. ³Location of the second royal palace, the prime minister's office, and the supreme court. ⁴Includes the population of Putrajaya. ⁵Geographically within East Malaysia. ⁶Detail does not add to total given because of rounding. ⁷Conurbation contiguous with Kuala Lumpur. ⁸2007. ⁹Net of import duties less imputed bank service charges. ¹⁰Unemployed. ¹¹Weights of consumer price index components. ¹²Imports c.i.f.; exports f.o.b. ¹³January 1. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶Excludes extra-budgetary funding.

Internet resources for further information:

- Department of Statistics <http://www.statistics.gov.my>
- Central Bank of Malaysia <http://www.bnm.gov.my>

Maldives

Official name: Dhivehi Raajjeyge Jumhooriyyaa (Republic of Maldives).

Form of government: multiparty republic¹ with one legislative house (People's Majlis [77]).

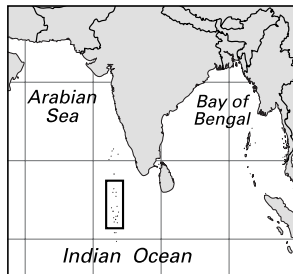
Head of state and government: President.

Capital: Male².

Official language: Dhivehi (Maldivian).

Official religion: Islam.

Monetary unit: rufiyaa (Rf); valuation (Sept. 1, 2009) 1 U.S.\$ = Rf 12.80; 1 £ = Rf 20.77.



Structure of gross domestic product and labour force

	2008		2006	
	in value Rf '000,000 ¹³	% of total value	labour force	% of labour force
Agriculture, fishing	656	6.2	12,624	9.8
Mining	54	0.5	339	0.3
Manufacturing	735	6.9	19,259	14.9
Public utilities	466	4.4	1,229	1.0
Construction	699	6.6	5,930	4.6
Transp. and commun.	1,987	18.7	7,098	5.5
Trade	404	3.8	23,801	18.5
Tourism (resorts)	2,883	27.2	...	...
Finance, real estate	1,172	11.0	1,738	1.3
Pub. admin., defense	1,815	17.1	15,949	12.4
Services	157	1.5	17,302	13.4
Other	-417 ¹⁴	-3.9 ¹⁴	23,567 ¹⁵	18.3 ¹⁵
TOTAL	10,611	100.0	128,836	100.0

Land use as % of total land area (2007): in temporary crops c. 13%, in permanent crops c. 27%, in pasture c. 3%, forest area c. 3%.

Foreign trade^{16, 17}

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-318.8	-460.8	-583.3	-701.3	-868.3	-1,057.5
% of total	51.2%	56.0%	64.3%	60.9%	65.6%	61.5%

Imports (2008): U.S.\$1,388,000,000 (refined petroleum 22.6%; food 15.3%; goods for construction 14.1%; transport equipment/parts 10.4%). **Major import sources:** Singapore 21.3%; U.A.E. 18.0%; India 10.4%; Malaysia 7.7%; Sri Lanka 5.9%.

Exports (2008): U.S.\$330,500,000 (reexports [mostly jet fuel] 61.6%; fish 37.3%, of which fresh skipjack tuna 16.7%, fresh yellowfin tuna 13.2%, dried fish 3.0%). **Major export destinations**¹⁸: Thailand 49.4%; Sri Lanka 9.5%; France 8.8%; Italy 8.3%; U.K. 7.7%.

Transport and communications

Transport. Railroads: none. Roads: total length, n.a. Vehicles (2008): passenger cars 3,917; trucks and buses 2,314. Air transport (2008)¹⁹: passenger arrivals 1,275,993, passenger departures 1,264,572; cargo unloaded 20,561 metric tons, cargo loaded 13,029 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	41	144	PCs	2005	45	152
Telephones				Dailies	2007	21 ²⁰	69 ²⁰
Cellular	2008	436 ²¹	1,407 ²¹	Internet users	2008	72	231
Landline	2008	47	151	Broadband	2008	16 ²¹	51 ²¹

Education and health

Educational attainment (2006). Population age 6 and over 267,283; percentage with bachelor's degree 0.6%, master's degree 0.3%. **Literacy** (2006): total population age 15 and over literate 93.5%; males literate 92.5%; females literate 94.5%.

Education (2005)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	3,336	54,770	16.4	97
Secondary/Voc. (age 13–17)	2,088 ²²	32,645	13.7 ²²	67
Tertiary ²³	138	6,898	50.0	... (age 18–22)

Health (2008): physicians 575 (1 per 539 persons); hospital beds 785 (1 per 395 persons); infant mortality rate per 1,000 live births 11; undernourished population (2002–04) 30,000 (10% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (2006): 2,000-member paramilitary incorporates coast guard duties. **Paramilitary expenditure as percentage of GDP** (2008): 4.9%; per capita expenditure U.S.\$139.

¹New constitution ratified on Aug. 7, 2008; first multiparty election held in October 2008. ²Also spelled Maale or Male'. ³Maldives is divided into 20 administrative districts corresponding to atoll groups; arrangement shown here is from north to south. Total area figures are pre-December 2004 (or pre-Indian Ocean tsunami). ⁴A new administrative arrangement of 7 provinces and 1 capital district was pending in October 2009. ⁵For 196 inhabited administrative islets only. ⁶Excludes foreigners residing in the Maldives for employment purposes (representing [in 2009] c. 80,000 legal workers and c. 20,000 undocumented workers). Most foreign workers are Indian or Bangladeshi. ⁷Total area of all 1,192 islets (including 88 resort islets and 34 industrial/other islets) is 298 sq km (115 sq mi). ⁸Based on areas of inhabited islets only. ⁹The only non-Sunni are Shi'i members of the Indian trading community and non-Muslim workers who serve alcohol on the resort islands. ¹⁰Includes workers not actively seeking employment. ¹¹Data taken from the Household Income and Expenditure Survey 2002–03, comprising 834 households in both Male and outer atolls. ¹²Weights of consumer price index components. ¹³At constant prices of 1995. ¹⁴Less imputed bank service charges. ¹⁵Includes 18,605 unemployed. ¹⁶Imports c.i.f.; exports f.o.b. ¹⁷Exports include reexports unless otherwise footnoted. ¹⁸Domestic exports only. ¹⁹Male airport; both international and domestic flights. ²⁰Circulation of 2 daily newspapers. ²¹Subscribers. ²²2002. ²³2003; Maldives College of Higher Education.

Internet resources for further information:

- Ministry of Planning and National Development <http://www.planning.gov.mv>
- Maldives Monetary Authority <http://www.mma.gov.mv>

Area and population^{3, 4}

Administrative atolls	area ⁵	population	Administrative atolls	area ⁵	population
	sq km	2006 census ⁶		sq km	2006 census ⁶
North Thiladhunmathi	13.48	13,495	North Nilandhe	1.46	3,765
South Thiladhunmathi	16.52	16,237	South Nilandhe	1.61	4,967
North Miladhunmadulu	9.62	11,940	Kolhumadulu	3.69	8,493
South Miladhunmadulu	7.50	10,015	Hadhdhunmathi	14.14	11,990
North Maalhosmadulu	4.99	14,756	North Huvadhu	4.39	8,262
South Maalhosmadulu	3.73	9,578	South Huvadhu	6.02	11,013
Faadhippolhu	1.16	9,190	Gnaviyani	4.20	7,636
Maale (Male)	4.29	15,441	Addu	9.41	18,026
North Ari	2.86	5,776	Capital island		
South Ari	2.59	8,379	Male ²	2.24	103,693
Felidhu	0.42	1,606	TOTAL	116.81 ⁷	298,968
Mulakatholhu	2.49	4,710			

Demography

Population (2009): 315,000⁶.

Density (2009)⁸: persons per sq mi 6,984, persons per sq km 2,697.

Urban-rural (2006): urban 34.7%; rural 65.3%.

Sex distribution (2006): male 50.66%; female 49.34%.

Age breakdown (2006): under 15, 31.1%; 15–29, 33.2%; 30–44, 18.3%; 45–59, 9.2%; 60–74, 5.2%; 75–84, 1.1%; 85 and over, 0.2%; unknown 1.7%.

Population projection⁶: (2020) 375,000; (2030) 422,000.

Doubling time: 37 years.

Ethnic composition (2000)⁶: Maldivian 98.5%; Sinhalese 0.7%; other 0.8%.

Religious affiliation: virtually 100% Sunni Muslim⁹.

Major islets (2006): Male² (capital island) 103,693; Hithadhoo 9,465; Fuvammulah 7,636; Kulhudhuffushi 6,998; Thinadhoo 4,442.

Vital statistics

Birth rate per 1,000 population (2008): 22 (world avg. 20.3).

Death rate per 1,000 population (2008): 3 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 2.1.

Marriage/divorce rates per 1,000 population (2006): 18.6/7.3.

Life expectancy at birth (2007): male 72.3 years; female 73.7 years.

Major causes of death per 100,000 population (2005): external causes 227.1; diseases of the circulatory system 19.9; diseases of the respiratory system 15.8; malignant neoplasms (cancers) 12.3.

National economy

Budget (2008). Revenue: Rf 7,757,000,000 (nontax revenue 48.6%, of which resort lease rent 19.5%; tax revenue 43.7%, of which import duties 31.7%; grants 7.2%; other 0.5%). Expenditures: Rf 9,789,000,000 (general administration 21.8%; community programs 20.5%; education 15.6%; health 12.8%; police/security 9.1%; defense 5.6%).

Public debt (external, outstanding; 2008): U.S.\$471,700,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): vegetables 28,526, bananas 11,000, coconuts 2,625, nuts 2,100; roundwood, n.a.; fisheries production 144,169, of which skipjack tuna 97,342, yellowfin tuna 24,415 (from aquaculture, none). Mining and quarrying: coral for construction materials. Manufacturing: details, n.a.; however, major industries include boat building and repairing, coir yarn and mat weaving, coconut and fish processing, lacquerwork, garment manufacturing, and handicrafts. Energy production (consumption): electricity (kW-hr; 2008) 301,000,000 ([2006] 212,000,000); petroleum products (metric tons; 2006) none (283,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 586; remittances (2008) 3; foreign direct investment (2005–07 avg.) 13; official development assistance (2007) 37. Disbursements for (U.S.\$'000,000): tourism (2007) 92; remittances (2008) 103.

Population economically active (2006): total 128,836; activity rate of total population 43.1% (participation rates: ages 15–64, 65.8%; female 41.3%; unemployed 14.4%¹⁰).

Price index (2005 = 100)

	2004	2005	2006	2007	2008
Consumer price index	98.7	100.0	103.5	111.2	124.8

Household income and expenditure. Average household size (2006) 6.5; average annual income per household (2002–03)¹¹ Rf 188,743 (U.S.\$14,746); sources of income (2002–03)¹¹: self-employment 34.5%, wages and salaries 31.5%, rent 13.4%; expenditure (2004)¹²: food, beverages, and tobacco 33.3%, housing and energy 19.5%, clothing and footwear 6.0%, communications 5.8%, health 5.4%.

Gross national income (GNI; 2008): U.S.\$1,126,000,000 (U.S.\$3,630 per capita); purchasing power parity GNI (U.S.\$5,280 per capita).

Mali

Official name: République du Mali
(Republic of Mali).

Form of government: multiparty
republic with one legislative house
(National Assembly [147]).

Chief of state: President.

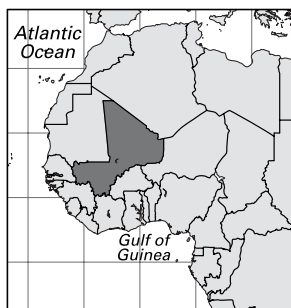
Head of government: Prime Minister.

Capital: Bamako.

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF);
valuation (Sept. 1, 2009) 1 U.S.\$ =
CFAF 458.60; 1 £ = CFAF 744.12.



Area and population

Regions	Capitals	area		population
		sq mi	sq km	1998 census
Gao	Gao	65,858	170,572	495,178
Kayes	Kayes	46,233	119,743	1,424,657
Kidal	Kidal	58,467	151,430	65,524
Koulikoro	Koulikoro	37,007	95,848	1,620,811
Mopti	Mopti	30,509	79,017	1,405,370
Ségou	Ségou	25,028	64,821	1,652,594
Sikasso	Sikasso	27,135	70,280	1,839,747
Tombouctou	Tombouctou (Timbuktu)	191,743	496,611	496,312
District				
Bamako	Bamako	97	252	1,178,977
TOTAL		482,077	1,248,574	10,179,170¹

Demography

Population (2009): 13,443,000.

Density (2009): persons per sq mi 27.9, persons per sq km 10.8.

Urban-rural (2008): urban 32.4%; rural 67.6%.

Sex distribution (2006): male 49.67%; female 50.33%.

Age breakdown (2006): under 15, 48.1%; 15–29, 27.7%; 30–44, 12.9%; 45–59, 6.4%; 60–74, 4.1%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 17,890,000; (2030) 22,690,000.

Doubling time: 23 years.

Ethnic composition (2000): Bambara 30.6%; Senufo 10.5%; Fula Macina (Niafunke) 9.6%; Soninke 7.4%; Tuareg 7.0%; Maninka 6.6%; Songhai 6.3%; Dogon 4.3%; Bobo 3.5%; other 14.2%.

Religious affiliation (2005): Muslim (nearly all Sunni) c. 90%; Christian (mostly Roman Catholic) c. 5%; traditional beliefs/nonreligious c. 5%.

Major cities (1998): Bamako (2007) 1,494,000²; Sikasso 113,803; Ségou 90,898; Mopti 79,840; Koutiala 74,153; Kayes 67,262.

Vital statistics

Birth rate per 1,000 population (2008): 46.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 15.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 31.5 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2005): n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2008): 6.70.

Life expectancy at birth (2008): male 49.9 years; female 53.0 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 1,487, of which HIV/AIDS 97; diseases of the circulatory system 135; accidents and injuries 120; malignant neoplasms (cancers) 54; chronic respiratory diseases 36.

National economy

Budget (2008). Revenue: CFAF 757,700,000,000 (tax revenue 74.3%, grants 22.4%, nontax revenue 3.3%). Expenditures: CFAF 913,500,000,000 (current expenditure 59.8%; capital expenditure 40.2%).

Public debt (external, outstanding; 2007): U.S.\$1,989,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 175; remittances (2008) 344; foreign direct investment (2005–07 avg.) 222; official development assistance (2007) 1,017. Disbursements for (U.S.\$'000,000): tourism (2006) 120; remittances (2008) 83.

Population economically active (2004): total 2,598,200³; activity rate of total population c. 23% (participation rates: ages 15–64, 51.1%; female 42.5%; officially unemployed 8.8%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	98.3	97.0	94.0	100.0	101.5	103.0	112.4

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): millet 1,074,440, rice 955,300, sorghum 907,966, corn (maize) 542,100, seed cotton 414,965, peanuts (groundnuts) 180,000, karite nuts (2005) 85,000, cowpeas 70,000; livestock (number of live animals) 13,010,000 goats, 8,595,000 sheep, 7,917,000 cattle, (2005) 720,000 asses, 476,000 camels; roundwood 5,555,900 cu m, of which fuelwood 93%; fisheries production 100,640 (from aquaculture 1%). Mining and quarrying (2007): salt (2005) 6,000; gold 52,800 kg. Manufacturing (2005): beef and veal 98,000; goat meat (2001) 49,000; sheep meat 36,000; raw sugar 35,000; cement (2002) 18,125; soft drinks (2002) 197,700 hectolitres. Energy production (consumption): electricity (kW-hr; 2006) 489,000,000 (489,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (185,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 6.0; average annual income per household: n.a.; sources of income: n.a.; expenditure: n.a.

Gross national income (GNI; 2008): U.S.\$7,360,000,000 (U.S.\$580 per capita); purchasing power parity GNI (U.S.\$1,090 per capita).

Structure of gross domestic product and labour force

	2008		2004	
	in value CFAF '000,000	% of total value	labour force ³	% of labour force
Agriculture, fishing	1,302,120	33.8	984,600	37.9
Mining	236,394	6.1	11,400	0.4
Manufacturing	195,145	5.1	272,500	10.5
Construction	199,682	5.2	102,100	3.9
Public utilities	74,662	1.9	5,100	0.2
Transp. and commun.	228,567	5.9	55,300	2.1
Trade, hotels	579,794	15.1	675,700	26.0
Finance, real estate	292,767	7.6	8,400	0.3
Pub. admin., defense	345,430	9.0	39,900	1.5
Services	396,277 ⁴	10.3 ⁴	214,000	8.2
Other	396,277 ⁴	10.3 ⁴	229,200 ⁵	8.8 ⁵
TOTAL	3,850,838	100.0	2,598,200	100.0⁶

Land use as % of total land area (2007): in temporary crops 3.6%, in permanent crops, 0.01%, in pasture 28.7%, forest area 10.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
CFAF '000,000,000	+113.4	–35.2	–61.5	–76.2	+39.2	–137.1
% of total	10.2%	3.2%	5.6%	6.7%	2.5%	8.9%

Imports (2007): CFAF 842,700,000,000 (machinery and apparatus 30.3%, petroleum products 28.9%, food products 19.7%). **Major import sources** (2004): France 15.9%; Senegal 12.2%; Côte d'Ivoire 9.4%; Togo 8.5%; Benin 7.4%; China 4.9%.

Exports (2007): CFAF 705,600,000,000 (gold 73.0%, raw cotton and cotton products 15.2%, livestock 4.3%). **Major export destinations** (2004): South Africa 30.9%; Switzerland 20.4%; Senegal 6.3%; China 4.7%; Côte d'Ivoire 4.7%.

Transport and communications

Transport. Railroads (2004): route length 453 mi, 729 km; passenger-km (2002) 196,000,000; metric ton-km cargo (2002) 188,000,000. Roads (2004): total length 11,625 mi, 18,709 km (paved 18%). Vehicles (2007): passenger cars 86,967; trucks and buses 26,759. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	400	36	PCs	2007	98	8.0
Telephones	2004	400	36	Dailies	2007	40 ⁷	6.4 ⁷
Cellular	2008	3,267 ⁸	257 ⁸	Internet users	2008	125	9.8
Landline	2008	83	6.5	Broadband	2008	5.3 ⁸	0.4 ⁸

Education and health

Education attainment (2001)⁹. Population age 25 and over having: no formal schooling/unknown 82.1%; incomplete primary education 7.7%; complete primary 2.0%; secondary 6.5%; higher 1.7%. **Literacy** (2007): percentage of total population age 15 and over literate 23.3%; males literate 31.4%; females literate 16.0%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	33,230	1,716,956	51.7	63
Secondary/Voc. (age 13–18)	15,013	533,886	35.6	...
Tertiary	976	50,913	52.2	4 (age 19–23)

Health: physicians (2004) 1,053 (1 per 10,566 persons); hospital beds (2001) 1,664 (1 per 6,203 persons); infant mortality rate per 1,000 live births (2008) 118.1; undernourished population (2003–05) 1,200,000¹⁰ (11%¹⁰ of total population based on the consumption of a minimum daily requirement of 1,720 calories).

Military

Total active duty personnel (November 2008): 7,350 (army 100%). **Military expenditure as percentage of GDP** (2007): 2.1%; per capita expenditure U.S.\$12.

¹Excludes 772,006 Malians living abroad. ²Population of urban agglomeration. ³Per 2004 Malian labour force survey; the 2004 population economically active estimate of the ILO Employment Trends Unit is 5,322,000. ⁴Net taxes on products less imputed bank service charges. ⁵Includes 227,500 unemployed. ⁶Detail does not add to total given because of rounding. ⁷Circulation of daily newspapers. ⁸Subscribers. ⁹Based on the Mali Demographic and Health Survey 2001, comprising 64,116 people in 12,331 households. ¹⁰Based on FAO data.

Internet resource for further information:

• **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Malta

Official name: Repubblika ta' Malta (Maltese); Republic of Malta (English).

Form of government: unitary multiparty republic with one legislative house (Kamra tad-Deputati, or House of Representatives [69]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Valletta.

Official languages: Maltese; English.

Official religion: Roman Catholicism.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.²



Area and population

Islands	Largest localities	area		population 2009 ³ estimate
		sq mi	sq km	
Comino	—	1.1	2.8	31,432 ⁵
Gozo	Rabat	25.9	67.1	
Malta	—	94.9 ⁶	245.7 ⁶	382,177
Northern District	Mosta	28.5	73.7	59,509
Northern Harbour	Birkirkara	9.3	24.0	122,408
South Eastern District	Żejtun	19.4	50.2	61,007
Southern Harbour	Zabbar	10.1	26.2	81,552
Western District	Zebbuġ	28.0	72.5	57,701
TOTAL		121.9	315.6	413,609

Demography

Population (2009): 414,000.

Density (2009): persons per sq mi 3,396; persons per sq km 1,312.

Urban-rural (2005): urban 95.3%; rural 4.7%.

Sex distribution (2009³): male 49.77%; female 50.23%.

Age breakdown (2009³): under 15, 15.9%; 15–29, 21.6%; 30–44, 19.8%; 45–59, 21.5%; 60–74, 15.1%; 75–84, 4.8%; 85 and over, 1.3%.

Population projection: (2020) 429,000; (2030) 433,000.

Ethnic composition (2005): Maltese 97.0%; other European 2.3%, of which British 1.2%; other 0.7%.

Religious affiliation (2004): Roman Catholic c. 95%, of which practicing c. 63%; other Christian c. 0.5%; Muslim c. 0.7%; nonreligious/atheist c. 2%; other c. 1.8%.

Major localities (2008³): Birkirkara 22,241; Mosta 19,018; Qormi 16,625; Zabbar 14,849; Valletta 6,319 (urban agglomeration 81,204).

Vital statistics

Birth rate per 1,000 population (2008): 10.0 (world avg. 20.3); within marriage 74.6%; outside of marriage 25.4%.

Death rate per 1,000 population (2008): 7.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 2.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.43.

Marriage/divorce rates per 1,000 population (2008): 6.0/7.

Life expectancy at birth (2008): male 76.7 years; female 82.3 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 309.4; malignant neoplasms (cancers) 207.8; diseases of the respiratory system 72.4; endocrine, nutritional, and metabolic diseases 40.1.

National economy

Budget (2008). Revenue: €2,132,200,000 (income tax 34.5%; VAT 21.4%; social security contributions 16.0%; nontax revenue/grants 9.6%). Expenditures: €2,365,300,000 (recurrent expenditures 90.1%; capital expenditure 9.9%).

Public debt (December 2008): U.S.\$5,052,000,000.

Production (metric tons except where noted). Agriculture, forestry, fishing (2007): cow's milk 41,000, potatoes 25,000, tomatoes 16,600, melons 9,400, wheat 9,200, pork 8,500, onions 7,800, eggs 7,000; livestock (number of live animals) 73,683 pigs, 19,233 cattle, 1,100,000 chickens; roundwood, n.a.; fisheries production 3,783 (from aquaculture 67%). Mining and quarrying (2008): salt 6,000, limestone⁸ 1,200,000 cu m. Manufacturing (value added in U.S.\$'000,000; 2005): electronic products 153; food products 109; printing and publishing 99; textiles and wearing apparel 88; beverages 61. Energy production (consumption): electricity (kW-hr; 2006/07) 2,266,000,000 ([2006] 2,296,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (815,000); natural gas, none (none).

Population economically active (2006): total 164,400; activity rate of total population 40.5% (participation rates: ages 15–64, 59.1%; female 32.1%; unemployed [April 2008–March 2009] 10.6%⁹).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.2	94.4	97.1	100.0	102.8	104.1	108.5

Household income and expenditure. Average household size (2005) 2.9; average annual income per household (2000) Lm 8,202 (U.S.\$18,722); sources of income: n.a.; expenditure (2005): food and nonalcoholic beverages 16.5%, transportation 14.1%, restaurants and hotels 13.9%, recreation and culture 10.8%, household furnishings 9.1%, housing and energy 8.5%.

Land use as % of total land area (2007): in temporary crops c. 23%, in permanent crops c. 4%, in pasture, n.a., forest area c. 1%.

Gross national income (GNI; 2008): U.S.\$8,028,000,000 (U.S.\$19,512 per capita); purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force

	2008		2006	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	115.3	2.0	2,200	1.3
Manufacturing	838.0	14.5	26,500	16.1
Mining	16.0	0.3	700	0.4
Construction	178.5	3.1	12,200	7.4
Public utilities	35.1	0.6	3,400	2.1
Transp. and commun.	490.9	8.5	11,500	7.0
Trade, hotels	820.9	14.3	35,400	21.5
Finance, real estate	1,083.7	18.8	15,500	9.4
Pub. admin., defense	333.5	5.8	14,400	8.8
Services	1,103.3	19.2	29,900	18.2
Other	743.9 ¹⁰	12.9 ¹⁰	12,700 ¹¹	7.7 ¹¹
TOTAL	5,758.8 ¹²	100.0	164,400	100.0 ¹²

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 947; remittances (2008) 50; foreign direct investment (2005–07 avg.) 1,170. Disbursements for (U.S.\$'000,000): tourism (2008) 435; remittances (2008) 60.

Foreign trade¹³

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–935	–1,166	–1,394	–1,480	–1,681	–2,037
% of total	15.9%	18.2%	22.3%	21.0%	21.5%	25.5%

Imports (2007): U.S.\$4,748,000,000 (machinery and apparatus 33.4%, of which electronic integrated circuits and micro-assemblies 20.0%; refined petroleum 11.8%; food 10.9%; chemicals and chemical products 9.7%). **Major import sources:** Italy 24.9%; U.K. 14.4%; France 9.1%; Germany 8.4%; U.S. 6.0%. **Exports** (2007): U.S.\$3,067,000,000 (machinery and apparatus 57.4%, of which semiconductor devices 44.6%; medicinal and pharmaceutical products 6.8%; food 4.8%; printed matter 4.2%; children's toys 3.1%; professional/scientific equipment 3.0%). **Major export destinations:** Germany 13.6%; Singapore 13.6%; France 12.0%; U.S. 11.0%; U.K. 9.9%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 1,400 mi, 2,254 km (paved 88%). Vehicles (2008): passenger cars 222,775; trucks and buses 48,210. Air transport (2008)¹⁴: passenger-km 2,604,000,000; metric ton-km cargo 8,027,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	222	553	PCs	2005	67	166
Telephones				Dailies	2007	102 ¹⁵	249 ¹⁵
Cellular	2008	386 ¹⁶	937 ¹⁶	Internet users	2008	200	487
Landline	2008	241	586	Broadband	2008	99 ¹⁶	240 ¹⁶

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no formal schooling 2.4%; special education for disabled 0.3%; primary education 25.9%; secondary 45.3%; some postsecondary 16.5%; undergraduate or professional qualification 7.2%; graduate 2.4%. **Literacy** (2005): total population age 10 and over literate 92.8%; males literate 91.7%; females literate 93.9%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	2,570	29,596	11.5	91
Secondary/Voc. (age 11–17)	3,939	38,479	9.8	87
Tertiary	712	9,441	13.3	32 (age 18–22)

Health: physicians (2008) 1,374 (1 per 299 persons); hospital beds (2008³) 1,967 (1 per 210 persons); infant mortality rate per 1,000 live births (2008) 9.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 1,954 (armed forces includes air and marine elements); Italian military (November 2008) 49 troops. **Military expenditure as percentage of GDP** (2007): 0.6%; per capita expenditure U.S.\$107.

¹Current number as of March 2008 elections; statutory number equals 65. ²The Maltese lira (Lm) was the former monetary unit; on Jan. 1, 2008, 1 Lm = €2.33. ³January 1. ⁴Actual local administration in 2009 was based on 68 local councils grouped into 3 regions. ⁵Four people lived on Comino as of Jan. 1, 2004. ⁶Detail does not add to total given because statistical district data are based on older survey. ⁷Divorce was illegal in mid-2009. ⁸Mostly golden limestone or globigerina limestone. ⁹Per labour force survey. ¹⁰Indirect taxes less subsidies. ¹¹Includes 11,925 unemployed. ¹²Detail does not add to total given because of rounding. ¹³Imports c.i.f.; exports f.o.b. ¹⁴Air Malta only. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers.

Internet resources for further information:

- National Statistics Office <http://www.nso.gov.mt>
- Central Bank of Malta <http://www.centralbankmalta.com>

Marshall Islands

Official name: Majol (Marshallese); (Republic of the Marshall Islands).
Form of government: unitary republic with one legislative house¹ (Nitijela, or Parliament [33]).

Head of state and government: President.

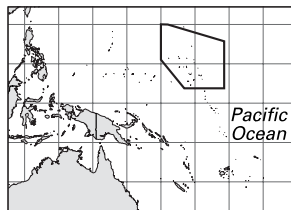
Capital: Majuro².

Official language: Marshallese³.

Official religion: none.

Monetary unit: U.S. dollar (U.S.\$); valuation (Sept. 1, 2009)

1 U.S.\$ = £0.62.



Area and population

area		population		area		population	
	sq km	1999 census			sq km	1999 census	
Atolls/islands⁴			Atolls/islands⁴				
Ailinglaplap	14.69	1,959	Majuro	9.71	23,682		
Aiuk	5.36	514	Maloelap	9.82	856		
Arno	12.95	2,069	Mejit	1.86	416		
Aur	5.62	537	Mili	15.93	1,032		
Bikini	6.01	13	Namorik	2.77	772		
Ebon	5.75	902	Namu	6.27	903		
Enewetak	5.85	853	Rongelap	7.95	19		
Jabat	0.57	95	Ujae	1.86	440		
Jaluit	11.34	1,669	Ujelang	1.74	0		
Kili	0.93	774	Utirik	2.43	433		
Kwajalein	16.39	10,903	Wotho	4.33	145		
Lae	1.45	322	Wotje	8.18	866		
Lib	0.93	147	Other atolls	10.46	0		
Likiep	10.26	527	TOTAL	181.435⁶	50,848		

Demography

Population (2009): 53,800.

Density (2009): persons per sq mi 768.0, persons per sq km 296.5.

Urban-rural (2008): urban 68.0%; rural 32.0%.

Sex distribution (2008): male 50.99%; female 49.01%.

Age breakdown (2008): under 15, 38.5%; 15–29, 29.6%; 30–44, 16.8%; 45–59, 10.5%; 60–74, 3.6%; 75–84, 0.8%; 85 and over, 0.2%.

Population projection: (2020) 62,000; (2030) 67,000.

Ethnic composition (2006)⁷: Marshallese 92.1%; other Pacific Islanders 1.0%; East Asians 0.5%; U.S. white 0.3%; other 6.1%.

Religious affiliation (1999): Protestant 85.0%, of which United Church of Christ 54.8%, Assemblies of God 25.8%; Roman Catholic 8.4%; Mormon 2.1%; nonreligious 1.5%; other/unknown 3.0%.

Major towns (1999): Majuro² (2004) 20,800; Ebeye (in Kwajalein Atoll) 9,345; Laura (in Majuro Atoll) 2,256; Ajeltake (in Majuro Atoll) 1,170; Enewetak 823.

Vital statistics

Birth rate per 1,000 population (2008): 31.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 4.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 26.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.68.

Life expectancy at birth (2008): male 68.9 years; female 73.0 years.

Major causes of death per 100,000 population (2007–08; registered deaths only): sepsis/septicemia 83.7; malignant neoplasms (cancers) 41.3; pneumonia 26.3; myocardial infarction 24.2.

National economy

Budget (2007). Revenue: U.S.\$98,900,000 (U.S. government grants 63.6%; tax revenue 25.0%, of which income tax 11.0%, import duties 8.9%; nontax revenue 11.4%). Expenditures: U.S.\$99,900,000 (current expenditure 79.0%, capital expenditure 21.0%).

Public debt (external, outstanding; 2008): U.S.\$87,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2002–03): copra (2007) 5,491, breadfruit 4,536, coconuts 885, bananas 161, pandanus 114, taro 108; livestock (number of live animals) 12,900 pigs, 86,000 chickens; roundwood, n.a.; fisheries production (2006) 42,019, of which skipjack 37,661 (from aquaculture, none). Mining and quarrying: for local construction only. Manufacturing (2007): copra 5,491; coconut oil and processed (chilled or frozen) fish are important products; the manufacture of handicrafts and personal items (clothing, mats, boats, etc.) by individuals is also significant. Energy production (consumption): electricity (kW-hr; 2006) 104,000,000 (104,000,000); coal, none (none); petroleum products (metric tons; 2006) none (30,000).

Population economically active (1999): total 14,677; activity rate of total population 28.9% (participation rates: ages 15–64, 52.1%; female 34.1%; unemployed [2007] 30.9%).

Price and earnings indexes (2005 = 100)

	2003	2004	2005	2006	2007	2008
Consumer price index	93.6	95.7	100.0	104.3	107.6	126.5
Annual earnings index ⁸	88.3	93.1	100.0	101.8	100.9	...

Household income and expenditure. Average household size (2006)⁹ 7.9; average annual income per household (2005)⁹ U.S.\$17,482; sources of income (2002)¹⁰: wages and salaries 89.3%, rent and investments 2.4%, social security 2.2%; expenditure (2006)¹¹: food 46.7%, housing and energy 15.9%, transportation 12.3%, wearing apparel 6.1%, education and communication 4.4%.

Gross national income (2008): U.S.\$195,000,000 (U.S.\$3,270 per capita).

Structure of gross domestic product and labour force

	2001		2006–07	
	in value U.S.\$'000	% of total value	labour force	% of labour force
Agriculture, fishing	10,296.1	10.4	345	3.4
Mining and quarrying	291.4	0.3	—	—
Manufacturing	4,489.5	4.5	60	0.6
Public utilities	3,402.2	3.4	274	2.7
Construction	11,314.1	11.4	780	7.7
Transp. and commun.	5,044.8	5.1	651	6.4
Trade, restaurants, hotels	16,937.3	17.1	2,116	20.8
Finance, insurance, real estate	15,458.2	15.6	412	4.0
Public administration	31,043.6	31.3	3,561	34.9
Services			798	7.8
Other	896.7 ¹²	0.9 ¹²	1,196	11.7
TOTAL	99,173.8⁶	100.0	10,192⁶	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4.5; remittances (2005) 0.4; foreign direct investment (FDI; 2005–07 avg.) 272; official development assistance (2007) 52. Disbursements for (U.S.\$'000,000): tourism (2006) 0.4; remittances, n.a.¹³; FDI (2005–07 avg.) 24.

Land use as % of total land area (2007): in temporary crops 11.1%, in permanent crops 44.4%, in pasture 22.2%, forest area, n.a.

Foreign trade¹⁴

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.\$'000,000	−74.4	−69.4	−59.2	−63.3	−57.4	−69.3
% of total	80.9%	77.6%	72.2%	69.0%	64.6%	67.7%

Imports (2006): U.S.\$67,700,000 ([2000] mineral fuels and lubricants 43.6%; machinery and transport equipment 16.9%; food, beverages, and tobacco 10.9%). **Major import sources:** U.S. 45.8%; Australia 8.4%; Japan 8.1%; New Zealand 3.2%; Hong Kong 1.8%.

Exports (2006–07): U.S.\$20,300,000 ([2005] reexports of diesel fuel 80.9%; crude coconut oil 15.4%; remainder 3.7%). **Major export destinations** (2005): mostly the U.S.

Transport and communications

Transport. Roads (2007): only Majuro and Kwajalein have paved roads (47 mi, 75 km). Vehicles (2004): passenger cars 1,694; trucks and buses 602. Air transport (2006)¹⁵: passenger-km 31,236,000; metric ton-km cargo 348,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2008	...	...	PCs	2005	4.6	88
Telephones	2008	...	...	Dailies	2008	0	0
Cellular	2008	1.0 ¹⁶	17 ¹⁶	Internet users	2008	2.2	36
Landline	2008	4.4	73	Broadband	2008	...	...

Education and health

Educational attainment (2006)⁹. Percentage of population age 25 and over having: no formal schooling 2.1%; elementary education 28.0%; secondary 55.8%; some higher 7.9%; undergraduate degree 5.1%; advanced degree 1.1%. **Literacy** (2000): total population age 15 and over literate 92.0%; males literate 92.0%; females literate 92.0%.

Education (2002–03)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	526	8,393 ¹⁷	16.9	90
Secondary/Voc. (age 12–17)	387	5,901 ¹⁷	16.7	74
Tertiary	49	919	18.8	17 (age 18–22)

Health (2008): physicians 38 (1 per 1,401 persons); hospital beds (2004) 140 (1 per 411 persons); infant mortality rate 26.4; undernourished population, n.a.

Military

The United States provides for the defense of the Republic of the Marshall Islands under the 1984 and 2003 compacts of free association¹⁸.

¹In addition, the Council of Iroij (Council of Chiefs), a 12-member body of tribal chiefs, serves in an advisory capacity. ²Local name of town is DUD (an acronym for Delap [Wojja], Uliga, and Djarrit [Rita]—three small islands now merged by landfill). ³Language of the Nitijela, or Parliament. ⁴Four districts centred at Majuro, Ebeye, Wotje, and Jaluit make up the local government structure. ⁵Land area only; excludes lagoon area of 11,673 sq km (4,507 sq mi). ⁶Detail does not add to total given because of rounding. ⁷Based on the Marshall Islands 2006 Community Survey, comprising 9,491 respondents. ⁸Data are for fiscal year. ⁹Based on the 2006 RMI Community Survey, comprising 9,491 respondents in 1,205 households. ¹⁰Based on the 2002 Household Income and Expenditure Survey, comprising 5,074 respondents in 657 households. ¹¹Weights of consumer price index components. ¹²Import duties less imputed bank service charges. ¹³Labour income of Marshallese at Kwajalein (2003–04) U.S.\$17,600,000. ¹⁴Imports f.o.b. in balance of trade; c.i.f. in commodities and trading partners. ¹⁵Air Marshall Islands only. ¹⁶Subscribers. ¹⁷2004–05. ¹⁸The U.S. Army's premier ballistic missile test site is at Kwajalein; number of troops at site, n.a.

Internet resources for further information:

- **Economic Policy-Planning and Statistics Office**
<http://www.spc.int/prism/country/mh/stats>
- **Republic of the Marshall Islands: Documents**
<http://marshall.wetserver.net/index.jsp>

Martinique

Official name: Département d'Outre-Mer de la Martinique (Overseas Department of Martinique).¹

Political status: overseas department/overseas region (France) with two legislative houses (General Council² [45]; Regional Council³ [41]).

Chief of state: President of France.

Heads of government: Prefect (for France); President of the General Council (for Martinique); President of the Regional Council (for Martinique).

Capital: Fort-de-France.

Official language: French.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.7	95.7	97.7	100.0	102.4	104.9	107.8

Gross domestic product (2007): U.S.\$10,847,000,000 (U.S.\$26,953 per capita).

Structure of gross domestic product and labour force

	2004		2005 ^{4,7}	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	174	2.6	8,922	5.9
Mining	...	...	...	...
Manufacturing	372	5.5	4,998	3.3
Construction	399	5.9	6,044	4.0
Public utilities	146	2.1	1,163	0.8
Transp. and commun.	218	3.2	5,939	3.9
Trade, restaurants, hotels	1,082	15.9	19,693	13.0
Finance, real estate, insurance	1,962	28.8	8,003	5.3
Pub. admin., defense	2,108	31.0	22,390	14.8
Services	339 ⁸	5.0 ⁸	36,247	23.9
Other	...	...	38,020 ⁹	25.1 ⁹
TOTAL	6,800	100.0	151,419	100.0

Land use as % of total land area (2007): in temporary crops c. 10%, in permanent crops c. 7%, in pasture c. 9%, forest area c. 44%.

Foreign trade

Balance of trade (current prices)

	2004	2005	2006	2007	2008
€'000,000	-1,691	-1,865	-1,997	-2,152	-2,357
% of total	71.1%	69.6%	70.8%	76.2%	76.1%

Imports (2008): €2,727,000,000 (mineral fuels 21.9%, food and agricultural products 14.1%, machinery and apparatus 11.9%, automobiles/parts 11.7%). **Major import sources (2006):** metropolitan France 55.6%; U.K. 15.3%; Italy 3.4%; Germany 2.6%; Netherlands 2.5%; Guadeloupe 2.0%.

Exports (2008): €370,000,000 (refined petroleum 57.6%, agricultural products [significantly bananas and rum] 26.1%). **Major export destinations (2006):** Guadeloupe 32.9%; metropolitan France 21.9%; U.S. 16.8%; St. Lucia 12.7%; French Guiana 3.7%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 1,308 mi, 2,105 km (paved, n.a.). Vehicles (1998): passenger cars 147,589; trucks and buses 35,615. Air transport (2007): passengers 1,695,000; cargo 13,926 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	66	169	PCs	2004	82	208
Telephones				Dailies	2007	68 ¹⁰	169 ¹⁰
Cellular	2004	295 ¹¹	748 ¹¹	Internet users	2008	130	321
Landline	2008	172	425	Broadband	2007	...	...

Education and health

Educational attainment (1999). Percentage of population age 20 and over having: unknown, or no formal education through lower secondary education 63.6%; vocational 16.7%; upper secondary 9.2%; incomplete higher 5.0%; complete higher 5.5%. **Literacy (2005):** percentage of total population age 15 and over literate 98.0%; males literate 97.6%; females literate 98.3%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	3,031 ¹²	30,156	...	...
Secondary/Voc. (age 12–18)	4,553 ¹²	45,348	...	...
Tertiary	...	8,985	...	... (age 19–23)

Health (2007): physicians 1,013 (1 per 397 persons); hospital beds (2006⁴) 1,993 (1 per 201 persons); infant mortality rate per 1,000 live births 6.6; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 1,450 French troops (including troops stationed in Guadeloupe, excluding gendarmerie).

¹Martinique is simultaneously administered as an overseas region (*région d'outre-mer*).

²Assembly for overseas department. ³Assembly for overseas region. ⁴January 1. ⁵Budget for region. ⁶2006. ⁷Salaried employees only. ⁸Import duties less subsidies and less imputed financial service charges. ⁹Unemployed. ¹⁰Circulation of daily newspapers.

¹¹Subscribers. ¹²2004–05.

Internet resources for further information:

- **INSEE: Martinique**
<http://www.insee.fr/fr/regions/martinique>
- **IEDOM: Martinique**
<http://www.iedom.fr/dom/martinique/publications.asp>

Area and population

Arrondissements	Capitals	area		population
		sq mi	sq km	2006 estimate
Fort-de-France	Fort-de-France	66	171	168,720
La Trinité	La Trinité	131	338	87,066
Le Marin	Le Marin	158	409	118,139
Saint-Pierre	Saint-Pierre	81	210	23,807
TOTAL		436	1,128	397,732

Demography

Population (2009): 406,000.

Density (2009): persons per sq mi 931.2, persons per sq km 359.9.

Urban-rural (2007): urban 98.0%; rural 2.0%.

Sex distribution (2005⁴): male 47.01%; female 52.99%.

Age breakdown (2005): under 15, 21.6%; 15–29, 18.4%; 30–44, 23.4%; 45–59, 18.9%; 60–74, 11.6%; 75–84, 4.3%; 85 and over, 1.8%.

Population projection: (2020) 417,000; (2030) 420,000.

Ethnic composition (2000): mixed race (black/white/Asian) 93.4%; French (metropolitan and Martinique white) 3.0%; East Indian 1.9%; other 1.7%.

Religious affiliation (2000): Roman Catholic 86.0%; Protestant 5.6% (mostly Seventh-day Adventist); other Christian 5.4%; other 3.0%.

Major communes (2006): Fort-de-France 90,347 (urban agglomeration, 133,281); Le Lamentin 39,847; Le Robert 23,856; Schœlcher 21,419.

Vital statistics

Birth rate per 1,000 population (2007): 13.2 (world avg. 20.3); (1997) within marriage 31.8%; outside of marriage 68.2%.

Death rate per 1,000 population (2007): 7.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 6.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.90.

Marriage/divorce rates per 1,000 population: (2007) 3.3/(2005) 1.5.

Life expectancy at birth (2008): male 76.7 years; female 82.4 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 181.8; malignant neoplasms (cancers) 167.9; accidents, poisoning, and violence 51.5; metabolic and nutritional disorders 42.2; diseases of the nervous system 36.4; diseases of the respiratory system 34.6.

National economy

Budget (2006)⁵. Revenue: €285,000,000 (tax revenue 46.5%; grants and subsidies from France 34.6%; loans 18.6%). Expenditures: €285,000,000 (current expenditure 46.7%; capital expenditure 53.3%).

Public debt: n.a.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 300,000, sugarcane 215,000, roots and tubers 20,000 (of which yams 7,500, sweet potatoes 1,000), plantains 18,000, pineapples 18,000, tomatoes 6,700, lettuce 5,000, cucumbers and gherkins 4,000; livestock (number of live animals) 25,000 cattle, 20,000 pigs, 15,000 sheep, 13,500 goats; roundwood 26,400 cu m, of which fuelwood 92%; fisheries production 6,300 (from aquaculture, negligible). Mining and quarrying (2007): salt 200,000, pumice 130,000. Manufacturing (2008): cement 263,700; gas-diesel oils 179,000; motor gasoline 164,000; kerosene 143,000; sugar 4,700; rum 74,500 hectolitres; other products include clothing, fabricated metals, and yaws and sails. Energy production (consumption): electricity (kW-hr; 2006) 1,215,000,000 (1,215,000,000); coal, none (none); crude petroleum (barrels; 2006) none (4,437,000); petroleum products (metric tons; 2006) 825,000 (2008) 591,000; natural gas, none (none).

Household income and expenditure. Average household size (2004–05) 2.6; average annual disposable income per household, n.a.; sources of income (2000): wages and salaries 54.7%, inheritance or endowment 14.0%, self-employment 12.7%, other 18.6%; expenditure (1993): food and beverages 32.1%, transportation and communications 20.7%, housing and energy 10.6%, household durable goods 9.4%, clothing and footwear 8.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 299; remittances, n.a.; foreign direct investment (FDI) n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.

Population economically active (2008): total 161,600; activity rate of total population c. 40% (participation rates: ages 15–64, 62.5%; female 52.3%; unemployed 22.4%).

Mauritania

Official name: Al-Jumhūriyah al-Islāmiyah al-Mūrītāniyah (Arabic) (Islamic Republic of Mauritania).

Form of government: republic¹ with two legislative houses (Senate [56]; National Assembly [95]).

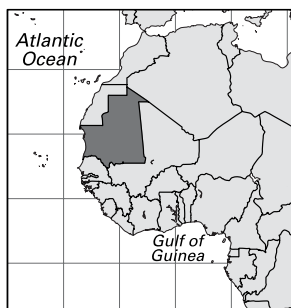
Head of state and government: President assisted by the Prime Minister.

Capital: Nouakchott.

Official language: Arabic².

Official religion: Islam.

Monetary unit: ouguiya (UM); valuation (Sept. 1, 2009)
1 U.S.\$ = UM 260.50;
1 £ = UM 422.69.



Area and population

Regions	Capitals	area		population
		sq mi	sq km	2006 estimate ³
El-Agāba	Kiffa	14,100	36,600	281,645
Adrar	Atar	83,100	215,300	80,846
Brakna	Aleg	13,000	33,800	287,157
Dakhlet Nouadhibou	Nouadhibou	8,600	22,300	92,441
Gorgol	Kaédi	5,300	13,600	282,164
Guidimaka	Sélibaby	4,000	10,300	206,593
Hodh ech-Chargui	Néma	70,600	182,700	327,374
Hodh el-Gharbi	'Ayoūn el-'Atroūs	20,600	53,400	246,642
Inchiri	Akjoujt	18,100	46,800	13,369
Tagant	Tidjikdja	36,800	95,200	89,075
Tiris Zemmour	Zouérate	97,600	252,900	47,805
Trarza	Rosso	25,800	66,800	311,819
Capital District				
Nouakchott	Nouakchott	400	1,000	648,930
TOTAL		398,000	1,030,700	2,915,860

Demography

Population (2009): 3,129,000.

Density (2009): persons per sq mi 7.9, persons per sq km 3.0.

Urban-rural (2006): urban 65.5%; rural 34.5%.

Sex distribution (2006): male 49.50%; female 50.50%.

Age breakdown (2006): under 15, 45.6%; 15–29, 27.2%; 30–44, 15.6%; 45–59, 8.0%; 60–74, 3.1%; 75 and over, 0.5%.

Population projection: (2020) 4,005,000; (2030) 4,851,000.

Doubling time: 24 years.

Ethnic composition (2003)⁴: black African-Arab-Berber (Black Moor) 40%; Arab-Berber (White Moor) 30%; black African (mostly Wolof, Tukulor, Soninke, and Fulani) 30%.

Religious affiliation (2000): Sunnī Muslim 99.1%; traditional beliefs 0.5%; Christian 0.3%; other 0.1%.

Major cities (2005): Nouakchott 743,500; Nouadhibou 94,700; Rosso (2000) 48,922; Boghé (2000) 37,531; Adel Bagrou (2000) 36,007.

Vital statistics

Birth rate per 1,000 population (2008): 34.6 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.3 (world avg. 8.5).

Marriage/divorce rates per 1,000 population (2005): n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2008): 4.52.

Life expectancy at birth (2008): male 57.9 years; female 62.2 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 178; malignant neoplasms (cancers) 71; diseases of the respiratory system 44; diseases of the digestive system 26.

National economy

Budget (2005). Revenue: UM 131,300,000,000 (tax revenue 57.9%, of which VAT 20.3%, corporate taxes 17.0%, import taxes 8.2%; nontax revenue 34.3%, of which fishing royalties 26.9%; grants 7.8%). Expenditures: UM 166,100,000,000 (current expenditure 76.2%, of which goods and services 36.5%, wages and salaries 13.5%, defense 10.7%; capital expenditure 23.8%).

Public debt (external, outstanding; 2008⁵): U.S.\$1,751,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 77,000, sorghum 58,000, dates 22,000, corn (maize) 17,000, peas 10,000, cowpeas 7,200; livestock (number of live animals) 8,850,000 sheep, 5,600,000 goats, 1,692,000 cattle, 1,600,000 camels; roundwood 1,707,400 cu m, of which fuelwood 99.8%; fisheries production 201,588, of which octopuses 11,525 (from aquaculture, none). Mining and quarrying (gross weight; 2006–07): iron ore 11,439,000; gypsum (2005) 39,000; copper 5,000. Manufacturing (value added in U.S.\$'000,000; 1997): food, beverages, and tobacco products 5.2; machinery, transport equipment, and fabricated metals 3.8; bricks, tiles, and cement 1.6. Energy production (consumption): electricity (kW-hr; 2006–07) 404,000,000 (290,000,000); coal (metric tons; 2004) none (7,000); crude petroleum (barrels; 2006–07)⁶ 9,600,000 ([2004] 8,830,000); petroleum products (metric tons; 2006–07) none (431,000).

Household income and expenditure. Average household size (2004) 5.8; expenditure (2002–03)⁷: food and beverages 53.1%, housing and energy 13.7%, transportation and communications 12.1%, household furnishings 6.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 11; remittances (2008) 2; foreign direct investment (2005–07 avg.) 374; official development assistance (2007) 364. Disbursements for (U.S.\$'000,000): tourism (1999) 55; remittances, n.a.

Population economically active (2006): total 1,238,000; activity rate of total population 39.2% (participation rates: over age 15, 68.8%; female 40.4%; unemployed [2005] 32.5%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	76.8	80.8	89.2	100.0	106.2	113.9	122.3
Hourly earnings index ⁸	53.6	53.6	64.2	100.0	...	...	...

Gross national income (GNI; 2007): U.S.\$2,636,000,000 (U.S.\$840 per capita); purchasing power parity GNI (U.S.\$2,010 per capita).

Structure of gross domestic product and labour force

	2006		2000	
	in value UM '000,000	% of total value	labour force	% of labour force
Agriculture, livestock, fishing	112,075	15.7	314,306	48.2
Mining	91,212	12.8	5,769	0.9
Crude petroleum	158,626	22.2	...	...
Manufacturing	23,952	3.4	30,156	4.6
Public utilities	...	...	2,837	0.4
Construction	39,638	5.5	15,562	2.4
Transp. and commun.	27,461	3.8	17,916	2.8
Trade	68,631	9.6	108,532	16.7
Finance	...	...	2,011	0.3
Services	66,005	9.2	98,720	15.1
Pub. admin., defense	71,296	10.0	...	...
Other	55,798 ⁹	7.8 ⁹	55,958 ¹⁰	8.6 ¹⁰
TOTAL	714,694	100.0	651,767	100.0

Land use as % of total land area (2007): in temporary crops 0.4%, in permanent crops 0.01%, in pasture 38.1%, forest area 0.2%.

Foreign trade

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	-110.0	-99.5	-223.8	-483.8	-803.2	+199.6	+143.7
% of total	13.4%	13.0%	26.0%	35.5%	39.1%	7.9%	5.7%

Imports (2007): U.S.\$1,198,800,000 (imports for extractive industries 28.3%, petroleum products 23.1%, unspecified 48.6%). **Major import sources** (2006): France 11.9%; China 8.2%; U.S. 6.8%; Belgium 6.7%; Italy 5.9%; Spain 4.1%. **Exports** (2007): U.S.\$1,342,500,000 (iron ore 39.7%, petroleum 23.1%, fish 15.3%). **Major export destinations** (2006): China 26.3%; Italy 11.8%; France 10.2%; Belgium 6.8%; Spain 6.7%; Japan 5.4%.

Transport and communications

Transport. Railroads (2005): route length 697 km; (2000) passenger-km, negligible; (2000) metric ton-km cargo 7,766,000,000. Roads (2006): total length 11,066 km (paved 27%). Vehicles (2001): passenger cars 12,200; trucks and buses 18,200. Air transport (2002)¹¹: passenger-km 45,000,000; metric ton-km cargo 4,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	123	44	PCs	2005	42	14
Telephones				Dailies	2007	91 ¹²	5.0 ¹²
Cellular	2008	2,092 ¹³	651 ¹³	Internet users	2006	100	33
Landline	2008	76	24	Broadband	2008	5.9 ¹³	1.8 ¹³

Education and health

Educational attainment (2000). Percentage of population age 6 and over having: no formal schooling 43.9%; no formal schooling but literate 2.5%; Islamic schooling 18.4%; primary education 23.2%; lower secondary 5.3%; upper secondary 4.6%; higher technical 0.4%; higher 1.7%. **Literacy** (2007): percentage of total population age 15 and over literate 43.6%; males literate 53.2%; females literate 34.3%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11) ¹⁴	11,379	483,776	42.5	80
Secondary/Voc. (age 12–17)	3,777	98,946	26.2	16
Tertiary	353	10,157	28.8	4 (age 18–22)

Health (2006): physicians (2005) 477 (1 per 6,212 persons); hospital beds 1,826 (1 per 1,667 persons); infant mortality rate per 1,000 live births (2008) 64.9; undernourished population (2003–05) 200,000 (8% of total population based on the consumption of a minimum daily requirement of 1,790 calories).

Military

Total active duty personnel (November 2008): 15,870 (army 94.5%, navy 3.9%, air force 1.6%). **Military expenditure as percentage of GDP** (2007): 0.5%; per capita expenditure U.S.\$6.

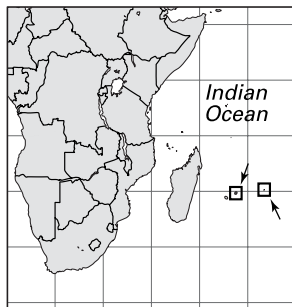
¹In actuality a military-backed regime with a democratically elected president. ²The 1991 constitution names Arabic as the official language and the following as national languages: Arabic, Fulani, Soninke, and Wolof. ³Mid-year official projection based on 2000 census. ⁴Estimated figures. ⁵January 1. ⁶Offshore crude petroleum production began in February 2006. ⁷Weights of consumer price index components. ⁸Minimum wage; private sector. ⁹Indirect taxes. ¹⁰Not adequately defined. ¹¹Includes 1/11 of the traffic of the defunct (from 2002) Air Afrique. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴2006–07.

Internet resources for further information:

- Office National de Statistique <http://www.ons.mr>
- Central Bank of Mauritania <http://www.bcm.mr>

Mauritius

Official name: Republic of Mauritius.
Form of government: republic with one legislative house (National Assembly [70]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Port Louis.
Official language: English¹.
Official religion: none.
Monetary unit: Mauritian rupee (Mau Re; plural Mau Rs); valuation (Sept. 1, 2009) 1 U.S.\$ = Mau Rs 31.85; 1 £ = Mau Rs 51.68.



Area and population		area		population
Island	Principal centres	sq mi	sq km	2008 estimate
Non-administrative districts²				
Mauritius		720	1,865 ³	1,230,995
Black River	Tamarin	100	259	73,277
Flacq	Centre de Flacq	115	298	138,194
Grand Port	Mahébourg	100	260	114,436
Moka		89	231	80,596
Pamplemousses	Pamplemousses	69	179	135,394
Plaines Wilhems	Rose Hill	78	203	381,394
Port Louis	Port Louis	17	43	129,874
Rivière du Rempart	Poudre d'Or	57	148	107,683
Savanne	Souillac	95	245	70,147
Mauritius dependencies				
Agalega ⁴	...	27	70	289 ⁵
Cargados Carajos Shoals (Saint Brandon) ⁴	—	0.4	1	0 ⁵
Rodrigues	Port Mathurin	40	104	37,570
TOTAL		788³	2,040	1,268,565

Demography

Population (2009): 1,276,000.
Density (2009): persons per sq mi 1,619, persons per sq km 625.5.
Urban-rural (2008): urban 41.9%; rural 58.1%.
Sex distribution (2009): male 49.35%; female 50.65%.
Age breakdown (2008): under 15, 22.7%; 15–29, 24.6%; 30–44, 23.2%; 45–59, 19.2%; 60–74, 7.7%; 75–84, 2.1%; 85 and over, 0.5%.
Population projection: (2020) 1,359,000; (2030) 1,407,000.
Ethnic composition (2000): Indo-Pakistani 67.0%; Creole (mixed Caucasian, Indo-Pakistani, and African) 27.4%; Chinese 3.0%; other 2.6%.
Religious affiliation (2000): Hindu 49.6%; Christian 32.2%, of which Roman Catholic 23.6%; Muslim 16.6%; Buddhist 0.4%; other 1.2%.
Major municipalities (2007): Port Louis 148,939; Beau Bassin–Rose Hill 109,701; Vacoas-Phoenix 106,865; Curepipe 83,754; Quatre Bornes 80,780.

Vital statistics

Birth rate per 1,000 population (2008): 12.9 (world avg. 20.3).
Death rate per 1,000 population (2008): 7.1 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): 5.8 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2006): 1.73.
Marriage/divorce rates per 1,000 population (2008): 8.8/1.2.
Life expectancy at birth (2007): male 69.1 years; female 75.8 years.
Major causes of death per 100,000 population (2008): diseases of the circulatory system 248.3; endocrine, nutritional, and metabolic disorders 166.6; malignant neoplasms (cancers) 85.9.

National economy

Budget (2007–08). Revenue: Mau Rs 57,593,500,000 (tax revenue 86.7%, of which taxes on goods and services 46.1%, taxes on trade 11.5%, corporate income tax 10.8%; nontax revenue/grants 13.3%). Expenditures: Mau Rs 55,781,200,000 (social security 22.6%; education 14.8%; interest on debt 14.3%; health 8.4%; police/defense 8.1%).
Public debt (external, outstanding; 2007): U.S.\$572,000,000.
Gross national income (GNI; 2008): U.S.\$8,122,000,000 (U.S.\$6,400 per capita); purchasing power parity GNI (U.S.\$12,480 per capita).

Structure of gross domestic product and labour force				
	2008		2006	
	in value Mau Rs '000,000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture	10,239	3.9	48,100	9.3
Mining	101	0.1	300	0.1
Manufacturing	46,888	17.7	121,000	23.5
Construction	16,216	6.1	48,400	9.4
Public utilities	4,893	1.9	3,000	0.6
Transp. and commun.	26,057	9.8	36,900	7.1
Trade, hotels	48,888	18.4	110,600	21.4
Finance, real estate	52,296	19.7	30,500	5.9
Pub. admin., defense	14,618	5.5	39,600	7.7
Services	18,352	6.9	77,400	15.0
Other	26,268 ⁸	10.0 ⁸	—	—
TOTAL	265,174	100.0	515,800	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,400,000, chicken meat 37,000, tomatoes 13,000, potatoes 13,000, bananas 10,500, eggs 5,250, tea 1,723; livestock (number of live animals) 28,500 cattle, 10,000,000 chickens; roundwood 15,200 cu m, of which fuelwood 44%; fisheries production 8,476 (from aquaculture 7%). Mining (2007): basalt, n.a.; marine salt 6,650. Manufacturing (value added in Mau Rs '000,000; 2005): wearing apparel 8,823; food products 6,220; beverages and

tobacco products 3,053; cement, bricks, and ceramics 1,968; textiles 1,374; printing and publishing 1,230. Energy production (consumption): electricity (kW-hr; 2008) 2,512,000,000 ([2006] 2,350,000,000); coal (metric tons; 2006) none (484,000); petroleum products (metric tons; 2006) none (835,000).
Population economically active (2004): total 549,600; activity rate of total population 44.5% (participation rates: ages 15 and over, 59.2%; female 35.0%; unemployed [2008] 7.2%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	87.6	91.0	95.3	100.0	108.9	118.5	130.1
Daily earnings index ¹⁰	80.3	89.6	95.3	100.0	...	...	...

Household income and expenditure (2006–07). Average household size 3.7; annual income per household Mau Rs 228,996 (U.S.\$7,047); sources of income: n.a.; expenditure: food and nonalcoholic beverages 28.6%, transportation 14.7%, housing and energy 13.1%, alcohol and tobacco 9.2%, household furnishings 6.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,304; remittances (2008) 215; foreign direct investment (FDI; 2005–07 avg.) 162; official development assistance (2007) 75. Disbursements for (U.S.\$'000,000): tourism (2007) 361; remittances (2008) 14; FDI (2005–07 avg.) 39.

Land use as % of total land area (2007): in temporary crops 44%, in permanent crops 2.0%, in pasture 3.4%, forest area 18.0%.

Foreign trade¹¹

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
Mau Rs '000,000	–12,920	–21,482	–30,063	–46,595	–51,599	–64,155
% of total	10.9%	16.4%	19.2%	24.6%	27.1%	31.9%

Imports (2007): Mau Rs 121,037,000,000 (machinery and transport equipment 23.5%, of which vehicles 6.7%, machinery 6.6%; food 16.6%, of which fish 5.8%; refined petroleum 15.7%; fabrics/yarn 7.4%). **Major import sources:** India 21.2%; China 11.4%; France 10.6; South Africa 7.4%; Japan 3.6%.
Exports (2007): Mau Rs 69,708,000,000 (apparel/clothing accessories 35.5%; food 24.8%, of which raw sugar 13.7%; textile yarns, fabrics, and made up articles 2.6%). **Major export destinations:** U.K. 32.4%; France 10.1%; U.S. 6.4%; U.A.E. 3.5%; Madagascar 2.6%.

Transport and communications

Transport. Railroads: none. Roads (2006¹²): total length 1,255 mi, 2,020 km (paved 98%). Vehicles (2008): passenger cars 109,500; trucks and buses 61,500. Air transport (2005)¹³: passenger-km 6,274,000,000; metric ton-km cargo 211,716,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2007	290	230	PCs	2005	210	169
Telephones				Dailies	2007	110 ¹⁴	115 ¹⁴
Cellular	2008	1,033 ¹⁵	807 ¹⁵	Internet users	2008	380	297
Landline	2008	365	285	Broadband	2008	73 ¹⁵	57 ¹⁵

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal education 12.3%; primary 44.1%; lower secondary 23.2%; upper secondary/some higher 17.3%; complete higher 2.6%; unknown 0.5%.
Literacy (2000): percentage of total population age 12 and over literate 85.1%; males literate 88.7%; females literate 81.6%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	5,548	119,310	21.5	95
Secondary/Voc. (age 11–17)	8,124	128,965	15.9	73
Tertiary	500 ¹⁶	7,167 ¹⁶	14.3 ¹⁶	17 ¹⁷ (age 18–22)

Health: physicians (2008) 1,450 (1 per 875 persons); hospital beds (2007) 3,756 (1 per 336 persons); infant mortality rate per 1,000 live births (2008) 14.4; undernourished population (2002–04) 60,000 (5% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2008): none; a 2,000-person paramilitary force includes a 500-person coast guard unit. **Paramilitary expenditure as percentage of GDP** (2008): 0.3%; per capita expenditure U.S.\$26.

¹French is not official but may be used to address the speaker of the National Assembly.
²The island of Mauritius is administratively divided between 5 municipalities and 4 district councils; detail is unavailable. ³Detail does not add to total given because of rounding. ⁴Administered directly from Port Louis. ⁵As of 2000 census. ⁶Includes Rodrigues; Rodrigues is 91% Roman Catholic. ⁷Estimate of employed workers only (including foreigners). ⁸Taxes less subsidies and imputed bank service charges. ⁹Establishments employing 10 or more persons only. ¹⁰September. ¹¹Imports c.i.f.; exports f.o.b. ¹²January 1. ¹³Air Mauritius only. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶Combined data for the University of Mauritius and the University of Technology, Mauritius only. ¹⁷2005–06.

Internet resources for further information:

- Central Statistical Office
<http://www.gov.mu/portal/site/cso>
- Bank of Mauritius <http://bom.intnet.mu>

Mayotte

Official name: Collectivité Départementale de Mayotte¹ (Departmental Collectivity of Mayotte).²

Political status: overseas dependency of France³ with one legislative house (General Council [19]).

Chief of state: President of France.

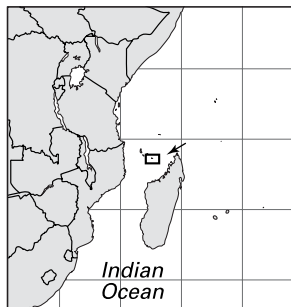
Head of government: Prefect (for France); President of the General Council (for Mayotte).

Capital: Mamoudzou.

Official language: French.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population		area		population
Islands	Communes	sq mi	sq km	2007 census
Grande Terre				
	Acoua	4.9	12.6	4,622
	Bandraboua	12.5	32.4	9,013
	Bandrele	14.1	36.5	6,838
	Boueni	5.4	14.1	5,296
	Chiconi	3.2	8.3	6,412
	Chirongui	11.3	29.3	6,605
	Dembeni	15.0	38.8	10,141
	Kani-Keli	7.9	20.5	4,527
	Koungou	11.0	28.4	19,831
	Mamoudzou	16.2	41.9	53,022
	M'tsangamouji	8.4	21.8	5,028
	M'tzamboro	5.3	13.7	6,917
	Ouangani	7.3	19.0	6,577
	Sada	4.3	11.2	8,007
	Tsingoni	13.4	34.8	9,200
Petite Terre				
	Dzaoudzi	2.6	6.7	15,339
	Pamandzi	1.7	4.3	9,077
TOTAL		144.5	374.2 ⁴	186,452 ⁵

Demography

Population (2009): 196,000.

Density (2009): persons per sq mi 1,356; persons per sq km 523.8.

Urban-rural: n.a.

Sex distribution (2006): male 52.27%; female 47.73%.

Age breakdown (2006): under 15, 45.9%; 15–29, 24.6%; 30–44, 18.1%; 45–59, 8.4%; 60–74, 2.5%; 75–84, 0.4%; 85 and over, 0.1%.

Population projection: (2020) 253,000; (2030) 305,000.

Doubling time: 21 years.

Ethnic composition (2000): Comorian⁶ 92.3%; Swahili 3.2%; white (French) 1.8%; Makua 1.0%; other 1.7%.

Religious affiliation (2000): Sunni Muslim 96.5%; Christian, principally Roman Catholic, 2.2%; other 1.3%.

Major villages/communes (2007): Mamoudzou 6,186/53,022; Koungou 6,710/19,831; village of Labattoir 15,067/commune of Dzaoudzi 15,339; Pamandzi 9,077/9,077.

Vital statistics

Birth rate per 1,000 population (2006): 41.0 (world avg. 20.3).

Death rate per 1,000 population (2006): 7.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 33.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.79.

Life expectancy at birth (2006): male 59.6; female 64.0.

National economy

Budget (2005)⁷. Revenue: €269,400,000 (current revenue 81.0%, of which taxes including customs duties 44.8%; development revenue 19.0%). Expenditures: €252,000,000 (current expenditure 78.9%, development expenditure 21.1%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): ylang-ylang 7,027 kg⁸, vanilla, negligible⁸, bananas, coconuts, and mangoes are also cultivated; livestock (number of live animals; 2003) 22,800 goats, 17,200 cattle; roundwood, n.a.; fisheries production (2007) 11,789 (from aquaculture 1% [95 metric tons⁸]). Mining and quarrying: negligible. Manufacturing: mostly processing of agricultural products, housing construction materials, printing and publishing, and textiles/clothing. Energy production (consumption): electricity (kW-hr; 2008) 190,000,000 (190,000,000); petroleum products, none (n.a.).

Household income and expenditure. Average household size (2007) 4.3; average annual income per household (2005) €9,337 (U.S.\$11,612); sources of income (2005): wages and salaries c. 79%, transfers c. 9%, self-employment c. 9%; expenditure (2005)⁹: food and beverages 25.9%, transportation 14.9%, housing 9.5%, clothing and footwear 7.4%, energy 6.4%, recreation and culture 6.2%, household furnishings 6.2%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 20; remittances, n.a.; foreign direct investment (2005–06 avg.) 3. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 18.7%, in permanent crops 34.8%, in pasture, n.a., forest area 14.4%.

Population economically active (2007): total 51,524; activity rate of total population 27.6% (participation rates: ages 15–60 [2002] 50.0%; female 41.6%; unemployed [2008] c. 26%).

Price and earnings indexes (December 2006 = 100)

	2003	2004	2005	2006	2007	2008
Consumer price index	...	...	...	100.0	103.3	108.5
Hourly earnings index ¹⁰	78.8	84.8	90.8	100.0	127.6	143.3

Gross national income (2002): U.S.\$444,000,000 (U.S.\$2,780 per capita).

Structure of value added¹¹ and labour force

	2005		2002	
	in value €'000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	1,000	0.4	3,229	7.2
Mining	...	...	...	...
Manufacturing	...	...	1,105	2.5
Public utilities	38,000	16.7	519	1.2
Construction	37,000	16.3	5,614	12.6
Transp. and commun.	19,000	8.4	2,007	4.5
Trade	62,000	27.3	5,435	12.2
Finance, insurance	18,000	7.9	145	0.3
Pub. admin., defense	...	...	...	...
Services	61,000	26.9	13,460	30.2
Other	–9,000	–4.0	13,044 ¹²	29.3 ¹²
TOTAL	227,000	100.0 ⁴	44,558	100.0

Public debt: n.a.

Foreign trade

Balance of trade (current prices)^{13, 14}

	2003	2004	2005	2006	2007	2008
€'000,000	–181	–199	–214	–247	–330	–371
% of total	95.6%	96.2%	95.5%	95.4%	96.0%	97.3%

Imports (2008): €376,163,000¹⁴ (food products 23.5%; machinery and apparatus 22.1%; transport equipment 14.4%; base and fabricated metals 9.5%). **Major import sources:** metropolitan France 41.8%; China 7.7%; Germany 5.1%; Italy 4.1%.

Exports (2008): €5,339,000 (reexports 77.6%; domestic exports 22.4%, of which ylang-ylang 11.4%, farm-grown fish 11.0%). **Major export destinations:** metropolitan France 45.5%; Comoros 16.4%; Réunion 10.0%; India 9.6%; Singapore 9.2%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 144 mi, 232 km (paved 100%). Vehicles (2004): passenger cars 2,279; trucks and buses 1,453. Air transport (2008): passenger arrivals and departures 263,332; cargo unloaded and loaded 1,604 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005	...	...	PCs	2007	...	...
Telephones	...	...	...	Dailies	2007	0	0
Cellular	2004	48 ¹⁵	283 ¹⁵	Internet users	2008	...	...
Landline	2008	10	52	Broadband	2008	...	...

Education and health

Educational attainment (2002). Percentage of population age 15 and over having: no formal education 37.6%; participating in formal education 17.8%; primary education 20.8%; lower secondary 13.4%; upper secondary 6.3%; higher 4.1%. **Literacy:** n.a.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	2,274	31,333	13.8	...
Secondary/Voc. (age 11–15)	1,718 ¹⁶	24,733	...	...
Tertiary	—	— ¹⁷	—	— (age 16–20)

Health (2006): physicians 120 (1 per 1,587 persons); hospital beds 245 (1 per 780 persons); infant mortality rate per 1,000 live births 61.2; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 1,000 French troops are stationed in Mayotte and Réunion.

¹Mahoré or Maore in Shimaoré, the local Swahili-based language. ²A local referendum in March 2009 approved the change of status to an overseas department of France in 2011. ³Mayotte has been claimed by Comoros since Comoros's unilateral declaration of independence in 1976. Comoros represents Mayotte in the UN. ⁴Detail does not add to total given because of rounding. ⁵Including illegal residents (40.7% of total population; mostly Comorians from adjacent islands but also Malagasy and continental Africans). ⁶About 1/3 of all Comorians (a mixture of Bantu, Arab, and Malagasy peoples) are recent arrivals from other nearby Comorian islands. ⁷Mayotte is largely dependent on French aid. ⁸Export production only. ⁹Based on a household budget survey. ¹⁰Minimum wage. ¹¹For 555 larger enterprises only. ¹²Unemployed. ¹³Based on rounded data. ¹⁴Excludes imports of mineral fuels (totaling \$56,000,000 in 2008). ¹⁵Subscribers. ¹⁶Excludes vocational. ¹⁷2,345 students study in metropolitan France or Réunion.

Internet resources for further information:

- IEDOM: Agence de Mayotte
<http://www.iedom.fr/dom/mayotte/publications.asp>
- INSEE: Mayotte
<http://www.insee.fr/fr/regions/mayotte/>

Mexico

Official name: Estados Unidos Mexicanos (United Mexican States).
Form of government: federal republic with two legislative houses (Senate [128]; Chamber of Deputies [500]).
Head of state and government: President.

Capital: Mexico City.

Official language: Spanish.

Official religion: none.

Monetary unit: Mexican peso (Mex\$); valuation (Sept. 1, 2009)

1 U.S.\$ = Mex\$13.52;

1 £ = Mex\$21.93.



Area and population		area		population
States	Capitals	sq mi	sq km	2005 census
Aguascalientes	Aguascalientes	2,112	5,471	1,065,416
Baja California	Mexicali	26,997	69,921	2,844,469
Baja California Sur	La Paz	28,369	73,475	512,170
Campeche	Campeche	19,619	50,812	754,390
Chiapas	Tuxtla Gutiérrez	28,653	74,211	4,293,459
Chihuahua	Chihuahua	94,571	244,938	3,241,444
Coahuila de Zaragoza	Saltillo	57,908	149,982	2,495,200
Colima	Colima	2,004	5,191	567,996
Durango	Durango	47,560	123,181	1,509,117
Guanajuato	Guanajuato	11,773	30,491	4,893,812
Guerrero	Chilpancingo	24,819	64,281	3,115,202
Hidalgo	Pachuca	8,036	20,813	2,345,514
Jalisco	Guadalajara	31,211	80,836	6,752,113
México	Toluca	8,245	21,355	14,007,495
Michoacán de Ocampo	Morelia	23,138	59,928	3,966,073
Morelos	Cuernavaca	1,911	4,950	1,612,899
Nayarit	Tepic	10,417	26,979	949,684
Nuevo León	Monterrey	25,067	64,924	4,199,292
Oaxaca	Oaxaca	36,275	93,952	3,506,821
Puebla	Puebla	13,090	33,902	5,383,133
Querétaro de Arteaga	Querétaro	4,420	11,449	1,598,139
Quintana Roo	Chetumal	19,387	50,212	1,135,309
San Luis Potosí	San Luis Potosí	24,351	63,068	2,410,414
Sinaloa	Culiacán	22,521	58,328	2,608,442
Sonora	Hermosillo	70,291	182,052	2,394,861
Tabasco	Villahermosa	9,756	25,267	1,989,969
Tamaulipas	Ciudad Victoria	30,650	79,384	3,024,238
Tlaxcala	Tlaxcala	1,551	4,016	1,068,207
Veracruz-Llave	Jalapa (Xalapa)	27,683	71,699	7,110,214
Yucatán	Mérida	14,827	38,402	1,818,948
Zacatecas	Zacatecas	28,283	73,252	1,367,692
Federal District				
Districto Federal	—	571	1,479	8,720,916
CONTINENTAL AREA		756,066 ¹	1,958,201 ¹	
LAND		736,950	1,908,690	
WATER		19,116	49,511	
INSULAR AREA²		1,980	5,127	
TOTAL		758,450 ³	1,964,375 ³	103,263,388

Demography

Population (2009): 107,551,000.

Density (2009): persons per sq mi 141.8, persons per sq km 54.8.

Urban-rural (2008): urban 77.2%; rural 22.8%.

Sex distribution (2008): male 49.20%; female 50.80%.

Age breakdown (2008): under 15, 29.6%; 15–29, 27.0%; 30–44, 21.6%; 45–59, 13.1%; 60–74, 6.4%; 75–89, 2.1%; 90 and over, 0.2%.

Population projection: (2020) 115,762,000; (2030) 120,928,000.

Doubling time: 49 years.

Ethnic composition (2000): mestizo 64.3%; Amerindian 18.0%, of which debtribalized 10.5%; Mexican white 15.0%; Arab 1.0%; Mexican black 0.5%; Spaniard 0.3%; U.S. white 0.2%; other 0.7%.

Religious affiliation (2000): Christian 96.3%, of which Roman Catholic 87.0%, Protestant 3.2%, independent Christian 2.7%, unaffiliated Christian 1.4%, other Christian (mostly Mormon and Jehovah's Witness) 2.0%; Muslim 0.3%; nonreligious 3.1%; other 0.3%.

Major cities/urban agglomerations (2005/2007): Mexico City 8,463,906 (19,028,000); Ecatepec 1,687,549; Guadalajara 1,600,894 (4,198,000); Puebla 1,399,519 (2,195,000); Juárez 1,301,452 (1,343,000); Tijuana 1,286,187 (1,553,000); León 1,137,465 (1,488,000); Ciudad Nezahualcóyotl 1,136,300; Monterrey 1,133,070 (3,712,000); Zapopan 1,026,492; Naucalpan 792,226; Chihuahua 748,518 (841,000); Mérida 734,153 (1,017,000); Guadalupe 691,434; San Luis Potosí 685,934 (1,050,000); Tlalnepantla 674,417; Aguascalientes 663,671 (927,000); Mexicali 653,046 (935,000); Hermosillo 641,791; Saltillo 633,667 (802,000); Acapulco 616,394; Morelia 608,049; Culiacán 605,304 (837,000); Querétaro 596,450 (1,032,000); other cities with an urban agglomeration of more than one million include: Torreon 548,723 (1,201,000) and Toluca 467,712 (1,584,000).

Households (2008). Total households 26,714,362; distribution by size (2005): 1 person 7.3%, 2 persons 14.0%, 3 persons 18.2%, 4 persons 22.8%, 5 persons 17.4%, 6 persons 9.5%, 7 or more persons 10.8%.

Migration. Legal Mexican immigrants entering the U.S. in 2004: 173,664; total number of illegal Mexican immigrants in U.S. (2006) 6,600,000.

Vital statistics

Birth rate per 1,000 population (2008): 19.1 (world avg. 20.3); (c. 2003) within marriage 62%; outside of marriage 38%.

Death rate per 1,000 population (2008): 4.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 14.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.10.

Marriage/divorce rates per 1,000 population (2007): 5.6/0.7.

Life expectancy at birth (2008): male 74.0 years; female 78.8 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 103.8; endocrine, metabolic, and nutritional disorders 80.9; malignant neoplasms (cancers) 65.0; accidents and violence 52.0; diseases of the digestive system 46.9; diseases of the respiratory system 41.3.

Adult population (ages 15–49) **living with HIV** (2007): 0.3%⁷ (world avg. 0.8%).

Social indicators

Educational attainment (2005). Percentage of population age 15 and over having: no formal schooling 8.4%; incomplete primary education 14.3%; complete primary 17.6%; incomplete/complete secondary 25.2%; vocational/professional 31.3%; advanced university (masters or doctorate degree) 0.7%; other/unknown 2.5%.

Access to services (2005). Proportion of dwellings having: electricity 96.6%; piped water supply 87.8%; piped sewage 84.8%.

Distribution of income (2008)

percentage of household income by decile

1	2	3	4	5	6	7	8	9	10 (highest)
1.7	2.9	3.9	4.9	6.0	7.4	9.2	11.7	16.1	36.2

Material well-being. Percentage of households possessing (2005): television 91.0%, refrigerator 79.0%, washing machine 62.7%, computer 19.6%.

Quality of working life (2008). Average workweek 44.5 hours. Annual rate per 100,000 insured workers for: injury 3,569; death 10. Labour stoppages: 21, involving 13,242 workers.

Social participation. Eligible voters participating in last national election (July 2006): 58.6%. Trade union membership in total workforce (2000): formal sector only, less than 20%; both formal and informal sectors, c. 17%. Practicing religious population (1995–97): percentage of adult population attending church services at least once per week 46%.

Social deviance (2007). Formally registered offense rate per 100,000 population for: murder 6.2; property damage 14.5; rape 4.3; battery 30.2; robbery 69.3; illegal narcotics possession 16.0; fraud 4.4; squatting 3.3; breaking and entering 2.5. Incidence per 100,000 in general population of: alcoholism (2000) 7.6; suicide 4.2.

National economy

Gross national income (GNI; 2008): U.S.\$1,061,444,000,000 (U.S.\$9,980 per capita); purchasing power parity GNI (U.S.\$14,270 per capita).

Structure of gross domestic product and labour force

	2007		2008	
	in value Mex\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, and fishing	350,955	3.6	5,758,500	12.7
Mining and quarrying	143,781	1.5	183,200	0.4
Manufacturing	1,579,198	16.2	7,228,100	15.9
Construction	500,366	5.1	3,641,200	8.0
Public utilities	127,480	1.3	206,200	0.4
Transp. and commun.	944,649	9.7	2,034,400	4.5
Trade, hotels	1,888,211	19.3	12,811,100	28.2
Finance, real estate	1,151,034	11.8	2,595,000	5.7
Pub. admin., defense	2,274,628	23.3	2,172,000	4.8
Services			6,903,800	15.2
Other	802,563 ⁸	8.2 ⁸	1,926,500 ⁹	4.2 ⁹
TOTAL	9,762,864¹⁰	100.0	45,460,000	100.0

Budget (2008). Revenue: Mex\$2,857,100,000,000 (nontax revenue 36.9%; tax revenue 34.8%, of which income tax 21.3%; other revenue, from PEMEX state oil company 12.6%, other state-owned organizations or companies 15.7%). Expenditures: Mex\$2,865,300,000,000 (current expenditure 58.3%; extra-budgetary expenditure 23.2%; capital expenditure 18.5%).

Public debt (external, outstanding; 2007): U.S.\$105,379,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 50,680,000, corn (maize) 22,500,000, cow's milk 9,599,437, sorghum 5,500,000, oranges 4,160,000, wheat 3,000,000, tomatoes 2,900,000, chicken meat 2,500,000, bananas 2,200,000, guavas and mangoes 2,050,000, lemons and limes 1,880,000, chilies and green peppers 1,690,000, cattle meat 1,650,000, potatoes 1,530,000, dry beans 1,390,000, dry onions 1,200,000, avocados 1,140,000, papayas 800,000, blue agave (2006) c. 778,000, string beans 755,000, pineapples 635,000, grapefruit and pomelos 390,000, coffee (green) 320,000, nuts 165,000, green onions and shallots 150,000; livestock (number of live animals) 29,000,000 cattle, 15,500,000 pigs, 8,900,000 goats, 7,500,000 sheep, 6,350,000 horses, 290,000,000 chickens; roundwood 44,905,800 cu m, of which fuelwood 86%; fisheries production 1,496,002 (from aquaculture 10%); aquatic plants production 4,500 (from aquaculture, none). Mining and quarrying (2008): fluorspar 980,000 [world rank: 2]; bismuth 1,200¹¹ [world rank: 2]; silver 3,000,000 kg¹¹ [world rank: 2]; strontium 96,900 [world rank: 3]; lead 145,000¹¹ [world rank: 5]; zinc 460,000¹¹ [world rank: 6]; cadmium 1,620¹¹ [world rank: 6]; gypsum 5,800,000 [world rank: 7]; iron ore 12,000,000¹¹; sulfur 1,800,000; copper 270,000¹¹; gold 41,000 kg¹¹. Manufacturing (value added in Mex\$'000,000; 2007): food and beverages 994,797; transportation equipment 146,839, of which motor vehicles 84,137, motor vehicle parts 58,470; mineral fuels 130,233, of which refined petroleum products 121,740; chemicals and chemical products 125,629, of which pharmaceutical products 58,561; basic metals 74,005; bricks, cement, and ceramics 66,932; electrical machinery and equipment 28,962; paper and paper products 28,773; fabricated metal products 26,355; rubber and plastic products

25,690; textiles and wearing apparel 23,195; nonelectrical machinery and apparatus 21,529; electronics 6,442; printing and publishing 6,085; wood and wood products 5,780.

Household income and expenditure (2008). Average household size 4.0; average annual income per household Mex\$38,263 (U.S.\$2,805); sources of income: wages and salaries 47.9%, nonmonetary income 19.1%, self-employment 14.7%, transfers 9.6%; expenditure: food and nonalcoholic beverages 22.1%, transportation and communications 12.2%, housing/energy 6.6%, education 6.3%, household furnishings 4.0%, clothing and footwear 3.5%, health 2.1%.

Selected economic activities (2003)

	no. of establishments	no. of employees	yearly wage as a % of avg. of all wages	value added (Mex\$'000,000)
Manufacturing	328,178	4,198,579	130.8	927,987
Services				
Transportation, storage	41,899	634,940	158.1	124,561
Mass media	7,586	244,679	340.7	166,901
Finance, insurance	10,417	275,830	358.4	285,715
Real estate, rental	45,579	179,146	52.2	38,967
Professional, scientific, and technical	68,589	472,348	109.8	65,479
Sanitation, waste management	43,152	815,388	129.2	90,233
Education	30,891	517,958	118.6	53,846
Health, social assistance	102,940	355,169	46.2	22,700
Recreation	31,790	143,589	53.1	11,340
Hotel, restaurant	277,436	1,218,262	35.2	64,700
Trade				
Wholesale	86,997	962,143	113.3	261,546
Retail	1,493,590	4,035,223	35.2	318,648
Mining	3,077	122,640	255.2	432,764
Electricity, gas, water	2,437	221,335	279.5	168,941
Construction	13,444	652,387	59.7	60,542

Energy production (consumption): electricity (kW-hr: 2008) 129,948,000,000 ([2006] 248,872,000,000); hard coal (metric tons: 2008–09) 10,679,000 ([2006] 1,920,000); lignite (metric tons: 2006) 9,573,000 (14,936,000); crude petroleum (barrels: 2008–09) 913,369,200 ([2006] 495,699,000); petroleum products (metric tons: 2006) 64,836,000 (74,439,000); natural gas (cu m: 2008–09) 74,360,122,000 ([2006] 51,054,509,000).

Population economically active (2008): total 45,460,000; activity rate of total population 42.6% (participation rates: ages 15–64, 63.6%; female 37.7%; unemployed [April 2008–March 2009] 4.3%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	87.9	91.9	96.2	100.0	103.6	107.7	113.3
Monthly earnings index	97.6	98.9	99.2	100.0	100.8	101.5	102.4

Financial aggregates

	2002	2003	2004	2005	2006	2007	2008
Exchange rate ^{1,2} , Mex\$ per:							
U.S. dollar	10.31	11.24	11.26	10.78	10.88	10.87	13.54
£	16.62	20.06	21.75	18.56	21.36	21.78	19.74
SDR	14.02	16.70	17.49	15.40	16.37	17.17	20.85
International reserves (U.S.\$)							
Total (excl. gold; '000,000)	50,594	58,956	64,141	74,054	76,271	87,109	95,126
SDRs ('000,000)	392	433	465	445	482	466	519
Reserve pos. in IMF ('000,000)	308	782	898	594	340	334	613
Foreign exchange ('000,000)	49,895	57,740	62,778	73,015	75,448	86,309	93,994
Gold ('000,000 fine troy oz)	0.23	0.17	0.14	0.11	0.09	0.12	0.20
% world reserves	0.02	0.02	0.02	0.01	0.01	0.01	0.02
Interest and prices							
Treasury bill rate	7.09	6.23	6.82	9.20	7.19	7.19	7.68
Balance of payments (U.S.\$'000,000)							
Balance of visible trade, of which:	-7,633	-5,780	-8,811	-7,587	-6,133	-10,074	-17,261
Imports, f.o.b.	-168,679	-170,546	-196,810	-221,820	-256,059	-281,949	-308,603
Exports, f.o.b.	161,046	164,766	187,999	214,233	249,925	271,875	291,343
Balance of invisibles	-6,517	-1,426	+3,627	+3,203	+1,744	+1,729	+1,522
Balance of payments, current account	-14,150	-7,206	-5,184	-4,384	-4,389	-8,345	-15,739

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 13,289, of which border shoppers only 2,695; remittances (2008) 26,304; foreign direct investment (FDI; 2005–07 avg.) 21,641; official development assistance (2007) 121. Disbursements for (U.S.\$'000,000): tourism (2008) 8,526, of which border shoppers only 4,001; remittances, n.a.; FDI (2005–06 avg.) 6,829.

Land use as % of total land area (2007): in temporary crops 12.6%, in permanent crops 1.2%, in pasture 41.1%, forest area 32.8%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	-7,633	-5,780	-8,811	-7,587	-6,133	-11,209
% of total	2.3%	1.7%	2.3%	1.7%	1.2%	2.0%

Imports (2006): U.S.\$256,130,000,000 (non-maquiladora sector 65.8%, of which imports for automotive industry 10.9%, special machinery for industries 9.8%, imports for extractive industries 8.2%, electrical and electronic equipment 6.3%, imports for chemical industry 5.6%; maquiladora sector 34.2%, of which electrical and electronic equipment 15.5%). **Major import sources:** U.S. 50.9%; China 9.5%; Japan 6.0%; South Korea 4.2%; Germany 3.7%; Canada 2.9%; Brazil 2.2%; Taiwan 1.9%; Malaysia 1.7%; Italy 1.6%.

Exports (2006): U.S.\$249,997,000,000 (non-maquiladora sector 55.3%, of which road vehicles and parts 15.1%, crude petroleum 13.9%, special machinery for industries 3.1%, electrical and electronic equipment 2.5%, food/beverages/tobacco products 2.4%; maquiladora sector 44.7%, of which electrical and electronic equipment 20.1%, exports of automotive industry 6.1%, professional/scientific equipment 2.6%). **Major export destinations:** U.S. 84.7%; Canada 2.1%; Spain 1.3%; Germany 1.2%; Colombia 0.9%; Venezuela 0.7%; China 0.7%.

Trade by commodity group (2006)

SITC group	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
00 Food and live animals	12,007	4.7	10,342	4.1
01 Beverages and tobacco	13	13	3,021	1.2
02 Crude materials, excluding fuels	7,418	2.9	3,548	1.4
03 Mineral fuels, lubricants, and related materials	14,471	5.7	38,636	15.5
04 Animal and vegetable oils, fats, and waxes	13	13	14	14
05 Chemicals and related products, n.e.s.	27,525	10.7	8,832	3.5
06 Basic manufactures	40,532	15.8	20,838	8.3
07 Machinery and transport equipment	122,105	47.7	135,168	54.1
08 Miscellaneous manufactured articles	27,153	10.6	27,701	11.1
09 Goods not classified by kind	3,455	1.3	14	14
TOTAL	256,086	100.0	249,961	100.0

Direction of trade (2005)

	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
Western Hemisphere	137,680	62.2	198,708	93.0
United States	118,262	53.4	183,052	85.7
Latin America and the Caribbean	13,255	6.0	11,426	5.3
Canada	6,163	2.8	4,230	2.0
Europe	28,371	12.8	9,462	4.4
EU	25,963	11.7	9,166	4.3
Other Europe	2,408	1.1	296	0.1
Asia	53,426	24.1 ¹⁰	4,760	2.2
Japan	13,023	5.9	1,471	0.7
China	17,631	8.0	1,134	0.5
Other Asia	22,772	10.3	2,155	1.0
Africa	570	0.3	343	0.2
Other	1,222	0.6	438	0.2
TOTAL	221,270 ¹⁰	100.0	213,711	100.0

Transport and communications

Transport. Railroads (2008): route length 16,604 mi, 26,722 km; passenger-km 147,000,000; metric ton-km cargo 78,872,000,000. Roads (2008): total length 223,912 mi, 360,352 km (paved 35%). Vehicles (2007): passenger cars 17,533,245; trucks and buses 8,152,942. Air transport (2008): passenger-km 28,514,000,000; metric ton-km cargo 223,958,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	29,400	282	PCs	2006	14,578	139
Telephones				Dailies	2007	4,470 ¹⁵	42 ¹⁵
Cellular	2008	75,304 ¹⁶	694 ¹⁶	Internet users	2008	23,260	214
Landline	2008	20,668	190	Broadband	2008	7,597 ¹⁶	70 ¹⁶

Education and health

Literacy (2007): total population age 15 and over literate 92.8%; males literate 94.4%; females literate 91.4%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	521,183	14,595,195	28.0	98
Secondary/Voc. (age 12–17)	610,387	10,883,455	17.8	70
Tertiary	261,889	2,446,726	9.3	26 (age 18–22)

Health (2008): physicians¹⁷ (2007) 171,193 (1 per 618 persons); hospital beds¹⁷ 84,813 (1 per 1,258 persons); infant mortality rate 15.2; undernourished population (2002–04) 5,300,000 (5% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (November 2008): 255,506 (army 73.6%, navy 21.9%, air force 4.5%). **Military expenditure as percentage of GDP** (2007): 0.4%¹⁸; per capita expenditure U.S.\$381¹⁸.

¹Continental area per more recent survey equals 756,470 sq mi (1,959,248 sq km).
²Uninhabited (nearly all Pacific) islands directly administered by federal government.
³Total area based on more recent survey figure for continental area. ⁴Within Mexico City urban agglomeration. ⁵Within Guadaluajara urban agglomeration. ⁶Within Monterrey urban agglomeration. ⁷Statistically derived midpoint within range. ⁸Indirect taxes less subsidies and less imputed bank service charges. ⁹Includes 1,593,300 unemployed. ¹⁰Detail does not add to total given because of rounding. ¹¹Metal content. ¹²End of year. ¹³Together categories 01 and 04 equal U.S.\$1,420,000,000 and 0.6%. ¹⁴Together categories 04 and 09 equal U.S.\$1,875,000,000 and 0.8%. ¹⁵Circulation. ¹⁶Subscribers. ¹⁷Public health institutions only. ¹⁸Excludes paramilitary expenditures.

Internet resources for further information:

- National Institute of Statistics, Geography, and Informatics <http://www.inegi.org.mx/inegi/default.aspx>
- Banco de México <http://www.banxico.org.mx/sitiolngles/index.html>

Micronesia, Federated States of

Official name: Federated States of Micronesia.

Form of government: federal nonparty republic in free association with the United States with one legislative house (Congress [14]).

Head of state and government: President.

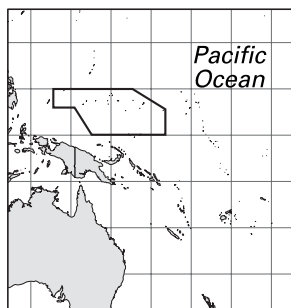
Capital: Palikir, on Pohnpei.

Official language: English¹.

Official religion: none.

Monetary unit: U.S. dollar (U.S.\$); valuation (Sept. 1, 2009)

1 U.S.\$ = £0.62.



Area and population

States	Major Islands	Capitals	area		population
			sq mi	sq km	2000 census
Chuuk (Truk)		Weno	49.2	127.4	53,595
Chuuk Islands			40,465
Kosrae		Tofol	42.3	109.6	7,686
Kosrae Island			42.3	109.6	7,686
Pohnpei (Ponape)		Kolonia	133.3	345.2	34,486
Pohnpei Island			129.0	334.1	32,395
Yap		Colonia	45.8	118.6	11,241
Yap Islands ²			38.7	100.2	7,391
TOTAL			270.6	700.9 ³	107,008

Demography

Population (2009): 111,000.

Density (2009): persons per sq mi 409.9, persons per sq km 158.3.

Urban-rural (2007): urban 22.0%; rural 78.0%.

Sex distribution (2008): male 50.32%; female 49.68%.

Age breakdown (2008): under 15, 36.9%; 15–29, 26.9%; 30–44, 17.0%; 45–59, 13.1%; 60–74, 4.7%; 75 and over, 1.4%.

Population projection: (2020) 116,000; (2030) 120,000.

Doubling time: 35 years.

Ethnic composition (2000): Chuukese/Mortlockese 33.6%; Pohnpeian 24.9%;

Yapese 10.6%; Kosraean 5.2%; U.S. white 4.5%; Asian 1.3%; other 19.9%.

Religious affiliation (2005): Roman Catholic c. 50%; Protestant c. 47%; other c. 3%.

Major towns (2000): Weno, in Chuuk state 13,802; Palikir, on Pohnpei 6,444; Nett, on Pohnpei 6,158; Kolonia, on Pohnpei 5,681; Colonia, on Yap 3,216.

Vital statistics

Birth rate per 1,000 population (2007): 25.5 (world avg. 20.3); (2006) within marriage 83.2%, outside of marriage 16.8%.

Death rate per 1,000 population (2007): 5.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 20.0 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2005): n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2006): 2.68.

Life expectancy at birth (2007): male 67.4 years; female 68.0 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 116.1; malignant neoplasms (cancers) 57.1; diseases of the respiratory system 55.3; diseases of the endocrine system 54.4; infectious and parasitic diseases 40.0.

National economy

Budget (2006–07; for consolidated general government). Revenue: U.S.\$145,200,000 (external grants 63.7%; tax revenue 19.1%; nontax revenue 17.2%, of which fishing access revenue 10.3%). Expenditures: U.S.\$153,000,000 (current expenditures 91.4%, capital expenditure 8.6%).

Public debt (external, outstanding; September 2007): U.S.\$67,200,000.

Population economically active (2000): total 37,414; activity rate of total population 35.0% (participation rates: ages 15–64, 60.7%; female 42.9%; unemployed 22.0%).

Price and earnings indexes (2000 = 100)						
	2001	2002	2003	2004	2005	2006
Consumer price index	100.5	100.4	100.5	102.9	107.2	112.3
Earnings index ⁴	101.6	104.0	106.4	103.8	101.2	98.4

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 41,000, cassava 12,000, sweet potatoes 3,200, bananas 2,100, betel nuts (2005) 228, kava (*sakau*) n.a.; livestock (number of live animals) 33,000 pigs, 14,000 cattle; roundwood, n.a.; fisheries production 16,990, of which significantly skipjack tuna (from aquaculture, negligible)⁵. Mining and quarrying: quarrying of sand and aggregate for local construction only. Manufacturing: copra and coconut oil are traditionally important products; the manufacture of handicrafts and personal items (garments, mats, boats, etc.) is also important. Energy production (consumption): electricity (kWh; 2007) 67,300,000 (n.a.); coal, none (none); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).

Household income and expenditure (2005). Average household size 6.9; annual median income per household U.S.\$12,390; sources of income: wages and salaries 47.2%, rent 10.3%, self-employment 9.1%, transfers and remittances 6.9%; expenditure: food 39.4%, housing 17.4%, transportation and commu-

nications 9.3%, energy 5.1%, household furnishings 4.1%, clothing and footwear 3.7%, alcohol, tobacco, kava (*sakau*), and betel nut 3.5%.

Gross national income (GNI; 2008): U.S.\$260,000,000 (U.S.\$2,340 per capita); purchasing power parity GNI (U.S.\$3,000 per capita).

Structure of gross domestic product and labour force				
	2006		2000	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture and fishing ⁶	44.0	18.0	15,216	40.7
Public utilities			360	1.0
Mining	3.4	1.4		
Manufacturing	3.3	1.3	1,164	3.1
Construction	2.4	1.0	781	2.1
Transp. and commun.	10.8	4.4	806	2.1
Trade, hotels	55.2	22.5	2,540	6.8
Finance			726	1.9
Services	109.0	44.5	1,445	3.9
Public administration			6,137	16.4
Other	16.9	6.9	8,239 ⁷	22.0 ⁷
TOTAL	245.0	100.0	37,414	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 18; remittances (2005) 6.0; foreign direct investment (2005–06 avg.) 0.5; official development assistance (2007) 115. Disbursements for (U.S.\$'000,000): tourism (2006) 5.7; remittances, n.a.

Land use as % of total land area (2007): in temporary crops c. 4%, in permanent crops c. 26%, in pasture c. 4%, forest area c. 91%⁸.

Foreign trade⁹

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–89.8	–99.7	–118.7	–117.2	–129.1	–126.5
% of total	75.7%	73.3%	80.9%	82.0%	87.9%	79.7%

Imports (2007): U.S.\$142,659,000 (food and beverages 29.8%, mineral fuels 22.1%, machinery and apparatus 14.4%, transport equipment 6.0%, chemicals and chemical products 5.4%). **Major import sources** (2007): U.S. 41.2%; Singapore 8.7%; Japan 8.5%; Hong Kong 6.3%; Australia 4.1%.

Exports (2007): U.S.\$16,190,000 (tuna 69.9%, betel nuts 13.7%, reef fish 5.2%, cooked food 4.9%, kava 2.6%). **Major export destinations** (2007): Guam 22.5%; U.S. 17.2%; Northern Marianas 4.3%; Japan 4.1%; unspecified 51.2%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 149 mi, 240 km (paved 18%). Vehicles (2007): passenger cars 3,916; trucks and buses 3,849. Air transport (2006)¹⁰: passenger-km 4,762,000,000; metric ton-km cargo 102,000,000.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2004	2.8	26	PCs	2005	6.0
Telephones				Dailies	2005	0
Cellular	2008	34 ¹¹	308 ¹¹	Internet users	2008	16
Landline	2008	8.7	79	Broadband	2008	—

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling/unknown 13.4%; primary education 37.0%; some secondary 18.3%; secondary 12.9%; some college 18.4%. **Literacy** (2000): total population age 10 and over literate 72,140 (92.4%); males literate 36,528 (92.9%); females literate 35,612 (91.9%).

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	1,113	18,512	16.6	...
Secondary/Voc. (age 12–17)	829	14,742	17.8	...
Tertiary	97 ¹²	2,705 ¹²	27.9 ¹²	14 ¹³ (age 18–22)

Health: physicians (2005) 62 (1 per 1,774 persons); hospital beds (2006) 365 (1 per 301 persons); infant mortality rate per 1,000 live births (2007) 37.5; undernourished population, n.a.

Military

External security is provided by the United States.

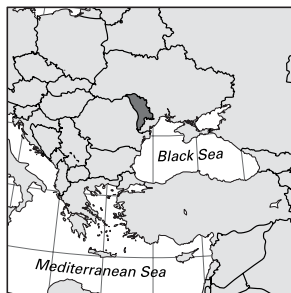
¹English is the language of the Congress per article 9, section 19, of the constitution. ²Yap Islands is the collective name of Yap Island and its immediately adjacent islands linked by common coral reef. The population of Yap Island at the 2000 census was 4,916. ³Detail does not add to total given because of rounding. ⁴Fiscal year. ⁵Foreign fishing in the Exclusive Economic Zone (200-mile limit; 2007): 111,512 metric tons, of which Taiwanese 53,767 metric tons, Japanese 32,431 metric tons. ⁶Includes subsistence farming and fishing. ⁷Unemployed. ⁸Forest area overlaps with other categories. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Continental Micronesia only. ¹¹Subscribers. ¹²2004–05; data refer to the five campuses of the College of Micronesia–FSM. ¹³1999–2000.

Internet resources for further information:

- **Division of Statistics**
<http://www.spc.int/prism/country/fm/stats>
- **Asian Development Bank: Key Indicators for Asia and the Pacific 2008**
http://www.adb.org/documents/books/key_indicators/2009

Moldova

Official name: Republica Moldova (Republic of Moldova).
Form of government: unitary parliamentary republic with a single legislative body (Parliament [101]).
Head of state: President.
Head of government: Prime Minister.
Capital: Chişinău.
Official language: 1.
Official religion: none.
Monetary unit: Moldovan leu (plural lei); valuation (Sept. 1, 2009)
 1 U.S.\$ = 11.20 Moldovan lei;
 1 £ = 18.17 Moldovan lei².



Population (2008³ estimate)

Districts	population	Districts	population	Districts	population
Anenii-Noi	82,400	Florêşti	87,700	Străşeni	88,700
Basarabesca	28,700	Glodeni	60,000	Taraclia	42,800
Briceni	76,500	Hînceşti	119,400	Teleneşti	69,900
Cahul	118,900	Ialoveni	98,100	Ungheni	110,600
Călăraşi	74,400	Leova	51,800		
Canemir	61,300	Nisporeni	64,800	Municipalities	
Căuşeni	90,200	Ocnîţa	55,600	Bălţi	127,100
Cîrmişlia	60,400	Orhei	115,500	Chişinău	755,200
Criuleni	72,200	Rezina	50,600		
Donduşeni	45,100	Rîşcani	68,400	Autonomous Region	
Drochia	86,500	Sîngerei	87,000	Găgăuzia	155,600
Dubăsari (rural)	35,000	Şoldăneşti	41,600		
Edineţ	82,500	Soroca	100,000	Disputed Territory⁴	
Fălăeşti	89,500	Ştefan-Vodă	70,400	Transnistria	533,500
				(Sîngia Nistrului)	
				TOTAL	3,957,900⁵

Demography

Area: 13,067 sq mi, 33,843 sq km⁶.
Population (2009): 3,604,000⁷.
Density (2009)⁷: persons per sq mi 275.8, persons per sq km 106.5.
Urban-rural (2007)⁸: urban 41.3%; rural 58.7%.
Sex distribution (2007)⁸: male 48.06%; female 51.94%.
Age breakdown (2004)⁸: under 15, 19.1%; 15–29, 26.3%; 30–44, 20.9%; 45–59, 19.1%; 60 and over, 14.3%; unknown 0.3%.
Population projection⁷: (2020) 3,378,000; (2030) 3,182,000.
Ethnic composition (2004)⁸: 9: Moldovan 75.8%; Ukrainian 8.4%; Russian 5.9%; Gagauz 4.4%; Rom (Gypsy) 2.2%; Bulgarian 1.9%; other 1.4%.
Religious affiliation (2005): Moldovan Orthodox 31.8%; Bessarabian Orthodox 16.1%; Russian Orthodox 15.4%; Sunni Muslim 5.5%; Protestant 1.7%; Jewish 0.6%; nonreligious 19.9%; other 9.0%.
Major cities (2008³): Chişinău 630,300; Tiraspol 155,000¹⁰; Bălţi 122,200; Bender (Tighina) 95,000¹⁰; Rybnitsa (Ribniţa) 52,000¹⁰.

Vital statistics

Birth rate per 1,000 population (2008): 10.9 (world avg. 20.3); within marriage 77.7%; outside of marriage 22.3%.
Death rate per 1,000 population (2008): 11.7 (world avg. 8.5).
Total fertility rate (avg. births per childbearing woman; 2008): 1.28.
Marriage/divorce rates per 1,000 population (2008): 7.5/3.5.
Life expectancy at birth (2008): male 65.6 years; female 73.2 years.
Major causes of death per 100,000 population (2008)⁸: diseases of the circulatory system 657.4; malignant neoplasms (cancers) 155.2; diseases of the digestive system 112.3; accidents, poisoning, and violence 99.4.

National economy

Budget (2007). Revenue: 14,004,000,000 Moldovan lei (tax revenue 75.0%, of which VAT 53.9%; nontax revenue 18.5%; grants 6.5%). Expenditures: 14,211,000,000 Moldovan lei (health care 12.9%; education 10.3%; public order 7.5%; social fund transfers 6.2%; transportation and communications 6.0%; interest payments 4.3%; defense 1.9%).
Public debt (external, outstanding; 2007): U.S.\$779,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 612,000, grapes 598,000, wheat 402,000, corn (maize) 363,000, potatoes 199,000, apples 172,000, sunflower seeds 156,000, tobacco leaves 4,000; livestock (number of live animals) 835,077 sheep, 531,818 pigs, 299,105 cattle; roundwood 188,000 cu m, of which fuelwood 50%; fisheries production 5,860 (from aquaculture 80%). Mining and quarrying (2006): gypsum 725,900. Manufacturing (value of production in '000,000 Moldovan lei; 2004)⁸: alcoholic beverages 4,013, of which wine 3,098; food products 3,461; non-metallic mineral products 1,273; tobacco products 410. Energy production (consumption): electricity (kW-hr; 2006) 3,829,000,000 (7,341,000,000); coal (metric tons; 2006) none (194,000); crude petroleum (barrels; 2006) 29,000 (negligible); petroleum products (metric tons; 2006) none (607,000); natural gas (cu m; 2006) none (2,696,000,000).
Land use as % of total land area (2007): in temporary crops 45.6%, in permanent crops 9.2%, in pasture 10.9%, forest area 10.0%.
Population economically active (2005)⁸: total 1,422,300; activity rate of total de facto population 39.5% (participation rates: ages 15–64, 53.2%; female 51.5%; unemployed [2008] 4.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71.0	79.4	89.3	100.0	112.8	126.7	142.9
Earnings index	52.4	67.6	83.7	100.0	128.7	156.6	191.8

Gross national income (GNI; 2008)⁸: U.S.\$5,338,000,000 (U.S.\$1,470 per capita); purchasing power parity GNI (U.S.\$3,210 per capita).

Structure of gross domestic product and labour force

	2006 ⁸		2005 ⁸	
	in value '000,000 Moldovan lei	% of total value	labour force	% of labour force
Agriculture	6,489	14.5	535,500	37.7
Mining	5,599	12.5	1,800	0.1
Manufacturing	757	1.7	131,800	9.3
Public utilities	1,776	4.0	25,800	1.8
Construction	5,289	11.8	51,600	3.6
Transp. and commun.	5,145	11.5	71,000	5.0
Trade, hotels	...	...	182,900	12.9
Finance, real estate	...	...	42,100	3.0
Pub. admin., defense	12,285	27.4	61,500	4.3
Services	7,415 ¹¹	16.6 ¹¹	213,000	15.0
Other	44,754 ¹³	100.0	1,422,300	100.0 ¹³

Household income and expenditure. Average household size (2004) 3.2; annual average income per household (2002) U.S.\$1,200; sources of income (2008): wages and salaries 42.9%, remittances 19.1%, self-employment 18.0%, social benefits 14.9%; expenditure (2008): food and drink 42.1%, housing and energy 21.1%, clothing and footwear 12.7%, transportation and communications 9.8%, health 5.6%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 164; remittances (2008) 1,897; foreign direct investment (2005–07 avg.) 299; official development assistance (2007) 269. Disbursements for (U.S.\$'000,000): tourism (2007) 213; remittances (2008) 115.

Foreign trade¹⁴

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–395	–613	–793	–1,202	–1,642	–2,348
% of total	23.5%	27.9%	28.8%	35.5%	34.6%	46.7%

Imports (2006): U.S.\$2,693,000,000 (machinery and apparatus 13.8%, refined petroleum 12.6%, chemicals and chemical products 11.9%, natural/manufactured gas 8.1%, food 7.4%). **Major import sources:** Ukraine 19.2%; Russia 15.5%; Romania 12.8%; Germany 7.9%; Italy 7.3%.

Exports (2006): U.S.\$1,051,000,000 (food 19.8%, of which cereals 4.3%, walnuts 3.6%; apparel/clothing accessories 19.1%; wine/grape must 15.4%; machinery and apparatus 5.2%). **Major export destinations:** Russia 17.3%; Romania 14.8%; Ukraine 12.2%; Italy 11.1%; Belarus 7.0%.

Transport and communications

Transport. Railroads (2007): length 1,154 km; passenger-km 468,000,000; metric ton-km cargo 3,120,000,000. Roads (2007): total length 9,337 km (paved 94%). Vehicles (2003): passenger cars 252,490; trucks and buses 77,534. Air transport (2007): passenger-km 550,000,000; metric ton-km cargo 1,300,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,300	327	PCs	2005	348	83
Telephones				Dailies	2007	303 ¹⁵	103 ¹⁵
Cellular	2008	2,420 ¹⁶	666 ¹⁶	Internet users	2008	800	220
Landline	2008	1,115	307	Broadband	2008	115 ¹⁶	32 ¹⁶

Education and health

Literacy (2003): total population age 15 and over literate 99.1%.

Education (2006–07)⁸

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–10)	10,517	151,736	14.4	83
Secondary/Voc. (age 11–17)	29,552	345,816	11.7	75
Tertiary	8,570	148,449	17.3	41 (age 18–22)

Health (2008): physicians⁸ 12,665 (1 per 287 persons); hospital beds⁸ 21,798 (1 per 167 persons); infant mortality rate 12.1; undernourished population (2002–04) 450,000 (11% of total population based on the consumption of a minimum daily requirement of 1,970 calories).

Military

Total active duty personnel (November 2008): 6,000 (army 85.8%, air force 14.2%); reserve 66,000. Opposition forces (excluding Russian troops) in Transnistria (2008) c. 7,500; Russian troops in Transnistria (November 2008) 1,500. **Military expenditure as percentage of GDP** (2008): 0.4%; per capita expenditure U.S.\$7.

¹Moldovan, a form of Romanian, is the state (official) language per article 13 of the constitution. ²The Transnistrian ruble is the official currency of Transnistria. ³January 1. ⁴Breakaway area from 1991 also known as Transnistria or Pridnestrovye. ⁵Official estimate; excludes Moldovans abroad. ⁶Of which Transnistria 1,607 sq mi, 4,163 sq km. ⁷Estimate of United Nations World Population Prospects: The 2008 Revision; includes Transnistria. ⁸Excludes Transnistria. ⁹Transnistria ethnic composition (2004): Moldovan 31.9%; Russian 30.4%; Ukrainian 28.8%; other 8.9%. ¹⁰Within Transnistria. ¹¹Net taxes. ¹²Includes unemployed. ¹³Detail does not add to total given because of rounding. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers.

Internet resources for further information:

- Department for Statistics and Sociology <http://www.statistica.md>
- National Bank of Moldova <http://www.bnm.org>

Monaco

Official name: Principauté de Monaco (Principality of Monaco).

Form of government: constitutional monarchy with one legislative body (National Council [24]).

Chief of state: Prince.

Head of government: Minister of State assisted by the Council of Government.

Capital: 2.

Official language: French.

Official religion: Roman Catholicism.

Monetary unit: euro (€)³; valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population		area		population
Quarters ²	Capitals ²	sq mi	sq km	2008 census
Fontvieille	—	0.13	0.33	3,602
Condamine	—	0.24	0.62	11,946
Monaco-Ville	—	0.07	0.19	975
Monte-Carlo	—	0.34	0.88	14,586
TOTAL		0.78	2.02	31,109 ⁴

Demography

Population (2009): 35,400.

Density (2009): persons per sq mi 45,385, persons per sq km 17,525.

Urban-rural (2008): urban 100%.

Sex distribution (2008): male 47.94%; female 52.06%.

Age breakdown (2008): under 15, 12.8%; 15–29, 12.7%; 30–44, 19.2%; 45–59, 21.8%; 60–74, 19.1%; 75–84, 7.9%; 85 and over, 4.2%; unknown 2.3%.

Population projection: (2020) 35,000; (2030) 35,000.

Doubling time: 58 years.

Ethnic composition (2008): French 28.4%; Monegasque 21.6%; Italian 18.7%; British 7.5%; Belgian 2.8%; Swiss 2.5%; German 2.5%; U.S. 1.0%; other 15.0% (including Asian countries c. 2.5%, African countries c. 2.2%).

Religious affiliation (2000): Christian 93.2%, of which Roman Catholic 89.3%; Jewish 1.7%; nonreligious and other 5.1%.

Vital statistics

Birth rate per 1,000 population (2007): 26.2 (world avg. 20.3); (2005) within marriage 61.4%, outside of marriage 38.6%.

Death rate per 1,000 population (2007): 14.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 12.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.75.

Marriage/divorce rates per 1,000 population (2005): 4.8/2.1.

Life expectancy at birth (2007): male 76.0 years; female 83.9 years.

Major causes of death per 100,000 population: n.a.; however, principal causes are those of a developed country with an older population.

National economy

Budget (2007). Revenue: €845,600,700 (taxes on commerce 47.4%⁵; property taxes 12.9%; state-run monopolies 10.0%; customs duties 3.1%). Expenditures: €843,119,681 (current expenditure 65.1%; capital expenditure 34.9%).

Public debt: n.a.

Production. Agriculture, forestry, fishing: some horticulture and greenhouse cultivation; no agriculture as such; roundwood, n.a.; fisheries production (2007; metric tons) 1 (from aquaculture, none). Mining and quarrying: none. Manufacturing (value of sales in €'000; 2007): chemicals, cosmetics, perfumery, and pharmaceuticals 364,077; plastic products 266,366; light electronics and precision instruments 86,113; textiles 41,982; paper and card manufactures 41,470. Energy production (consumption): electricity (kW-hr; 2001) n.a. (475,000,000 [imported from France]); coal, none (n.a.); crude petroleum, none (n.a.); natural gas, none (n.a.).

Gross national income (2008): U.S.\$6,919,000,000⁶ (U.S.\$195,717 per capita).

Structure of gross domestic product and labour force				
	2006		2007	
	in value €'000,000 ⁷	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	...	...	29	—
Mining and quarrying	...	...	2	—
Manufacturing	216.6	6.5	3,535	8.0
Public utilities	236.7	7.1	139	0.3
Construction	194.5	5.9	3,560	8.0
Transp. and commun.	786.1	23.8	12,476	28.1
Trade, hotels	1,248.4	37.8	13,717	30.8
Finance, real estate	221.1	6.7	256	0.6
Public administration	402.8	12.2	8,305	18.7
Services	...	...	...	...
Other	...	...	...	...
TOTAL	3,306.2	100.0	44,482 ⁸	100.0

Population economically active (2005): total 40,289; activity rate of total population 58.4% (participation rates: ages 17–64 [2000] 61.1%; female 41.4%; unemployed [2000] 3.6%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index ⁹	94.2	96.2	98.2	100.0	101.6	103.1	106.1

Household income and expenditure. Average household size (2008) 2.1; average annual income per household: n.a.; sources of income: n.a.; expenditure: n.a. **Selected balance of payments data.** Receipts from (U.S.\$'000,000): tourism (2007) n.a., 2,773 hotel rooms, 327,985 overnight visitors; remittances (2007) n.a.; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism (2007) n.a.; remittances (2007) n.a.; foreign direct investment, n.a. **Land use** as % of total land area (2000): public gardens c. 20%.

Foreign trade¹⁰

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
€'000,000	−79	+188	+17	−128	−73	−16
% of total	8.3%	18.4%	1.5%	8.9%	5.1%	1.0%

Imports (2007): €850,202,845 (nonelectrical machinery and apparatus 40.2%; pharmaceuticals, perfumes, clothing, and publishing 19.2%; rubber and plastic products, glass, construction materials, organic chemicals, and paper products 15.7%; food products 7.4%; products of the automobile industry 7.0%). **Major import sources:** China 34.9%; Italy 18.6%; Japan 8.5%; U.K. 7.1%; Belgium 5.3%.

Exports (2007): €834,108,693 (rubber and plastic products, glass, construction materials, organic chemicals, and paper products 39.9%; products of the automobile industry 12.7%; pharmaceuticals, perfumes, clothing, and publishing 12.2%; nonelectrical machinery and apparatus 12.1%; food products 9.6%). **Major export destinations:** Germany 10.7%; Italy 8.4%; Spain 7.9%; U.K. 6.6%; Lithuania 5.2%; unspecified 26.0%.

Transport and communications

Transport. Railroads (2001): length 1.1 mi, 1.7 km; passengers 2,171,100; cargo 3,357 tons. Roads (2007): total length 48 mi, 77 km (paved 100%). Vehicles (1997): passenger cars 21,120; trucks and buses 2,770. Air transport: 11, 12.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2004	25	758	PCs	2005	...
Telephones				Dailies	2005	0
Cellular	2008	22 ¹³	622 ¹³	Internet users	2008	22
Landline	2008	35	990	Broadband	2007	12 ¹³

Education and health

Educational attainment (2000). Percentage of population age 17 and over having: primary/lower secondary education 24.7%; upper secondary 27.6%; vocational 12.7%; university 35.0%. **Literacy:** virtually 100%.

Education (2004–05)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	133	1,827	13.7	...
Secondary/Voc. (age 11–17)	330	3,095	9.4	...
Tertiary ¹⁴	...	...	...	... (age 18–22)

Health (2002): physicians 156 (1 per 207 persons); hospital beds 521 (1 per 62 persons); infant mortality rate per 1,000 live births (2007) 5.2; undernourished population, n.a.

Military

Defense responsibility lies with France according to the terms of the Versailles Treaty of 1919.

¹Under the authority of the prince. ²The principality is a single administrative unit, and no separate area within it is distinguished as capital. ³Monaco uses the euro as its official currency, even though it is not a member of the EU. ⁴Unadjusted figure; adjusted census total equals 35,352. ⁵On hotels, banks, and the industrial sector. ⁶Per United Nations *National Accounts Main Aggregates Database*. ⁷At constant prices of 2000. ⁸Includes c. 30,000 French workers. ⁹The index is for France. ¹⁰Excludes trade with France; Monaco has participated in a customs union with France since 1963. ¹¹Fixed-wing service is provided at Nice, France; helicopter service is available at Fontvieille. ¹²Charter service of Monacair (2004): passenger-km 414,000; metric ton-km cargo, none. ¹³Subscribers. ¹⁴Most Monegasque students undertake higher education in France.

Internet resource for further information:

- La Principauté de Monaco
<http://www.gouv.mc>

Mongolia

Official name: Mongol Uls (Mongolia).

Form of government: unitary multiparty republic with one legislative house (State Great Hural [76]).

Chief of state: President.

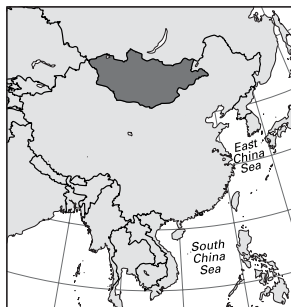
Head of government: Prime Minister.

Capital: Ulaanbaatar (Ulan Bator).

Official language: Khalkha Mongolian.

Official religion: none.

Monetary unit: tugrik (Tug); valuation (Sept. 1, 2009) 1 U.S.\$ = Tug 1,415; 1 £ = Tug 2,296.



Area and population

	area ¹	population		area ¹	population
	sq km	2008 ² estimate		sq km	2008 ² estimate
Provinces			Provinces		
Arhangay	55,300	92,800	Hovd	76,100	88,600
Bayan-Olgii	45,700	100,800	Hovsgol	100,600	122,400
Bayanhongor	116,000	84,200	Ömnögovi		
Bulgan	48,700	60,500	(South Gobi)	165,400	46,900
Darhan-Uul	3,280	87,600	Orkhon	840	80,100
Dornod (Eastern)	123,600	72,900	Övörhangay	62,900	115,700
Dornogovi			Selenge	41,200	100,500
(East Gobi)	109,500	55,600	Sühbaatar	82,300	55,100
Dundgovi			Töv (Central)	74,000	85,900
(Central Gobi)	74,700	48,800	Uvs	69,600	80,400
Dzavhan	82,500	81,100			
Govi-Altay	141,400	60,200	Autonomous municipality		
Govi-Sumber	5,540	12,600	Ulaanbaatar	4,700	1,031,200
Hentiy	80,300	71,300	TOTAL	1,564,160	2,635,200

Demography

Population (2009): 2,704,000.

Density (2009): persons per sq mi 4.5, persons per sq km 1.7.

Urban-rural (2006): urban 60.9%; rural 39.1%.

Sex distribution (2005²): male 49.60%; female 50.40%.

Age breakdown (2005): under 15, 28.9%; 15–29, 32.3%; 30–44, 22.6%; 45–59, 10.3%; 60–74, 4.5%; 75–84, 1.1%; 85 and over, 0.3%.

Population projection: (2020) 3,052,000; (2030) 3,290,000.

Ethnic composition (2000): Khalkha Mongol 81.5%; Kazakh 4.3%; Dörbed Mongol 2.8%; Bayad 2.1%; Buryat Mongol 1.7%; Dariganga Mongol 1.3%; Zakhchin 1.3%; Tuvan (Uriankhai) 1.1%; other 3.9%.

Religious affiliation (2005): traditional beliefs (shamanism) c. 32%; Buddhist (Lamaism) c. 23%; Muslim c. 5%; Christian c. 1%; nonreligious c. 30%; atheist/other c. 9%.

Major cities (2008²): Ulaanbaatar (Ulan Bator) 1,031,200; Erdenet 74,300; Darhan 72,400; Choybalsan (2000) 40,123; Möron (2000) 28,903.

Vital statistics

Birth rate per 1,000 population (2008): 23.8 (world avg. 20.3); (2001) within marriage 82.2%, outside of marriage 17.8%.

Death rate per 1,000 population (2008): 5.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 18.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 1.97.

Marriage/divorce rates per 1,000 population (2007): 15.73/0.7.

Life expectancy at birth (2005²): male 61.6 years; female 67.8 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 230.6; malignant neoplasms (cancers) 121.6; accidents and violence 103.4; diseases of the digestive system 48.2; diseases of the respiratory system 30.3.

National economy

Budget (2006). Revenue: Tug 1,360,400,000,000 (tax revenue 83.0%, of which income taxes 35.0%, taxes on goods and services 25.9%; nontax revenue 16.6%; other 0.4%). Expenditures: Tug 1,237,000,000,000 (economic services 26.1%; social security 20.8%; general administration 19.6%; education 15.6%; health 8.0%; defense/public order 3.7%).

Population economically active (2005²): total 986,100; activity rate of total population 39.3% (participation rates: ages 16–59, 63.7%; female 51.0%; unemployed [December 2008] 2.8%⁴).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	78.0	82.0	88.7	100.0	105.1	114.6	143.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): hay 930,405, potatoes 114,490, wheat 109,560, vegetables 76,500, raw (greasy) wool 16,500; livestock (number of live animals) 15,451,700 goats, 14,815,100 sheep, 2,167,900 cattle, 2,114,800 horses, 253,500 camels; roundwood 791,000 cu m, of which fuelwood 95%; fisheries production 185 (from aquaculture, none). Mining and quarrying (2007): fluor spar 381,000; copper (metal content) 130,160; molybdenum (metal content) 1,978; gold 17,473 kg⁵. Manufacturing (value of production in Tug '000,000; 2006): textiles 93,475; base metals 74,879; food products 71,428; beverages 51,623; clothing and apparel 29,495; bricks, cement, and ceramics 20,226. Energy production (consumption): electricity (kW-hr; 2006) 3,544,000,000 (3,691,000,000); hard coal (metric tons; 2006) 1,316,000 (1,316,000); lignite (metric tons; 2006) 6,758,000 (4,301,000); crude petroleum (barrels; 2005) 201,000 (n.a.); petroleum products (metric tons; 2006) none (635,000); natural gas, none (none).

Gross national income (GNI; 2008): U.S.\$4,411,000,000 (U.S.\$1,680 per capita); purchasing power parity GNI (U.S.\$3,480 per capita).

Structure of gross domestic product and labour force

	2008		2005 ²	
	in value Tug '000,000,000	% of total value	labour force	% of labour force
Agriculture	1,151.2	18.8	381,800	38.7
Mining	1,704.9	27.0	33,500	3.4
Manufacturing	245.4	4.0	57,300	5.8
Construction	88.9	1.5	39,200	4.0
Public utilities	131.7	2.1	23,400	2.4
Transp. and commun.	597.9	9.8	42,200	4.3
Trade, hotels	519.6	8.5	162,100	16.4
Finance, real estate	487.1	7.9	27,100	2.7
Public admin., defense	264.8	4.3	46,200	4.7
Services	474.5	7.7	137,700	14.0
Other	464.2 ⁶	7.6 ⁶	35,600 ⁷	3.6 ⁷
TOTAL	6,130.3⁸	100.0	986,100	100.0

Public debt (external; 2007): U.S.\$1,566,000,000.

Household income and expenditure. Average household size (2005²) 4.2; annual income per household (2005) Tug 1,629,600 (U.S.\$1,350); sources of income (2005): wages 35.2%, self-employment 31.3%, transfer payments 10.6%, other 22.9%; expenditure (2005)⁹: food and nonalcoholic beverages 42.2%, housing and energy 10.5%, clothing and footwear 10.1%, transportation 9.5%, education 5.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 225; remittances (2008) 200; foreign direct investment (2005–07 avg.) 267; official development assistance (2007) 228. Disbursements for (U.S.\$'000,000): tourism (2006) 188; remittances (2008) 77.

Land use as % of total land area (2007): in temporary crops 0.5%, in permanent crops, negligible, in pasture 74.1%, forest area 6.5%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–185.1	–151.4	–119.4	+39.6	–228.3	–1,076.5
% of total	13.1%	8.0%	5.3%	1.3%	5.7%	17.5%

Imports (2006): U.S.\$1,489,200,000 (mineral fuels 30.0%, machinery and apparatus 18.2%, food and agricultural products 12.4%, transportation equipment 10.3%). **Major import sources:** Russia 36.6%; China 27.5%; Japan 6.8%; South Korea 5.6%; Kazakhstan 3.5%.

Exports (2006): U.S.\$1,528,800,000 (copper concentrate 42.7%, gold 18.1%, refined copper 7.2%, combed goat down 5.3%, raw [greasy] cashmere 4.2%, molybdenum 3.2%). **Major export destinations:** China 68.1%; Canada 11.2%; U.S. 7.8%; Russia 2.9%; U.K. 2.5%.

Transport and communications

Transport. Railroads (2006): route length 1,810 km; passenger-km 1,287,000,000; metric ton-km cargo 10,513,000,000. Roads (2002): total length 49,250 km (paved 4%). Vehicles (2007): passenger cars 110,153; trucks and buses 50,216. Air transport (2006): passenger-km 835,800,000; metric ton-km cargo 86,400,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	220	88	PCs	2005	340	133
Telephones				Dailies	2007	54 ¹¹	29 ¹¹
Cellular	2008	999 ¹²	378 ¹²	Internet users	2008	330	125
Landline	2008	165	63	Broadband	2007	7.4 ¹²	2.8 ¹²

Education and health

Educational attainment (2000). Percentage of population age 10 and over having: no formal education 11.6%; primary education 23.5%; secondary 46.1%; vocational secondary 11.2%; higher 7.6%. **Literacy** (2004): percentage of total population age 15 and over literate 97.8%; males 98.0%; females 97.5%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–11)	7,572	239,262	31.6	84
Secondary/Voc. (age 12–17)	16,605	328,009	19.8	81
Tertiary	8,754	142,411	16.3	48 (age 18–22)

Health (2005²): physicians 6,590 (1 per 384 persons); hospital beds 18,400 (1 per 138 persons); infant mortality rate per 1,000 live births (2008) 19.6; undernourished population (2003–05) 800,000 (29% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 10,000 (army 89.0%, air force 8.0%, other 3.0%); reserve 137,000. **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$16.

¹Rounded figures. ²January 1. ³In 2006 the government implemented a “newly married couple” program to promote marriage. ⁴Registered figure. ⁵Excludes gold contained in copper concentrate. ⁶Net taxes on products less imputed bank service charges. ⁷Unemployed. ⁸Detail does not add to total given because of rounding. ⁹Weights of consumer price index components. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers.

Internet resources for further information:

- National Statistical Office of Mongolia <http://www.nso.mn/>
- Bank of Mongolia <http://www.mongolbank.mn>

Montenegro

Official name: Crna Gora (Montenegro).
Form of government: multiparty republic with one legislative house (Parliament [81])¹.

Chief of state: President.

Head of government: Prime Minister.

Capital: Podgorica; Cetinje is the old royal capital.

Official language: Montenegrin.

Official religion: none.

Monetary unit: euro (€)²; valuation

(Sept. 1, 2009) 1 U.S.\$ = €0.70;

1 £ = €1.13.



Structure of gross domestic product and labour force

	2006		2007	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	178.2	8.3	17,600	6.5
Mining and quarrying	28.6	1.3	23,900	8.9
Manufacturing	164.7	7.7	8,300	3.1
Construction	76.0	3.5	6,100	2.3
Public utilities	88.5	4.1	22,900	8.5
Transp. and commun.	208.3	9.7	60,700	22.5
Trade, hotels	302.0	14.1	9,200	3.4
Finance, real estate	310.1	14.4	20,400	7.6
Pub. admin., defense	174.3	8.1	48,200	17.9
Services	226.2	10.5	52,100 ⁷	19.3 ⁷
Other	392.1 ⁶	18.3 ⁶	269,500 ⁸	100.0
TOTAL	2,149.0	100.0		

Household income and expenditure (2007)⁹. Average household size 3.5; average annual income per household €6,816 (U.S.\$9,329); sources of income: wages and salaries 61.1%, transfer payments 19.0%, agriculture 4.5%; expenditure: food and nonalcoholic beverages 35.4%, housing and energy 12.9%, transportation 11.0%, clothing and footwear 8.2%, communications 6.1%, household furnishings 5.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 725; remittances (2006) c. 100; foreign direct investment (FDI; 2005–07 avg.) 657; official development assistance (2007) 106. Disbursements for (U.S.\$'000,000): tourism (2008) 43; remittances (2007) n.a.; FDI (2005–07 avg.) 98.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	–359.3	–416.4	–505.9	–855.2	–1,535.4	–1,502.0
% of total	39.9%	31.5%	36.8%	40.5%	56.2%	60.8%

Imports (2007): €2,134,377,900 (mineral fuels 11.6%; automobiles 11.4%; non-electrical machinery and apparatus 9.0%; electrical machinery and apparatus 8.8%; base and fabricated metals 7.1%). **Major import sources:** Serbia 29.9%; Germany 10.0%; Italy 9.8%; Croatia 3.9%; Greece 3.5%.

Exports (2007): €599,020,700,000 (aluminum and aluminum products 47.0%; base metals 11.9%; beverages and tobacco 8.9%; mineral fuels 8.1%). **Major export destinations:** Serbia 28.3%; Italy 27.4%; Greece 12.3%; Hungary 11.1%; Bosnia and Herzegovina 5.1%.

Transport and communications

Transport. Railroads (2007): length (2006) 155 mi, 250 km; passenger-km 110,000,000; metric ton-km cargo 184,957,000. Roads (2006): total length 4,578 mi, 7,368 km (paved 64%). Vehicles (2007): passenger cars 178,449; trucks and buses, n.a. Air transport (2007): passengers 1,024,491; freight 1,320 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2008	...	...	PCs	2007	...	...
Telephones	2008	...	...	Dailies	2007	60 ¹¹	96 ¹¹
Cellular	2008	735 ¹²	1,171 ¹²	Internet users	2008	294	468
Landline	2008	362	577	Broadband	2006	26 ¹²	42 ¹²

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no formal education 3.2%; incomplete primary education 6.8%; complete primary 22.5%; secondary 55.0%; higher 12.5%. **Literacy (2003):** total population age 15 and over literate 97.6%; males literate 99.6%; females literate 95.7%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–14)	4,889	75,038	15.3	...
Secondary/Voc. (age 15–18)	2,254	31,557	14.0	...
Tertiary ¹³	1,035	16,173	15.6	... (age 19–23)

Health (2007): physicians 1,277 (1 per 490 persons); hospital beds 3,948 (1 per 159 persons); infant mortality rate per 1,000 live births (2008) 7.5; under-nourished population, n.a.

Military

Total active duty personnel (November 2008): 4,500 (army 55.6%, navy 44.4%).

Military expenditure as percentage of GDP (2007): 2.3%; per capita expenditure U.S.\$94.

¹New constitution effective from Oct. 22, 2007. ²Montenegro uses the euro as its official currency, even though it is not a member of the EU. ³January 1. ⁴Industrial consumption only. ⁵As of December. ⁶Taxes on products less imputed bank service charges and less subsidies. ⁷Unemployed. ⁸Detail does not add to total given because of rounding. ⁹Based on the 2007 Household Budget Survey. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2006–07.

Internet resources for further information:

- Central Bank of Montenegro <http://www.cb-mn.org/eng>
- Statistical Office of the Republic of Montenegro <http://www.monstat.org>

Area and population

	area	population		area	population
	sq km	2007 estimate		sq km	2007 estimate
Municipalities			Municipalities		
Andrijevica	283	5,545	Nikšić	2,065	75,192
Bar	598	41,706	Plav	486	13,933
Berane	717	34,817	Pljevlja	1,346	34,481
Bijelo Polje	924	49,630	Plužine	854	3,981
Budva	122	16,736	Podgorica	1,441	176,569
Cetinje	910	17,869	Rožaje	432	23,447
Danilovgrad	501	16,509	Šavnik	553	2,717
Herceg Novi	235	33,075	Tivat	46	13,487
Kolašin	897	9,398	Ulcinj	255	20,653
Kotor	335	22,800	Žabljak	445	4,048
Mojkovac	367	9,595	TOTAL	13,812	626,188

Demography

Population (2009): 630,000.

Density (2009): persons per sq mi 118.1, persons per sq km 45.6.

Urban-rural (2005): urban 61.2%; rural 38.8%.

Sex distribution (2007³): male 49.28%; female 50.72%.

Age breakdown (2005): under 15, 19.6%; 15–29, 23.6%; 30–44, 19.8%; 45–59, 19.1%; 60–74, 12.8%; 75–84, 4.3%; 85 and over, 0.8%.

Population projection: (2020) 636,000; (2030) 639,000.

Ethnic composition (2003): Montenegrin 43.2%; Serb 32.0%; Bosniac/Muslim 11.8%; Albanian 5.0%; undeclared 4.0%; other 4.0%.

Religious affiliation (2003): Orthodox c. 70%; Muslim c. 21%; Roman Catholic c. 4%; other c. 5%.

Major settlements (2003): Podgorica 136,473; Nikšić 58,212; Pljevlja 21,377; Bijelo Polje 15,883; Cetinje 15,137; Bar 13,719.

Vital statistics

Birth rate per 1,000 population (2008): 13.1 (world avg. 20.3); within marriage 82.6%, outside of marriage 17.4%.

Death rate per 1,000 population (2008): 9.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 4.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.69.

Marriage/divorce rates per 1,000 population (2007): 6.8/0.7.

Life expectancy at birth (2007): male 71.2 years; female 76.1 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 543; malignant neoplasms (cancers) 156.1; injuries, accidents, and violence 47.0, of which suicide 22.1; diseases of the respiratory system 41.0; ill-defined conditions 89.4.

National economy

Budget (2006). Revenue: €582,258,287 (tax revenue 85.8%, of which VAT 44.5%, income tax 12.5%, excise tax 12.4%, taxes on international trade 9.7%; nontax revenue 14.2%). Expenditures: €579,780,129 (wages and salaries 27.4%; transfers 20.7%; debt service 20.0%).

Public debt (external, outstanding; December 2008): U.S.\$670,400,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 130,000, grapes 41,000, tomatoes 22,000, chilies and peppers 17,000, corn (maize) 9,000, oranges 7,200, plums 5,500, apples 4,500, figs 4,500, onions 4,000, peaches 3,800, cherries 2,000, pears 1,900, olives 1,900, tobacco 400; livestock (number of live animals) 249,281 sheep, 114,922 cattle, 13,294 pigs; roundwood 457,000 cu m, of which fuelwood 58%; fisheries production 911 (from aquaculture 1%). Mining and quarrying (2007): bauxite 667,053; sea salt 20,000. Manufacturing (gross value added in €'000; 2005): base metals and fabricated metal products (mostly of aluminum) 60,766; food products, beverages, and tobacco 56,607; paper products, publishing, and printing 7,044; wood and wood products 4,706; transportation equipment 4,404. Energy production (consumption): electricity (kW-hr; 2007) 2,144,000,000 (2,654,000,000⁴); hard coal (metric tons; 2007) none (none⁴); lignite (metric tons; 2007) 1,195,500 (29,000⁴); crude petroleum (barrels; 2007) none (n.a.); petroleum products, n.a. (n.a.); natural gas (cu m; 2007) none (n.a.).

Land use as % of total land area (2007): in temporary crops 2.3%, in permanent crops 1.2%, in pasture 33.7%, forest area 46.5%.

Population economically active (2007): total 269,500; activity rate 43.2% (participation rates: over age 15, 52.9%; female 43.0%; unemployed [September 2008–August 2009] 14.1%).

Price index (December 2005 = 100)

	2004	2005	2006	2007	2008
Consumer price index ⁵	97.7	100.0	102.8	110.7	118.7

Gross national income (GNI; 2008): U.S.\$4,008,000,000 (U.S.\$6,440 per capita); purchasing power parity GNI (U.S.\$13,920 per capita).

Morocco

Official name: Al-Mamlakah al-Maghribiyah (Kingdom of Morocco).

Form of government: constitutional monarchy with two legislative houses (House of Councillors [270¹]; House of Representatives [325]).

Chief of state and head of government: King assisted by Prime Minister.

Capital: Rabat.

Official language: Arabic.

Official religion: Islam.

Monetary unit: Moroccan dirham

(DH); valuation (Sept. 1, 2009)

1 U.S.\$ = DH 7.92; 1 £ = DH 12.84.



Area and population²

Regions	area	population	Regions	area	population
	sq km	2006 estimate		sq km	2006 estimate
Chaouia-Ouardigha	16,760	1,675,000	Meknès-Tafilalet	79,210	2,174,000
Doukkala-Abda	13,285	2,008,000	Oriental	82,820	1,942,000
Fès-Boulemane	19,795	1,615,000	Oued Eddahab-Lagouira ²	120,000	120,000
Gharb-Chrarda-Beni Hssen	8,805	1,893,000	Rabat-Salé-Zemmour-Zaër	9,580	2,453,000
Grand Casablanca	1,615	3,685,000	Souss-Massa-Drâa	70,880	3,198,000
Guelmim-Es Smara ³	130,500	476,000	Tadla-Azilal	17,125	1,465,000
Laâyoune-Bojador-Sakia El-Hamra ⁴	76,300	274,000	Tanger-Tétouan	11,570	2,545,000
Marrakech-Tensift-Al Haouz	31,160	3,159,000	Taza-Al Hoceima-Taounate	24,155	1,824,000
			TOTAL	710,850⁵	30,506,000⁷

Demography

Area²: 274,461 sq mi, 710,850 sq km.

Population (2009)²: 31,690,000^{8,9}.

Density (2009)²: persons per sq mi 115.5, persons per sq km 44.6.

Urban-rural (2007): urban 56.4%; rural 43.6%.

Sex distribution (2008)¹⁰: male 49.28%; female 50.72%.

Age breakdown (2008)¹⁰: under 15, 29.1%; 15–29, 28.6%; 30–44, 21.0%; 45–59, 13.1%; 60–74, 6.0%; 75–84, 1.8%; 85 and over, 0.4%.

Population projection²: (2020) 35,501,000; (2030) 38,578,000.

Ethnic composition (2000): Amazigh (Berber) c. 45%, of which Arabized c. 24%; Arab c. 44%; Moors originally from Mauritania c. 10%; other c. 1%.

Religious affiliation (2004): Muslim more than 99% (including Sunnī c. 97%; Shī'ī c. 2%); other less than 1%.

Major urban agglomerations (2007): Casablanca 3,181,000; Rabat (incl. Salé) 1,705,000; Fès 1,002,000; Marrakech 872,000; Tangier 669,685¹¹.

Vital statistics

Birth rate per 1,000 population (2008): 20.0¹⁰ (world avg. 20.3).

Death rate per 1,000 population (2008): 4.7¹⁰ (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 2.31¹⁰.

Life expectancy at birth (2008)¹⁰: male 72.2 years; female 78.4 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 201, of which ischemic heart disease 100; infectious and parasitic diseases 120; malignant neoplasms (cancers) 41; accidents and injuries 40.

National economy

Budget. Revenue (2007): DH 167,904,000,000 (VAT 29.6%; corporate taxes 18.1%; income tax 16.5%; nontax revenue 8.8%). Expenditures (2007): DH 168,959,000,000 (current expenditure 78.5%; capital expenditure 16.3%; other 5.2%).

Public debt (external, outstanding; 2007): U.S.\$15,670,000,000.

Household income and expenditure. Average household size (2004) 5.3; expenditure (2001): food 41.3%, housing and energy 22.1%, health 7.6%.

Population economically active (2006): total 10,990,000; activity rate 36.0% (participation rates: ages 15 and over, 51.3%; female [2005] 27.5%; unemployed [April 2008–March 2009] 9.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugar beets 3,000,000, wheat 1,583,000, potatoes 1,450,000, tomatoes 1,140,000, oranges 740,000, olives 657,000, clementines (2006–07) 336,000, grapes 325,000, green broad beans (2005) 140,000; livestock (number of live animals) 17,250,000 sheep, 2,700,000 cattle, 140,000,000 chickens; roundwood 1,040,000 cu m, of which fuelwood 41%; fisheries production 882,079 (from aquaculture, negligible)¹². Mining and quarrying (2007): phosphate rock 27,834,000; barite 664,708; fluorite 78,817; zinc 68,000¹³; lead 44,800¹³; cobalt 1,100¹³; silver 246,000 kg¹⁴. Manufacturing (value added in U.S.\$'000,000; 2005): food/beverages 1,467; tobacco products 1,307; wearing apparel 697; bricks, pottery, and cement 690; chemicals and chemical products 586. Energy production (consumption): electricity (kW-hr; 2008) 18,646,000,000 ([2006] 25,190,000,000); coal (metric tons; 2006) none (5,877,000); crude petroleum (barrels; 2007) 81,000 ([2006] 46,000,000); petroleum products (metric tons; 2006) 5,221,000 (7,467,000); natural gas (cu m; 2007) 61,000,000 ([2006] 571,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 7,181; remittances (2008) 6,730; foreign direct investment (FDI; 2005–07 avg.) 2,277; official development assistance (2007) 1,090. Disbursements for (U.S.\$'000,000): tourism (2007) 880; remittances (2008) 52; FDI (2005–07 avg.) 390.

Gross national income (GNI; 2008): U.S.\$80,544,000,000 (U.S.\$2,580 per capita); purchasing power parity GNI (U.S.\$4,330 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value DH '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	90,690	13.2	4,303,300	39.2
Mining and quarrying	45,121	6.6		
Manufacturing	87,959	12.8	1,224,700	11.1
Public utilities	16,123	2.3		
Construction	38,663	5.6	789,600	7.2
Transp. and commun.	45,262	6.6	394,700	3.6
Trade, hotels	86,875	12.6	1,402,600	12.8
Pub. admin., defense	54,000	7.8	508,900	4.6
Finance, real estate	154,939	22.5	1,292,800	11.8
Services	69,211 ¹⁵	10.0 ¹⁵	1,073,400 ¹⁶	9.8 ¹⁶
Other				
TOTAL	688,843	100.0	10,990,000	100.0¹⁷

Land use as % of total land area (2007): in temporary crops 18.1%, in permanent crops 2.0%, in pasture 47.1%, forest area 9.8%.

Foreign trade¹⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
DH '000,000	–52,183	–70,025	–85,115	–98,575	–135,806	–167,438
% of total	23.7%	28.5%	30.0%	31.5%	35.4%	35.1%

Imports (2008): DH 321,931,000,000 (mineral fuels 22.2%, of which crude petroleum 9.6%; machinery and apparatus 22.0%; food and beverages 9.6%).

Major import sources: France 15.0%; Middle Eastern countries 11.6%; Spain 11.1%; Italy 6.7%; China 5.7%; U.S. 5.0%.

Exports (2008)¹⁹: DH 154,493,000,000 (apparel/clothing accessories 16.6%; phosphoric acid 14.6%; phosphate rock 11.2%; fish/shrimp/octopuses 8.0%; fertilizer 7.1%; equipment for distributing electricity 5.8%; vegetables/fruit 5.7%). **Major export destinations:** France 20.0%; Spain 17.8%; India 6.6%; Brazil 5.1%; Italy 4.7%.

Transport and communications

Transport. Railroads (2005): route length 1,907 km; (2007) passenger-km 3,659,000,000; (2007) metric ton-km cargo 5,835,000,000. Roads (2007): total length 57,799 km (paved 62%). Vehicles (2007): passenger cars 1,644,523; trucks and buses 528,175. Air transport (2008)²⁰: passenger-km 9,901,000,000; metric ton-km cargo 55,477,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5,010	164	PCs	2007	1,115	36
Telephones				Dailies	2007	395 ²¹	13 ²¹
Cellular	2008	22,816 ²²	728 ²²	Internet users	2008	10,300	329
Landline	2008	2,991	95	Broadband	2008	484 ²²	15 ²²

Education and health

Educational attainment (2004). Percentage of population age 10 and over having: no formal education through incomplete primary education 45.5%; complete primary 40.8%; secondary 8.7%; higher 5.0%. **Literacy** (2007): total population over age 10 literate 58.7%; males 70.6%; females 47.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	143,846	3,939,177	27.4	89
Secondary/Voc. (age 12–17)	100,367 ²³	2,173,454	18.7 ²³	35 ²⁴
Tertiary	18,464	369,142	20.0	11 (age 18–22)

Health (2006): physicians 18,248 (1 per 1,678 persons); hospital beds²⁵ 26,649 (1 per 1,149 persons); infant mortality rate (2008) 30.9¹⁰; undernourished population (2002–04) 1,800,000 (6% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

Total active duty personnel (November 2008): 195,800 (army 89.4%, navy 4.0%, air force 6.6%). **Military expenditure as percentage of GDP** (2008): 3.4%; per capita expenditure U.S.\$115.

¹All seats indirectly elected. ²Includes Western Sahara, annexure of Morocco whose political status has been unresolved since 1991; Western Sahara area: 252,120 sq km, 97,344 sq mi; Western Sahara population (2009 est.) 405,000. ³About 50% of the land area of Guelmim-Es Smara is located within Western Sahara. ⁴About 83% of the land area of Laâyoune-Bojador-Sakia El-Hamra is located within Western Sahara. ⁵The entire area of Oued Eddahab-Lagouira is located within Western Sahara. ⁶Detail does not add to total given because of gross rounding of the Western Sahara areas of Morocco. ⁷Official estimate of Moroccan demographic research centre. ⁸Estimate of U.S. Bureau of the Census International Database (June 2009 update). ⁹In addition, about 90,000 Western Saharan refugees live in camps near Tindouf, Alg. ¹⁰Excludes Western Sahara. ¹¹2004; sum of combined arrondissement populations. ¹²Roughly 60% of Morocco's fisheries production comes from Atlantic waters off of Western Sahara. ¹³Metal content. ¹⁴Including smelter bullion. ¹⁵Import taxes and duties less subsidies. ¹⁶Including 1,062,000 unemployed. ¹⁷Detail does not add to total given because of rounding. ¹⁸Imports c.i.f.; exports f.o.b. ¹⁹Cannabis is an important illegal export; Morocco was the world's number 2 producer in 2008. ²⁰Royal Air Maroc only. ²¹Circulation of daily newspapers. ²²Subscribers. ²³2003–04. ²⁴2002–03. ²⁵Public hospitals only.

Internet resources for further information:

- Haut-Commissariat au Plan <http://www.hcp.ma>
- Bank al-Maghrib <http://www.bkam.ma>

Mozambique

Official name: República de Moçambique (Republic of Mozambique).

Form of government: multiparty republic with a single legislative house (Assembly of the Republic [250]).

Head of state and government: President.

Capital: Maputo.

Official language: Portuguese.

Official religion: none.

Monetary unit: (new) metical (MTn; plural meticals); valuation (Sept. 1, 2009) 1 U.S.\$ = MTn 27.78; 1 £ = MTn 45.07.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2007 preliminary census
Cabo Delgado	Pemba	31,902	82,625	1,632,809
Gaza	Xai-Xai	29,231	75,709	1,219,013
Inhambane	Inhambane	26,492	68,615	1,267,035
Manica	Chimoio	23,808	61,661	1,418,927
Maputo	Maputo	9,945	25,756	1,259,713
Nampula	Nampula	31,508	81,606	4,076,642
Niassa	Lichinga	49,828	129,055	1,178,117
Sofala	Beira	26,262	68,018	1,654,163
Tete	Tete	38,890	100,724	1,832,339
Zambézia	Quelimane	40,544	105,008	3,892,854
City				
Maputo	—	232	602	1,099,102
TOTAL		308,642	799,379	20,530,714

Demography

Population (2009): 22,894,000².

Density (2009): persons per sq mi 74.2, persons per sq km 28.6.

Urban-rural (2008): urban 36.9%; rural 63.1%.

Sex distribution (2007): male 47.67%; female 52.33%.

Age breakdown (2005): under 15, 43.1%; 15–29, 26.8%; 30–44, 16.5%; 45–59, 9.0%; 60–74, 3.9%; 75 and over, 0.7%.

Population projection²: (2020) 28,545,000; (2030) 33,894,000.

Doubling time: 37 years.

Ethnic composition (2000): Makuana 15.3%; Makua 14.5%; Tsonga 8.6%; Sena 8.0%; Lomwe 7.1%; Tswa 5.7%; Chwabo 5.5%; other 35.3%.

Religious affiliation (2005): traditional beliefs c. 46%; Christian c. 37%, of which Roman Catholic c. 19%, Protestant c. 11%; Muslim c. 9%; other c. 8%.

Major cities (2007; final census): Maputo 1,094,315 (urban agglomeration 1,766,823); Matola 672,508; Nampula 477,900³; Beira 431,583; Chimoio 237,278.

Vital statistics

Birth rate per 1,000 population (2008): 38.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 19.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 19.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.35.

Life expectancy at birth (2006): male 41.2 years; female 40.4 years.

Adult population (ages 15–49) *living with HIV* (2007): 12.5%⁴ (world avg. 0.8%).

National economy

Budget (2008). Revenue: MTn 69,107,000,000 (tax revenue 47.3%; grants 45.4%; nontax revenue 7.3%). Expenditures: MTn 83,220,000,000 (capital expenditures 48.6%; current expenditures 45.5%; net lending 5.9%).

Public debt (external, outstanding; 2007): U.S.\$2,533,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 7,350,000, sugarcane 2,650,000, corn (maize) 1,579,400, sorghum 350,000, coconuts 265,000, rice 196,000, peanuts (groundnuts) 105,000, cashews 58,000, tobacco 11,000, tea 10,500; livestock (number of live animals) 1,330,000 cattle, 393,000 goats, 28,500,000 chickens; roundwood 18,028,000 cu m, of which fuelwood 93%; fisheries production 93,108 (from aquaculture 1%). Mining and quarrying (2007): bauxite 12,000; limestone 250,000 cu m; tantalite 28,000 kg; garnet 7,200 kg; gold 450 kg⁵. Manufacturing (value added in MT⁶ '000,000,000; 2003): aluminum 19,067; beverages 4,773; food products 2,577; tobacco 581; chemicals and chemical products 297. Energy production (consumption): electricity (kW-hr; 2006) 14,737,000,000 (11,751,000,000); coal (metric tons; 2006) 41,000 (negligible); crude petroleum, none (none); petroleum products (metric tons; 2006) none (490,000); natural gas (cu m; 2006) 2,700,000,000 (84,500,000).

Household income and expenditure. Average household size (2004) 4.2; income per household: n.a.; source of income (1992–93)⁶: wages and salaries 51.6%, self-employment 12.5%, barter 11.5%, private farming 7.7%; expenditure (1998)⁶: food, beverages, and tobacco 63.5%, firewood and furniture 17.0%, transportation and communications 4.6%, clothing and footwear 4.6%.

Population economically active (2003; ILO estimate): total 8,981,000; activity rate 47.1% (participation rates: ages 15–64, 84.4%; female 53.8%; unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	73.0	82.8	93.3	100.0	113.2	122.5	135.1

Gross national income (GNI; 2008): U.S.\$8,119,000,000 (U.S.\$370 per capita); purchasing power parity GNI (U.S.\$770 per capita).

Structure of gross domestic product and labour force				
	2006		2002	
	in value MTn '000,000	% of total value	labour force	% of labour force
Agriculture	44,551	25.2	7,837,000	80.8
Mining	1,709	1.0		
Manufacturing	26,233	14.8		
Construction	5,356	3.0		
Public utilities	9,579	5.4		
Transp. and commun.	16,077	9.1		
Finance, real estate	8,355	4.7		
Trade, hotels	35,666	20.2		
Pub. admin., defense	6,640	3.8		
Services	11,831	6.7		
Other	10,807 ⁷	6.1 ⁷	9,696,000	100.0
TOTAL	176,804	100.0		

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 163; remittances (2008) 116; foreign direct investment (2005–07 avg.) 230; official development assistance (2007) 1,777. Disbursements for (U.S.\$'000,000): tourism (2007) 180; remittances (2008) 52.

Land use as % of total land area (2007): in temporary crops 5.7%, in permanent crops 0.4%, in pasture 56.0%, forest area 24.4%.

Foreign trade⁸

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–667	–604	–346	–497	–268	–638
% of total	29.2%	22.4%	10.3%	12.5%	5.3%	11.7%

Imports (2006): U.S.\$2,869,000,000 (machinery and apparatus 14.5%; refined petroleum 13.1%; food 11.4%, of which cereals 6.7%; road vehicles 9.4%; unspecified 19.7%). **Major import sources:** South Africa 37.4%; Netherlands 15.8%; India 4.6%; U.A.E. 4.2%; U.S. 3.5%.

Exports (2006): U.S.\$2,381,000,000 (aluminum 58.9%; food 10.2%, of which shrimp 3.6%; electricity 7.5%; natural gas 4.6%; tobacco 4.6%). **Major export destinations:** Netherlands 59.7%; South Africa 14.1%; Zimbabwe 3.2%; Switzerland 2.2%.

Transport and communications

Transport. Railroads (2002): route length 3,123 km; (2003) passenger-km 167,000,000; (2003) metric ton-km cargo 1,362,000,000. Roads (2000): total length 30,400 km (paved 19%). Vehicles (2001): passenger cars 81,600; trucks and buses 76,000. Air transport (2007)⁹: passenger-km 440,000,000; metric ton-km cargo 6,000,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	391	20	PCs	2005	283	14
Telephones				Dailies	2007	17 ¹⁰	1.5 ¹⁰
Cellular	2008	4,405 ¹¹	197 ¹¹	Internet users	2008	350	16
Landline	2008	78	3.5	Broadband	2008	—	—

Education and health

Educational attainment (1997). Percentage of population age 15 and over having: no formal schooling 78.4%; primary education 18.4%; secondary 2.0%; technical 0.4%; higher 0.2%; other/unknown 0.6%. **Literacy** (2007): percentage of total population age 15 and over literate 53.0%; males literate 67.9%; females literate 38.6%.

Education (2005–06)				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–12)	61,932	4,172,749	67.4	76
Secondary/Voc. (age 13–17)	10,278	367,395	35.7	4
Tertiary ¹²	3,009	28,298	9.4	1 (age 18–22)

Health: physicians (2003) 635 (1 per 30,525 persons); hospital beds (2003) 16,493 (1 per 1,175 persons); infant mortality rate per 1,000 live births (2006) 112.1; undernourished population (2003–05) 7,500,000 (38% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Military

Total active duty personnel (November 2008): 11,200 (army 89.3%, navy 1.8%, air force 8.9%). **Military expenditure as percentage of GDP** (2007): 0.7%; per capita expenditure U.S.\$3.

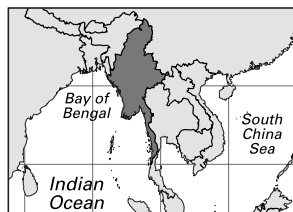
¹The (new) metical (MTn) replaced the (old) metical (MT) on July 1, 2006, at a rate of 1 MTn = MT 1,000. ²Estimate of United Nations *World Population Prospects: The 2008 Revision*. ³Preliminary census figure. ⁴Statistically derived midpoint of range. ⁵Official figures; unofficial artisanal production is 360–480 kg per year. ⁶Weights of consumer price index components. ⁷Taxes less subsidies and less imputed bank service charges. ⁸Imports are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. ⁹LAM (Linha Aérea de Moçambique) only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2004–05.

Internet resources for further information:

- Instituto Nacional de Estatística <http://www.ine.gov.mz>
- Banco de Moçambique <http://www.bancomoc.mz>

Myanmar (Burma)

Official name: Pyidaungzu Myanmar Naingngandaw (Union of Myanmar).
Form of government: military regime¹.
Head of state and government: Chairman².
Capital: Naypyidaw (Nay Pyi Taw)³.
Official language: Burmese.
Official religion: none⁴.
Monetary unit: Myanmar kyat (K); valuation⁵ (Sept. 1, 2009)
 1 U.S.\$ = K 6.41; 1 £ = K 10.40.



Area and population		area		population
Divisions	Capitals	sq mi	sq km	2002 estimate
Ayeyarwady (Irrawaddy)	Patheingyi (Bassein)	13,567	35,138	7,184,000
Bago (Pegu)	Bago (Pegu)	15,214	39,404	5,327,000
Magway (Magwe)	Magway (Magwe)	17,305	44,820	4,873,000
Mandalay	Mandalay	14,295	37,024	7,246,000
Sagaing	Sagaing	36,535	94,625	5,655,000
Tanintharyi (Tenasserim)	Dawei (Tavoy)	16,735	43,343	1,455,000
Yangon	Yangon (Rangoon)	3,927	10,171	6,056,000
States				
Chin	Hakha	13,907	36,019	495,000
Kachin	Myittha	34,379	89,041	1,364,000
Kayah	Loi-kaw	4,530	11,733	293,000
Kayin (Karen)	Hpa-an (Pa-an)	11,731	30,383	1,575,000
Mon	Mawlamyine (Moulmein)	4,748	12,297	2,672,000
Rakhine (Arakan)	Sittwe (Akyab)	14,200	36,778	2,915,000
Shan	Taunggyi	60,155	155,801	5,061,000
TOTAL		261,228	676,577	52,171,000

Demography

Population (2009): 48,138,000⁶.
Density (2009): persons per sq mi 184.3, persons per sq km 71.1.
Urban-rural (2007): urban 32.0%; rural 68.0%.
Sex distribution (2008): male 49.49%; female 50.51%.
Age breakdown (2008): under 15, 25.7%; 15–29, 28.6%; 30–44, 23.4%; 45–59, 14.3%; 60–74, 6.2%; 75–89, 1.7%; 90 and over, 0.1%.
Population projection⁶: (2020) 51,787,000; (2030) 53,905,000.
Ethnic composition (2000): Burman 55.9%; Karen 9.5%; Shan 6.5%; Han Chinese 2.5%; Mon 2.3%; Yangbye 2.2%; Kachin 1.5%; other 19.6%.
Religious affiliation (2005): Buddhist c. 74%; Protestant c. 6%; Muslim c. 3%; Hindu c. 2%; traditional beliefs c. 11%; other c. 4%.
Major urban agglomerations (2007): Yangon (Rangoon) 4,088,000; Mandalay 961,000; Naypyidaw (Nay Pyi Taw) 930,000; Mawlamyine (Moulmein) 405,800⁷; Patheingyi (Bassein) 215,600⁷; Bago (Pegu) 200,900⁷.

Vital statistics

Birth rate per 1,000 population (2008): 17.2 (world avg. 20.3).
Death rate per 1,000 population (2008): 9.2 (world avg. 8.5).
Total fertility rate (avg. births per childbearing woman; 2008): 1.92.
Life expectancy at birth (2008): male 60.7 years; female 65.3 years.
Major causes of death per 100,000 population (2002): infectious and parasitic diseases 477; cardiovascular diseases 258; injuries, accidents, and violence 92; malignant neoplasms (cancers) 74; chronic respiratory diseases 57.
Adult population (ages 15–49) living with HIV (2007): 0.7% (world avg. 0.8%).

National economy

Budget (2005–06). Revenue: K 819,534,000,000 (tax revenue 58.2%, of which taxes on goods and services 30.7%, taxes on individual income 25.2%; non-tax revenue 41.8%). Expenditures: K 1,008,785,000,000 (economic affairs 34.3%, of which transport 19.7%; defense 19.6%; education 6.8%; health 2.2%).
Public debt (external, outstanding; 2007): U.S.\$5,516,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 32,610,000, sugarcane 7,450,000, dry beans 1,765,000, peanuts (groundnuts) 1,000,000, corn (maize) 789,000, onions 740,000, plantains 630,000, sesame seeds 600,000, pigeon peas 540,000, coconuts 370,000, sunflower seeds 365,000, chickpeas 225,000, garlic 128,000; livestock (number of live animals) 12,500,000 cattle, 6,300,000 pigs, 94,500,000 chickens; roundwood 42,548,000 cu m, of which fuelwood 90%; fisheries production 2,840,240 (from aquaculture 21%). Mining and quarrying (2008–09): copper (2007; metal content) 14,700; jade 32,311,589 kg; rubies 1,751,355 carats; sapphires 1,313,723 carats; spinel 339,894 carats. Manufacturing (value added in U.S.\$'000,000; 2003): nonelectrical machinery and apparatus 728; transportation equipment 483; fabricated metal products 254; food products, n.a.; cement (2008–09) 702,419 metric tons. Energy production (consumption): electricity (kW-hr; 2008–09) 6,654,630,000 ([2006] 6,164,000,000); hard coal (metric tons; 2006) 1,006,000 (128,000); lignite (metric tons; 2006) 380,000 (111,000); crude petroleum (barrels; 2008–09) 7,058,000 ([2006] 6,035,600); petroleum products (metric tons; 2006) 790,000 (1,633,000); natural gas (cu m; 2008–09) 11,591,300,000 ([2006] 2,119,600,000).
Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 46; remittances (2008) 150; foreign direct investment (2005–07 avg.) 202; official development assistance (2007) 190. Disbursements for (U.S.\$'000,000): tourism (2006) 37; remittances (2008) 32.
Household income and expenditure. Average household size (2004) 5.0; average annual income per household: n.a.; sources of income: n.a.; expenditure (2001): food and nonalcoholic beverages 70.4%, fuel and lighting 6.6%, transportation 3.3%, clothing and footwear 2.4%.
Gross national income (2008): U.S.\$28,663,000,000 (U.S.\$578 per capita).

Structure of gross domestic product and labour force

	2004–05		1997–98	
	in value K '000,000,000	% of total value	labour force ^a	% of labour force ^a
Agriculture	4,390	48.3	12,093,000	65.9
Mining	57	0.6	121,000	0.7
Manufacturing	1,050	11.6	1,666,000	9.1
Construction	357	3.9	400,000	2.2
Public utilities	7	0.1	26,000	0.1
Transp. and commun.	934	10.3	495,000	2.7
Trade	2,022	22.3	1,781,000	9.7
Finance	6	0.1		
Public administration	104	1.1	1,485,000	8.1
Services, other	152	1.7	270,000	1.5
TOTAL	9,079	100.0	18,337,000	100.0

Population economically active (2008; ILO estimates): total 28,361,000; activity rate of total population 57.6% (participation rates: ages 15–64, 79.3%; female 45.5%; official unemployed 4.9%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	64.0	87.5	91.4	100.0	120.0	162.0	205.4

Land use as % of total land area (2007): in temporary crops 15.7%, in permanent crops 1.7%, in pasture 0.5%, forest area 47.9%.

Foreign trade⁹

Balance of trade (current prices)

	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
K '000,000	+721	+5,359	+9,132	+13,191	+16,878	+12,154
% of total	2.6%	19.1%	28.4%	28.1%	31.4%	19.6%

Imports (2006–07): K 16,835,000,000 (mineral fuels 24.8%, nonelectrical machinery and transport equipment 15.9%, base and fabricated metals 7.0%, synthetic fabrics 6.5%). **Major import sources:** Singapore 36.5%; China 24.4%; Thailand 10.3%; India 5.3%; Japan 4.9%.

Exports (2006–07): K 30,026,000,000 (natural gas 42.6%; pulses [mostly beans] 11.1%; hardwood 10.0%, of which teak 6.0%; garments 5.3%; unspecified [including gemstones] 22.3%). **Major export destinations:** Thailand 48.9%; India 13.7%; Hong Kong 8.2%; China 7.9%; Singapore 3.5%.

Transport and communications

Transport. Railroads (2008–09): route length 3,955 km; passenger-km 5,466,155,000; metric ton-km cargo 883,650,000. Roads (1999): total length 27,966 km (paved 11%). Vehicles (2009¹⁰): passenger cars 244,609; trucks and buses 79,025. Air transport (2007–08): passenger-km 124,885,000; metric ton-km cargo (2006) 245,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	373	8.1	PCs	2005	400	8.6
Telephones				Dailies	2007	370 ¹¹	7.8 ¹¹
Cellular	2008	367 ¹²	7.4 ¹²	Internet users	2008	109	2.2
Landline	2008	811	16	Broadband	2008	10 ¹²	— ¹²

Education and health

Educational attainment: n.a. **Literacy** (2003): total population age 15 and over literate 89.7%; males literate 93.7%; females literate 86.2%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–9)	166,195	4,969,445	29.9	...
Secondary/Voc. (age 10–15)	79,837	2,696,307	33.8	46
Tertiary	10,522 ¹³	555,060 ¹⁴	52.6 ¹³	12 ¹⁴ (age 16–20)

Health (2004–05): physicians 17,564 (1 per 2,660 persons); hospital beds 34,654 (1 per 1,350 persons); infant mortality rate per 1,000 live births (2008) 49.1; undernourished population (2002–04) 2,400,000 (5% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2008): 406,000 (army 92.4%, navy 3.9%, air force 3.7%). **Military expenditure as percentage of GDP** (2007): n.a.

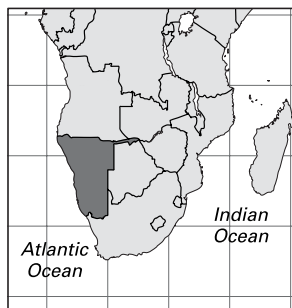
¹A new draft constitution was approved in a May 2008 referendum; parliamentary elections are scheduled for 2010. ²Of State Peace and Development Council, assisted by Prime Minister. ³Site near Pyinmana was officially proclaimed the new capital on March 27, 2006. ⁴The government promotes Theravada Buddhism over other religions. ⁵The kyat is not freely traded internationally; the unofficial (but tolerated) black market rate in February 2009 was about 1 U.S.\$ = K 950. ⁶Estimate from U.S. Census Bureau International Database (August 2006 update). ⁷City population; 2004. ⁸Employed only. ⁹Imports c.i.f.; exports f.o.b. ¹⁰August 1. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2000–01. ¹⁴2001–02.

Internet resources for further information:

- **Key Indicators for Asia and the Pacific**
http://www.adb.org/documents/books/key_indicators/2009
- **Central Statistical Organization** <http://www.csostat.gov.mm>

Namibia

Official name: Republic of Namibia.
Form of government: republic with two legislative houses (National Council [26]; National Assembly [78¹]).
Head of state and government: President.
Capital: Windhoek.
Official language: English.
Official religion: none.
Monetary unit: Namibian dollar (N\$); valuation (Sept. 1, 2009) 1 U.S.\$ = N\$7.79; 1 £ = N\$12.64.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2001 census
Caprivi	Katima Mulilo	5,609	14,528	79,826
Erongo	Swakopmund	24,548	63,579	107,663
Hardap	Mariental	42,336	109,651	68,249
Karas	Keetmanshoop	62,245	161,215	69,329
Kavango	Rundu	18,712	48,463	202,694
Khomas	Windhoek	14,288	37,007	250,262
Kunene	Opuwo	44,515	115,293	68,735
Ohangwena	Eenhana/Oshikango	4,132	10,703	228,384
Omaheke	Gobabis	32,669	84,612	68,039
Omusati	Outapi	10,260	26,573	228,842
Oshana	Oshakati	3,341	8,653	161,916
Oshikoto	Tsumeb	14,924	38,653	161,007
Otjozondjupa	Otjiwarongo/Grootfontein	40,612	105,185	135,384
TOTAL		318,193 ²	824,116 ²	1,830,330

Demography

Population (2009): 2,109,000.
Density (2009): persons per sq mi 6.6, persons per sq km 2.6.
Urban-rural (2007): urban 36.3%; rural 63.7%.
Sex distribution (2006): male 50.13%; female 49.87%.
Age breakdown (2006): under 15, 38.2%; 15–29, 31.3%; 30–44, 15.6%; 45–59, 9.2%; 60–74, 4.5%; 75 and over 1.2%.
Population projection: (2020) 2,263,000; (2030) 2,281,000.
Ethnic composition (2000): Ovambo 34.4%; mixed race (black/white) 14.5%; Kavango 9.1%; Afrikaner 8.1%; San (Bushmen) and Bergdama 7.0%; Herero 5.5%; Nama 4.4%; Kwambi 3.7%; German 2.8%; other 10.5%.
Religious affiliation (2000): Protestant (mostly Lutheran) 49.3%; Roman Catholic 17.7%; unaffiliated Christian 14.1%; independent Christian 10.8%; traditional beliefs 6.0%; other 2.1%.
Major urban localities (2006): Windhoek 277,300; Rundu 62,300; Walvis Bay 54,900; Oshakati 34,900; Swakopmund 26,700; Katima Mulilo 25,600.

Vital statistics

Birth rate per 1,000 population (2008): 25.5 (world avg. 20.3).
Death rate per 1,000 population (2008): 12.5 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): 13.0 (world avg. 11.8).
Marriage/divorce rates per 1,000 population (2005): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2006): 3.06.
Life expectancy at birth (2006): male 44.5 years; female 42.3 years.
Adult population (ages 15–49) *living with HIV* (2007): 15.3%³ (world avg. 0.8%).

National economy

Budget (2008–09). Revenue: N\$21,973,000,000 (tax revenue 91.9%, of which customs duties and excises 40.4%, income tax 33.4%, VAT 16.8%; nontax revenue 7.0%; grants 1.1%). Expenditures: N\$22,469,100,000 (current expenditure 76.9%; capital expenditure 23.1%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): roots and tubers 290,000, millet 58,000, corn (maize) 40,000, wheat 10,000, pulses 9,000, grapes 8,500, sorghum 6,000, seed cotton 5,200; livestock (number of live animals) 2,700,000 sheep, 2,500,000 cattle, 2,000,000 goats; roundwood, n.a.; fisheries production 415,543 (from aquaculture, negligible). Mining and quarrying (2007): salt 800,000; fluorite 118,766; zinc (metal content) 52,000; lead (metal content) 11,900; copper (metal content) 8,500; uranium oxide 3,395; amethyst 40,000 kg; silver 30,000 kg; gold 2,600 kg; gem diamonds 2,266,000 carats. Manufacturing (value added in N\$'000,000; 2006): food and food products 2,633 (of which fish processing 620, meat processing 101); other manufactures, which include fur products (from Karakul sheep), textiles, carved wood products, and refined metals 2,962. Energy production (consumption): electricity (kWh; 2006) 1,606,000,000 ([2004] 2,819,000,000); coal, none (none); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).
Household income and expenditure (2003–04). Average household size⁴ 4.9; average annual income per household⁴ N\$43,520 (U.S.\$6,554); sources of income⁴: wages and salaries 46.4%, farming 29.6%, transfer payments 10.2%, self-employment 7.1%; expenditure (2001)⁵: food and nonalcoholic beverages 29.6%, housing and energy 20.6%, transportation 14.8%, education 7.6%.
Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 434; remittances (2008) 16; foreign direct investment (2005–06 avg.) 477; official development assistance (2007) 205. Disbursements for (U.S.\$'000,000): tourism (2007) 132; remittances (2008) 16; foreign direct investment (2005–07 avg.) –9.
Population economically active (2006): total 656,000; activity rate of total population 32.0% (participation rates: over age 15, 54.0%; female 43.4%; officially unemployed 5.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	87.6	93.9	97.8	100.0	105.1	112.1	123.7

Public debt (external, outstanding; 2006–07): U.S.\$2,526,000,000.
Gross national income (GNI; 2008): U.S.\$8,880,000,000 (U.S.\$4,200 per capita); purchasing power parity GNI (U.S.\$6,270 per capita).

Structure of gross domestic product and labour force

	2007		2000	
	in value N\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	5,844	9.5	134,259	20.6
Mining	7,591	12.4	3,868	0.6
Manufacturing	9,661	15.7	22,922	3.5
Construction	2,047	3.3	21,788	3.3
Public utilities	1,128	1.8	4,193	0.7
Transp. and commun.	15,040	24.5	14,308	2.2
Trade, hotels	7,859	12.8	46,579	7.1
Finance, real estate	2,922	4.8	44,251	6.8
Services	419	0.7	112,172	17.2
Pub. admin., defense	5,101	8.3	24,419	3.7
Other	3,846 ⁶	6.3 ⁶	223,726 ⁷	34.3 ⁷
TOTAL	61,457 ²	100.0 ²	652,483 ²	100.0

Land use as % of total land area (2007): in temporary crops 1.0%, in permanent crops, negligible, in pasture 46.2%, forest area 9.1%.

Foreign trade⁸

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
N\$'000,000	–1,711	–2,183	–3,481	–1,829	–1,688	–1,114
% of total	8.0%	8.8%	15.5%	7.2%	6.0%	2.6%

Imports (2006): N\$21,719,000,000 (refined petroleum products 18.3%; transport equipment 16.0%; chemicals, rubber, and plastics 12.1%; food, beverages, and tobacco 11.5%; machinery and apparatus 9.8%). **Major import sources** (2004): South Africa 85.4%; U.K. 2.6%; Germany 1.9%; China 1.2%; Zimbabwe 0.8%.

Exports (2006): N\$20,605,000,000 (diamonds 33.0%; fish 18.2%; other minerals [mainly gold, zinc, copper, lead, and silver] 12.4%; refined zinc 12.2%; meat preparations [mostly beef] 7.8%). **Major export destinations** (2004): South Africa 27.8%; U.K. 14.9%; Angola 13.8%; U.S. 11.0%; Spain 9.6%.

Transport and communications

Transport. Railroads: route length (2006) 1,480 mi, 2,382 km; (1995–96) passenger-km 48,300,000; (2003–04) metric ton-km 1,247,400. Roads (2004): total length 26,245 mi, 42,237 km (paved 13%). Vehicles (2008): passenger cars 107,825; trucks and buses 119,806. Air transport (2006)⁹: passenger-km 1,588,466,000; metric ton-km cargo (2005) 60,429,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	509	259	PCs	2007	504	240
Telephones				Dailies	2007	55 ¹⁰	43 ¹⁰
Cellular	2008	1,052 ¹¹	494 ¹¹	Internet users	2008	114	53
Landline	2008	140	66	Broadband	2007	0.3 ¹¹	— ¹¹

Education and health

Educational attainment (2000)¹². Percentage of population age 25 and over having: no formal schooling/unknown 26.5%; incomplete primary education 25.5%; complete primary 8.0%; incomplete secondary 24.9%; complete secondary 11.4%; higher 3.7%. **Literacy** (2007): total population age 15 and over literate 86.6%; males literate 86.5%; females literate 86.7%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–13)	13,675	409,508	29.9	87
Secondary/Voc. (age 14–18)	6,423	158,162	24.6	49 ¹³
Tertiary ¹³	763	13,185	17.3	6 (age 19–23)

Health: physicians (2004) 598 (1 per 3,201 persons); hospital beds (2004–05) 6,811¹⁴ (1 per 283 persons); infant mortality rate (2006) 48.1; undernourished population (2003–05) 400,000 (19% of total population based on the consumption of a minimum daily requirement of 1,790 calories).

Military

Total active duty personnel (November 2008): 9,200 (army 97.8%, navy 2.2%). **Military expenditure as percentage of GDP** (2008): 4.4%; per capita expenditure U.S.\$112.

¹An additional 6 nonvoting members may be appointed. ²Detail does not add to total given because of rounding. ³Statistically derived midpoint of range. ⁴Based on the National Household Income and Expenditure Survey 2003/04, comprising 10,920 households. ⁵Weights of consumer price index components. ⁶Taxes less imputed bank service charges and less subsidies. ⁷Includes 220,634 unemployed. ⁸Imports are f.o.b. in balance of trade and c.i.f. for commodities and trading partners. ⁹Air Namibia only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²Based on the Namibia Demographic and Health Survey 2000, comprising 6,392 households. ¹³2005–06. ¹⁴Public sector only.

Internet resources for further information:

- Bank of Namibia <http://www.bon.com.na>
- National Planning Commission <http://www.npc.gov.na>

Nauru

Official name: Naoero (Nauruan¹)
(Republic of Nauru).

Form of government: republic with one legislative house (Parliament [18]).

Head of state and government: President.

Capital: 2.

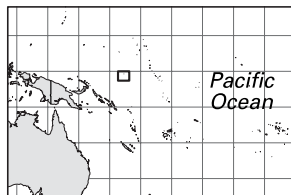
Official language: none¹.

Official religion: none.

Monetary unit: Australian dollar

(\$A); valuation (Sept. 1, 2009)

1 U.S.\$ = \$A 1.19; 1 £ = \$A 1.94.



Area and population

Districts	area		population
	sq mi	sq km	2006 survey ³
Aiwo	0.4	1.1	1,285
Anabar	0.6	1.5	473
Anetan	0.4	1.0	351
Anibare	1.2	3.1	116
Baitsi	0.5	1.2	657
Boe	0.2	0.5	825
Buada	1.0	2.6	657
Denigomodu	0.3	0.9	1,577 ⁴
Ewa	0.5	1.2	723
Ijuw	0.4	1.1	347
Meneng	1.2	3.1	1,509
Nibok	0.6	1.6	671
Uaboe	0.3	0.8	143
Yaren	0.6	1.5	635
TOTAL	8.2	21.2	9,968⁵

Demography

Population (2009): 9,800.

Density (2009): persons per sq mi 1,195, persons per sq km 462.3.

Urban-rural (2006): urban 100%.

Sex distribution (2006): male 50.78%; female 49.22%.

Age breakdown (2005): under 15, 37.5%; 15–29, 29.5%; 30–44, 17.8%; 45–59, 11.8%; 60–74, 3.1%; 75 and over, 0.3%.

Population projection: (2020) 12,000; (2030) 14,000.

Doubling time: 33 years.

Ethnic composition (2006): Nauruan 95.8%; Kiribertese (Gilbertese) 1.5%; Asian 1.4%; other Pacific Islanders 0.3%; other/unknown 1.0%.

Religious affiliation (2005): Protestant c. 49%, of which Congregational c. 29%;

Roman Catholic c. 24%; Chinese folk-religionist c. 10%; other c. 17%.

Major cities: none; population of Yaren urban area (2007) 4,616.

Vital statistics

Birth rate per 1,000 population (2009): 29.8 (world avg. 20.3).

Death rate per 1,000 population (2009): 9.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2009): 20.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.4⁶.

Marriage/divorce rates per 1,000 population: n.a.

Life expectancy at birth (2008): male 52.5 years; female 58.2 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 391; endocrine nutritional and metabolic diseases 98; diseases of the respiratory system 65; malignant neoplasms (cancers) 43.

National economy

Budget (2007). Revenue: \$A 17,751,000 (grants 38.2%, property income 35.3%, sales of goods and services 13.1%, other taxes 13.4%). Expenditures: \$A 21,769,000.

Total public and private debt (July 2007): U.S.\$854,000,000.

Gross national income (at current market prices; 2008): U.S.\$34,933,000 (U.S.\$3,650 per capita).

Distribution of gross domestic product and labour force

	2007		1997	
	in value \$A '000,000	% of total value	labour force ^{7, 8, 9}	% of labour force ^{7, 8, 9}
Agriculture, fishing	3.7	13.8	...	...
Mining (phosphate)	4.6	17.1	...	...
Public utilities	-3.5	-13.0	528	24.7
Manufacturing	0.6	2.2	...	...
Construction	0.6	2.2	...	...
Transportation and communications	0.3	1.1	...	...
Trade, hotels	8.0	29.7	137	6.4
Finance	0.7	2.6	33	1.6
Pub. admin.	8.1	30.1	1,238	58.0
Services	3.8	14.1	...	...
Other	...	...	198	9.3
TOTAL	26.9	100.0¹⁰	2,134	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 1,800, vegetables 500, pig meat 75, tropical fruit, coffee, almonds, figs, and pandanus (screw pine) are also cultivated, but most foodstuffs and beverages (including water) are imported; livestock (number of live animals) 2,900 pigs, 5,000 chickens; roundwood none; fisheries production 39 (from aquaculture, none). Mining and quarrying (2007): phosphate rock (gross weight including basic slag and guano) 45,000¹¹. Manufacturing: none; virtually all consumer manufactures are imported. Energy production (consumption): electricity (kW-hr; 2006) 33,000,000 (33,000,000); coal, none (none);

crude petroleum, none (none); petroleum products (metric tons; 2006) none (46,000); natural gas, none (none).

Population economically active (2002): 3,280⁸; activity rate of total population 32.6% (participation rates: over age 15, 76.7%; female 45.5%; unemployed [2006] 26.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.5	95.4	97.7	100.0	103.2	106.2	111.0

Household income and expenditure (2006). Average household size 6.5; average annual income per household \$A 9,550 (U.S.\$7,199); sources of income: wages and salaries 68.7%, gifts 6.2%, imputed rent 5.4%, other 19.7%; expenditure: food and nonalcoholic beverages 52.1%, housing/energy/household furnishings 17.0%, gifts 8.8%, transportation 7.6%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; foreign direct investment (2005–07 avg.) 0.67; official development assistance (2007) 26. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops, n.a., in permanent crops, n.a., in pasture, n.a., forest area, none.

Foreign trade

Balance of trade (current prices)

	2003–04	2004–05	2005–06
\$A '000,000	-26.2	-26.5	-30.8
% of total	74.4%	94.3%	91.1%

Imports (2005–06): \$A 32,300,000 (unspecified [mostly personal material needs] 100.0%). **Major import sources** (2005): South Korea c. 48%; Australia c. 36%; U.S. c. 6%; Germany c. 5%.

Exports (2005–06): \$A 1,500,000 (phosphate, virtually 100%^{11, 12}). **Major export destinations** (2005): South Korea c. 30%; Canada c. 24%; other c. 46%.

Transport and communications

Transport. Railroads (2001): length 3 mi, 5 km; passenger traffic, n.a.; metric ton-km cargo, n.a. Roads (2004): total length 25 mi, 40 km (paved 73%). Vehicles: n.a. Air transport (2004): passenger-km 338,000,000; metric ton-km cargo 34,000,000¹³.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	0.8	77	PCs	2007	...	...
Telephones	...	...	...	Dailies	2005	0	0
Cellular	2008	...	...	Internet users	2008	...	...
Landline	2008	1.8	188	Broadband	2008	...	...

Education and health

Educational attainment (2007). Percentage of population age 15–49 and over having: incomplete/complete primary education 4%; incomplete secondary 71%; complete secondary 17%; more than secondary 8%. **Literacy** (2007): total population age 15 to 49 literate c. 98%; males literate 96.1%; females literate 99.3%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	52	1,393	26.8	...
Secondary/Voc. (age 12–17)	24	815	34.0	...
Tertiary	—	—	—	... (age 18–22)

Health (2008): physicians 10 (1 per 957 persons); hospital beds 51 (1 per 188 persons); infant mortality rate per 1,000 live births (2003–07) 37.9⁹; undernourished population, n.a.

Military

Total active duty personnel (2008): Nauru does not have any military establishment. The defense is assured by Australia, but no formal agreement exists.

¹Nauruan is the national language; English is the language of business and government. ²No official capital; government offices are located in Yaren district. ³Based on 2006 Nauru Household Income and Expenditure Survey. ⁴Includes housing complex for foreign workers. The majority of foreign mine workers were repatriated to Kiribati and Tuvalu in 2006. ⁵Reported total; summed total equals 9,969. ⁶Based on 2007 Republic of Nauru Demographic and Health Survey. ⁷Employed only. ⁸Nauruan only. ⁹Most non-Nauruans are phosphate industry contract workers. ¹⁰Detail does not add to total given because of rounding. ¹¹Phosphate extraction, the backbone of the Nauruan economy, halted in 2003 but resumed in 2006. Expect phosphate extraction for the next 5 years (on the surface) to 20 years (from the subsurface) using processing refurbishments. ¹²Coral gravel, a by-product of phosphate extraction, was exported in 2008. ¹³Includes weight of passengers and mail.

Internet resources for further information:

- Nauru Bureau of Statistics
<http://www.spc.int/prism/country/nr/stats>
- Asian Development Bank Country Economic Report: Nauru
<http://www.adb.org/Documents/CERs/NAU/CER-NAU-2007.pdf>

Nepal

Official name: Sanghiya Loktantrik Ganatantra Nepal (Federal Democratic Republic of Nepal).

Form of government: multiparty republic with interim legislature (Constituent Assembly [601])².

Chief of state: President.

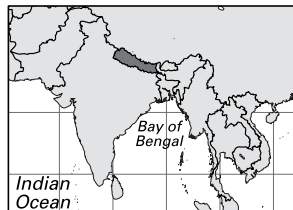
Head of government: Prime Minister.

Capital: Kathmandu.

Official language: Nepali.

Official religion: none.

Monetary unit: Nepalese rupee (NRs); valuation (Sept. 1, 2009) 1 U.S.\$ = NRs 78.46; 1 £ = NRs 127.32.



Area and population		area		population
Development regions	Principal centres	sq mi	sq km	2001 census
Eastern	Dhankuta	10,987	28,456	5,344,476
Central	Kathmandu	10,583	27,410	8,031,629
Western	Pokhara	11,351	29,398	4,571,013
Mid-western	Birendranagar	16,362	42,378	3,012,975
Far-western	Dipayal	7,544	19,539	2,191,330
TOTAL		56,827	147,181	23,151,423

Demography

Population (2009): 28,563,000.

Density (2009): persons per sq mi 502.6, persons per sq km 194.1.

Urban-rural (2006): urban 16.7%; rural 83.3%.

Sex distribution (2007): male 50.10%; female 49.90%.

Age breakdown (2005): under 15, 39.0%; 15–29, 27.9%; 30–44, 17.2%; 45–59, 10.2%; 60–74, 4.7%; 75–84, 0.9%; 85 and over, 0.1%.

Population projection: (2020) 34,209,000; (2030) 38,886,000.

Doubling time: 33 years.

Ethnic composition (2000): Nepalese 55.8%; Maithili 10.8%; Bhojpuri 7.9%; Tharu 4.4%; Tamang 3.6%; Newar 3.0%; Awadhi 2.7%; Magar 2.5%; Gurkha 1.7%; other 7.6%.

Religious affiliation (2001): Hindu 80.6%; Buddhist 10.7%; Muslim 4.2%; Kirat (local traditional belief) 3.6%; Christian 0.5%; other 0.4%.

Major cities (2001): Kathmandu 671,846; Biratnagar 166,674; Lalitpur 162,991; Pokhara 156,312; Birganj 112,484.

Vital statistics

Birth rate per 1,000 population (2008): 27.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 19.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.10.

Life expectancy at birth (2008): male 63.6 years; female 64.5 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 472; diseases of the circulatory system 203, of which ischemic heart disease 95; accidents and injuries 86; malignant neoplasms (cancers) 63.

National economy

Budget (2007–08). Revenue: NRs 104,865,300,000 (tax revenue 81.1%, of which VAT 28.4%, customs duties 20.1%, corporate income tax 12.6%; non-tax revenue 18.9%). Expenditures: NRs 151,969,500,000 (current expenditures 64.6%, of which education 16.8%, defense 6.7%, health 6.1%; capital expenditures 35.4%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 3,680,839, sugarcane 2,599,789, potatoes 1,943,246, corn (maize) 1,819,925, wheat 1,515,139, millet 284,813, ginger 158,905, mangoes 143,000, mustard seed 141,000, tangerines 105,000, bananas 53,500, garlic 30,115; live-stock (number of live animals) 7,847,624 goats, 7,044,279 cattle, 4,366,813 buffalo; roundwood 13,879,000 cu m, of which fuelwood 91%; fisheries production 46,779 (from aquaculture 57%). Mining and quarrying (2007): limestone 822,042; talc 9,043; marble 22,110 sq m. Manufacturing (value added in U.S.\$'000,000; 2002): food products 83; textiles and wearing apparel 73; tobacco products 55; beverages 49; paints, soaps, and pharmaceuticals 42. Energy production (consumption): electricity (kW-hr; 2006) 2,684,000,000 (2,755,000,000); coal (metric tons; 2006) 11,963 (420,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (645,000); natural gas, none (none).

Gross national income (GNI; 2008): U.S.\$11,537,000,000 (U.S.\$400 per capita); purchasing power parity GNI (U.S.\$1,120 per capita).

Structure of gross domestic product and labour force				
	2007-08		1998-99	
	in value NRs '000,000	% of total value	labour force ³	% of labour force ³
Agriculture	258,282	31.5	7,203,000	76.1
Mining	3,857	0.5	8,000	0.1
Manufacturing	55,900	6.8	552,000	5.8
Construction	51,044	6.2	344,000	3.7
Public utilities	15,556	1.9	26,000	0.3
Transp. and commun.	73,697	9.0	135,000	1.4
Trade, restaurants, hotels	119,109	14.5	522,000	5.5
Finance, real estate	116,190	14.1	51,000	0.5
Pub. admin., defense	15,069	1.8	70,000	0.7
Services	83,427	10.2	544,000	5.8
Other	28,684 ⁴	3.5 ⁴	8,000	0.1
TOTAL	820,814 ⁵	100.0	9,463,000	100.0

Population economically active (2003)⁶: total 9,981,000; activity rate of total population 38.3% (participation rates: ages 15–64, 66.3%; female 41.0%; unofficially unemployed [2004] c. 42%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	86.1	91.0	93.6	100.0	107.6	114.1	126.6

Public debt (external, outstanding; 2007): U.S.\$3,485,000,000.

Household income and expenditure (2005–06)⁷. Average household size 5.4; income per household NRs 328,692 (U.S.\$4,439); sources of income: self-employment 29.5%, wages and salaries 28.1%, remittances 16.1%, real estate 10.2%; expenditure: food and beverages 38.9%, housing and energy 24.3%, recreation and culture 8.7%, education 7.6%, clothing and footwear 5.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 200; remittances (2008) 2,735; foreign direct investment (2005–07 avg.) 0.3; official development assistance (2007) 598. Disbursements for (U.S.\$'000,000): tourism (2007) 274; remittances (2008) 4.

Land use as % of total land area (2007): in temporary crops 16.2%, in permanent crops 0.8%, in pasture 12.2%, forest area 24.6%.

Foreign trade⁸

Balance of trade (current prices)						
	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
NRs '000,000	–74,422	–82,366	–90,768	–113,546	–130,913	–165,329
% of total	42.7%	43.3%	43.6%	48.5%	51.8%	57.6%

Imports (2006–07): NRs 191,709,000,000 (basic manufactures [including fabrics, yarns, and made-up articles] 24.8%; mineral fuels [mostly refined petroleum] 19.0%; machinery and transport equipment 18.6%; chemicals and chemical products 13.5%). **Major import sources** (2006): India c. 48%; China c. 13%; U.A.E. c. 12%; Saudi Arabia c. 5%; Kuwait c. 4%.

Exports (2006–07): NRs 60,796,000,000 (ready-made garments 9.8%; woollen carpets 9.2%; vegetable ghee 6.8%; thread 6.7%; zinc sheets 5.9%; textiles 5.0%; jute goods 4.5%). **Major export destinations** (2006): India c. 58%; U.S. c. 14%; Germany c. 6%; U.K. c. 3%; France c. 2%.

Transport and communications

Transport. Railroads (2006): route length 59 km; passengers carried (2002) 1,600,000; freight handled 22,000 metric tons. Roads (2007): total length 17,782 km (paved 30%). Vehicles (2007): passenger cars 93,266; trucks and buses 64,959. Air transport: passenger-km (2003) 652,000,000; metric ton-km cargo (2005) 7,000,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	249	9.6	PCs	2005	132	4.9
Telephones				Dailies	2007	680 ⁹	38 ⁹
Cellular	2008	4,200 ¹⁰	146 ¹⁰	Internet users	2008	499	17
Landline	2008	805	28	Broadband	2007	14 ¹⁰	0.5 ¹⁰

Education and health

Educational attainment (2005–06)⁷. Percentage of population having: unknown through literate 15.4%; primary education 22.0%; secondary 44.0%; higher 18.6%. **Literacy** (2003–04): total population age 15 and over literate 48.0%; males literate 64.5%; females literate 33.8%.

Education (2006–07)				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–9)	112,827	4,515,059	40.0	76
Secondary/Voc. (age 10–16)	52,528 ¹¹	1,983,561 ¹²	34.7 ¹¹	...
Tertiary	...	147,123 ¹³	...	6 ¹³ (age 17–21)

Health (2006): physicians¹⁴ 1,259 (1 per 21,737 persons); hospital beds 9,881 (1 per 2,801 persons); infant mortality rate per 1,000 live births (2007) 48.0; undernourished population (2003–05) 4,000,000 (15% of total population based on the consumption of a minimum daily requirement of 1,760 calories).

Military

Total active duty personnel (November 2008): 69,000 (army 100%). **Military expenditure as percentage of GDP** (2007): 2.1%; per capita expenditure U.S.\$6.

¹Includes 26 nonelected seats. ²An interim constitution was promulgated Jan. 15, 2007. In late December 2007 the interim legislature voted to abolish the monarchy (which had been suspended from January 2007); the formal endorsement of the abolishment occurred in May 2008. ³Employed only; excludes 1,987,000 workers ages 5–14. ⁴Indirect taxes less imputed bank service charges and less subsidies. ⁵Detail does not add to total given because of rounding. ⁶Estimates of the ILO Employment Trends Unit. ⁷Based on the Household Budget Survey 2005–06. ⁸Imports c.i.f.; exports f.o.b. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹2002–03. ¹²2005–06. ¹³2003–04. ¹⁴Public health system only.

Internet resources for further information:

- Central Bank of Nepal <http://www.nrb.org.np>
- Central Bureau of Statistics <http://www.cbs.gov.np>

Netherlands¹

Official name: Koninkrijk der Nederlanden (Kingdom of the Netherlands).

Form of government: constitutional monarchy with a parliament (States General) comprising two chambers (Senate [75]; House of Representatives [150]).

Chief of state: Monarch.

Head of government: Prime Minister.

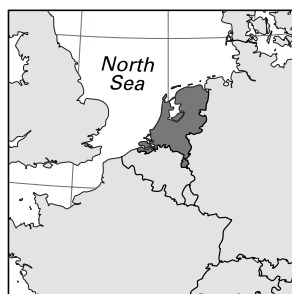
Capital: Amsterdam.

Seat of government: The Hague.

Official language: Dutch².

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2008 ³ estimate
Drenthe	Assen	1,035	2,680	488,135
Flevoland	Lelystad	931	2,412	378,688
Friesland	Leeuwarden	2,217	5,741	643,189
Gelderland	Arnhem	1,983	5,137	1,983,869
Groningen	Groningen	1,146	2,968	573,459
Limburg	Maastricht	853	2,209	1,123,705
Noord-Brabant	's-Hertogenbosch	1,962	5,082	2,424,827
Noord-Holland	Haarlem	1,580	4,092	2,626,163
Overijssel	Zwolle	1,321	3,421	1,119,994
Utrecht	Utrecht	559	1,449	1,201,350
Zeeland	Middelburg	1,133	2,934	380,585
Zuid-Holland	The Hague	1,314	3,403	3,461,435
TOTAL		16,034⁴	41,528⁴	16,405,399

Demography

Population (2009): 16,522,000.

Density (2009)⁵: persons per sq mi 1,267, persons per sq km 489.1.

Urban-rural (2005): urban 80.2%; rural 19.8%.

Sex distribution (2009)³: male 49.48%; female 50.52%.

Age breakdown (2009)³: under 15, 17.7%; 15–29, 18.2%; 30–44, 21.5%; 45–59, 21.3%; 60–74, 14.5%; 75–84, 5.1%; 85 and over, 1.7%.

Population projection: (2020) 17,090,000; (2030) 17,458,000.

Ethnic composition (by place of origin⁶; 2009)³: Netherlander 80.0%; from EU countries 5.3%; Indonesian 2.3%; Turkish 2.3%; Surinamese 2.1%; Moroccan 2.1%; Netherlands Antillean/Aruban 0.8%; other 5.1%.

Religious affiliation (2004): Roman Catholic c. 30%; Reformed/Lutheran tradition c. 20%; Muslim c. 6%; nonreligious/atheist c. 40%; other c. 4%.

Major urban agglomerations (2008)³: Amsterdam 1,482,287; Rotterdam 1,169,800; The Hague 997,323; Utrecht 592,463; Haarlem 407,521.

Vital statistics

Birth rate per 1,000 population (2008): 11.2 (world avg. 20.3); within marriage 58.8%; outside of marriage 41.2%.

Death rate per 1,000 population (2008): 8.2 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.77.

Marriage/divorce rates per 1,000 population (2008): 4.6/2.0.

Life expectancy at birth (2008): male 78.4 years; female 82.4 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 255.4; malignant neoplasms (cancers) 241.8; diseases of the respiratory system 84.1; diseases of the digestive system 33.2.

National economy

Budget (2007). Revenue: €261,628,000,000 (social security contributions 31.3%, indirect taxes 28.3%, direct taxes 26.0%, nontax revenue 7.3%, sales tax 7.1%). Expenditures: €259,526,000,000 (current expenditure 92.3%, of which social security and welfare 45.3%; development expenditure 7.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 7,200,000, sugar beets 5,400,000, wheat 990,000, onions 925,000, tomatoes 690,000, carrots 545,000, cucumbers 445,000, apples 370,000, mushrooms 245,000, flowering bulbs and tubers 80,000 acres (32,400 hectares), of which tulips 27,200 acres (11,000 hectares), cut flowers/plants under glass 10,900 acres (4,400 hectares); livestock (number of live animals) 11,663,000 pigs, 3,763,000 cattle, 1,369,000 sheep; roundwood 1,022,056 cu m, of which fuelwood 28%; fisheries production 470,363 (from aquaculture 12%). Mining: limestone, n.a. Manufacturing (value added in €'000,000; 2008): food, beverages, and tobacco 16,198; petroleum products 8,094; base chemicals and man-made fibres 7,975; machinery and equipment 7,084; fabricated metal products 6,129; printing and publishing 5,946. Energy production (consumption): electricity (kW-hr; 2008) 107,645,000,000 ([2006] 118,192,000,000); coal (metric tons; 2008) none ([2006] 12,683,000); crude petroleum (barrels; 2008) 12,200,000 ([2006] 357,600,000); petroleum products (metric tons; 2006) 61,361,000 (25,334,000); natural gas (cu m; 2008) 79,771,000,000 ([2006] 50,416,000,000).

Household income and expenditure (2005). Average household size (2008)³ 2.3; disposable income per household €34,321 (U.S.\$42,683); sources of income (2003): wages 70.8%, transfers 25.3%, other 3.9%; expenditure: housing and energy 22.2%, transportation 11.4%, food and nonalcoholic beverages 10.6%, recreation/culture 10.1%, household furnishings 6.2%.

Land use as % of total land area (2007): in temporary crops 31.4%, in permanent crops 1.0%, in pasture 24.3%, forest area 10.9%.

Gross national income (GNI; 2008): U.S.\$824,636,000,000 (U.S.\$50,150 per capita); purchasing power parity GNI (U.S.\$41,670 per capita).

Structure of gross domestic product and labour force

	2008		2005	
	in value €'000,000	% of total value	labour force ^{7, 8}	% of labour force ^{7, 8}
Agriculture, forestry, fishing	9,414	1.6	234,000	3.0
Mining	21,579	3.6	8,000	0.1
Manufacturing	71,767	12.1	1,021,000	13.1
Construction	30,570	5.1	483,000	6.2
Public utilities	10,779	1.8	44,000	0.6
Transp. and commun.	35,007	5.9	484,000	6.2
Trade, hotels	75,857	12.7	1,442,000	18.5
Finance, real estate	149,658	25.1	1,173,000	15.1
Pub. admin., defense	58,675	9.9	538,000	6.9
Services	65,692	11.0	2,035,000	26.1
Other	66,885 ⁹	11.2 ⁹	323,000	4.2
TOTAL	595,883	100.0	7,784,000¹⁰	100.0

Public debt (December 2008): U.S.\$392,000,000,000.

Population economically active (2005): total 8,308,000; activity rate of total population c. 51% (participation rates: ages 15–64, 75.1%; female 45.1%; unemployed [April 2008–March 2009] 2.8%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	95.1	97.2	98.3	100.0	101.1	102.7	105.3
Hourly earnings index	95.1	97.6	99.1	100.0	101.8	103.4	...

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 13,339; remittances (2008) 3,006; foreign direct investment (FDI; 2005–07 avg.) 51,705. Disbursements for (U.S.\$'000,000): tourism (2007) 19,110; remittances (2008) 8,431; FDI (2005–07 avg.) 71,354.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	+27,299	+27,413	+31,455	+30,858	+41,113	+31,515
% of total	6.2%	5.7%	5.9%	5.5%	6.3%	4.5%

Imports (2007): €307,851,000,000 (machinery and apparatus 25.7%, of which office machines/computers/parts 8.7%; mineral fuels 13.6%, of which crude petroleum 7.0%; chemicals and chemical products 12.1%; food products 7.0%; road vehicles 5.4%). **Major import sources:** Germany 20.1%; Belgium 10.8%; China 8.6%; U.S. 7.9%; U.K. 6.4%.

Exports (2007): €348,964,000,000 (machinery and apparatus 26.3%, of which office machines/computers/parts 8.3%, nonelectrical machinery and equipment 7.3%; chemicals and chemical products 15.2%; food 9.8%; refined petroleum 8.0%). **Major export destinations:** Germany 23.6%; Belgium 11.9%; U.K. 9.1%; France 8.2%; U.S. 5.0%.

Transport and communications

Transport. Railroads (2006): length 2,797 km; passenger-km (2004) 14,097,000,000; metric ton-km cargo (2001) 4,293,000,000. Roads (2006): total length 134,981 km (paved 90%). Vehicles (2007)³: passenger cars 7,230,178; trucks and buses 1,064,846. Air transport (2007): passenger-km 75,012,000,000; metric ton-km cargo 4,735,500,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	10,514	648	PCs	2007	14,934	912
Telephones				Dailies	2007	5,517 ¹²	337 ¹²
Cellular	2008	19,927 ¹³	1,212 ¹³	Internet users	2008	14,273	868
Landline	2008	7,324	446	Broadband	2008	5,756 ¹³	350 ¹³

Education and health

Educational attainment (2007). Percentage of population ages 25–64 having: primary/lower secondary education 27%; upper secondary 39%; higher vocational 2%; university 29%; other 3%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	1,277,478	...	98
Secondary/Voc. (age 12–17)	106,952	1,423,262	13.3	88
Tertiary	44,414	579,622	13.1	60 (age 18–22)

Health: physicians (2005) 60,519 (1 per 270 persons); hospital beds (2006) c. 48,000 (1 per 340 persons); infant mortality rate (2008) 3.8.

Military

Total active duty personnel (November 2008): 40,537 (army 53.0%, navy 23.4%, air force 23.6%). **Military expenditure as percentage of GDP** (2007): 1.5%; per capita expenditure U.S.\$700.

¹Alternately known as The Netherlands. ²Frisian is officially recognized in Friesland but not legally codified by the national government. ³January 1. ⁴Total area per more recent survey equals 16,040 sq mi (41,543 sq km), of which land area equals 13,044 sq mi (33,783 sq km), inland water equals 1,380 sq mi (3,574 sq km), and coastal water equals 1,616 sq mi (4,186 sq km). ⁵Based on land area. ⁶Including second generation. ⁷Ages 15–64 only. ⁸Employed only. ⁹Taxes less imputed bank service charges and less subsidies. ¹⁰Detail does not add to total given because of rounding. ¹¹Imports c.i.f.; exports f.o.b. ¹²Circulation of daily newspapers. ¹³Subscribers.

Internet resources for further information:

- Statistics Netherlands <http://www.cbs.nl>
- Netherlands Bank <http://www.dnb.nl/en/home/index.jsp>

Netherlands Antilles

Official name: Nederlandse Antillen (Dutch); Antianan Hulandes (Papiamentu); Netherlands Antilles (English).

Political status: nonmetropolitan territory of the Netherlands with one legislative house (Staten, or Parliament [22¹]).

Chief of state: Dutch Monarch represented by Governor.

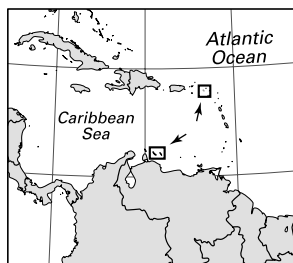
Head of government: Prime Minister.

Capital: Willemstad.

Official languages: Dutch; Papiamentu²; English.

Official religion: none.

Monetary unit: Netherlands Antillean guilder (Naf.); valuation (Sept. 1, 2009) 1 U.S.\$ = Naf. 1.79; 1 £ = Naf. 2.90.



Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.3	94.7	96.1	100.0	103.1	106.3	113.6

Gross national income (at current market prices; 2008): U.S.\$3,818,538,000 (U.S.\$19,557 per capita).

Structure of gross domestic product and labour force

	2008			
	in value Naf. '000,000	% of total value	labour force ^a	% of labour force ^a
Agriculture, forestry, fishing }	41.9	0.6	817	1.2
Mining and quarrying				
Manufacturing	391.2	5.5	4,139	5.9
Construction	369.4	5.2	5,538	7.9
Public utilities	258.2	3.6	918	1.3
Transp. and commun.	606.2	8.6	4,397	6.3
Trade, hotels, restaurants	1,207.4	17.1	16,139	23.1
Finance, real estate, insurance	1,685.2	23.8	10,804	15.5
Pub. admin., defense	790.6	11.2	5,877	8.4
Services	1,212.6	17.1	14,225	20.4
Other	514.7 ⁹	7.3 ⁹	7,007 ¹⁰	10.0 ¹⁰
TOTAL	7,077.2 ¹¹	100.0	69,862 ¹¹	100.0

Public debt (external outstanding; March 2009): U.S.\$438,800,000.

Land use as % of total land area (2007): in temporary crops 10.0%, in permanent crops, n.a., in pasture, n.a., forest area 1.5%.

Foreign trade¹²

Balance of trade (current prices)

	2000	2001	2002
U.S.\$'000,000	-845	-410	-569
% of total	17.4%	7.8%	14.3%

Imports (2002): U.S.\$2,268,500,000 (crude petroleum 59.7%, refined petroleum 8.7%, food 6.4%, electrical machinery and apparatus 4.0%). **Major import sources** (2004): Venezuela 51.1%; United States 21.9%; Netherlands 5.0%.

Exports (2002): U.S.\$1,699,200,000 (refined petroleum 94.7%, food 1.2%, furniture and parts 0.8%). **Major export destinations** (2004): United States 20.4%; Panama 11.2%; Guatemala 8.8%; Haiti 7.1%; The Bahamas 5.6%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 373 mi, 600 km (paved 50%). Vehicles (2009)¹³: passenger cars 103,424; trucks and buses 22,003. Air transport (2001)¹⁴: passenger arrivals and departures 2,131,000; freight loaded and unloaded 18,900 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1999	71	390	PCs	2006	...	...
Telephones				Dailies	2007	30 ¹⁵	154 ¹⁵
Cellular	2004	200 ¹⁶	1,086 ¹⁶	Internet users	1999	2.0	11
Landline	2008	88	451	Broadband	2006	...	...

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.8%; primary education 24.2%; lower secondary 42.8%; upper secondary 16.8%; higher 11.4%; unknown 4.0%. **Literacy** (2007): total population age 15 and over literate 96.4%; males literate 96.3%; females literate 96.4%.

Education (2002–03)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	1,145	22,667	19.8	96 ¹⁷
Secondary/Voc. (age 12–17)	1,181	15,268	12.9	81
Tertiary ¹⁷	300	2,285	7.6	21 (age 18–22)

Health: physicians (2001) 333 (1 per 520 persons); hospital beds (2002) 1,264 (1 per 138 persons); infant mortality rate per 1,000 live births (2008) 6.1; undernourished population (2002–04) 20,000 (13% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (2009): n.a.; Dutch and Antillean coast guard personnel are assisted by the U.S. coast guard.

¹The dissolution of the Netherlands Antilles is scheduled to take place in October 2010. Curaçao and Sint Maarten are to become separate overseas territories within the Netherlands with a status similar to Aruba. Bonaire, Saba, and Sint Eustatius will be directly integrated into the Netherlands. Curaçao's island council has jurisdiction over the other island councils until the dissolution is finalized. ²From 2003. ³January 1. ⁴Mostly tomatoes, beans, cucumbers, gherkins, melons, and lettuce grown on hydroponic farms; aloes grown for export, divi-divi pods, and sour orange fruit are nonhydroponic crops. ⁵Excludes Curaçao, Saba, and Sint Eustatius. ⁶Curaçao only. ⁷Weights of consumer price index components. ⁸Curaçao and Bonaire only. ⁹Taxes less subsidies and less imputed bank service charges. ¹⁰Includes 6,919 unemployed. ¹¹Detail does not add to total given because of rounding. ¹²Imports c.i.f.; exports f.o.b. ¹³Excludes Saba and Sint Eustatius. ¹⁴Curaçao and Sint Maarten airports. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷2001–02.

Internet resources for further information:

- Central Bank of the Netherlands Antilles <http://www.centralbank.an>
- Central Bureau of Statistics <http://www.cbs.an>

Area and population

Island councils	Capitals	area		population
		sq mi	sq km	2009 ³ estimate
Leeward Islands				
Bonaire	Kralendijk	111	288	12,877
Curaçao	Willemstad	171	444	141,766
Windward Islands				
Saba	The Bottom	5	13	1,601
Sint Eustatius	Oranjestad	8	21	2,768
Sint Maarten (Dutch part only)	Philipsburg	13	34	40,917
TOTAL		308	800	199,929

Demography

Population (2009): 202,000.

Density (2009): persons per sq mi 655.8, persons per sq km 252.5.

Urban-rural (2008): urban 92.7%; rural 7.3%.

Sex distribution (2009³): male 46.69%; female 53.31%.

Age breakdown (2009³): under 15, 21.8%; 15–29, 18.6%; 30–44, 23.1%; 45–59, 21.9%; 60–74, 10.8%; 75–84, 2.9%; 85 and over, 0.9%.

Population projection: (2020) 214,000; (2030) 213,000.

Ethnic composition (2000): local black-other (Antillean Creole) 81.1%; Dutch 5.3%; Surinamese 2.9%; other (significantly West Indian black) 10.7%.

Religious affiliation (2001): Roman Catholic 72.0%; Protestant 16.0%; Spiritist 0.9%; Buddhist 0.5%; Jewish 0.4%; Bahā'ī 0.3%; Hindu 0.2%; Muslim 0.2%; other/unknown 9.5%.

Major locales (2001): Willemstad 93,599; Kralendijk 3,179; Philipsburg 1,227; Oranjestad 1,003; The Bottom 462.

Vital statistics

Birth rate per 1,000 population (2008): 13.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 6.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.06.

Marriage/divorce rates per 1,000 population (2006): 5.8/2.5.

Life expectancy at birth (2008): male 72.8 years; female 79.9 years.

Major causes of death per 100,000 population (1993): infectious and parasitic diseases/diseases of the respiratory system 209.0; diseases of the circulatory system 180.2; malignant neoplasms (cancers) 117.7.

National economy

Budget (2007). Revenue: Naf. 837,200,000 (tax revenue 84.9%, of which sales tax 42.6%, import duties 19.8%; nontax revenue 11.4%; grants 3.7%). Expenditures: Naf. 931,800,000 (current expenditures 98.5%, of which transfers 34.8%, wages 33.5%, interest payments 18.8%; capital expenditures 1.5%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): 4; livestock (number of live animals) 13,600 goats, 9,100 sheep, 2,600 pigs, 140,000 chickens; roundwood 3,200 cu m, of which fuelwood 100%; fisheries production 3,662 (from aquaculture, negligible). Mining and quarrying (2007): salt 500,000, sulfur by-product 23,000. Manufacturing (2004): residual fuel oil 4,188,000; gas-diesel oils 2,202,000; asphalt 994,000; other manufactures include electronic parts, cigarettes, textiles, rum, and Curaçao liqueur. Energy production (consumption): electricity (kW-hr; 2006) 1,271,000,000 (1,271,000,000); coal, none (none); crude petroleum (barrels; 2006) none (84,360,000); petroleum products (metric tons; 2006) 9,704,000 (1,186,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007)⁵ 772; remittances (2008) 32; foreign direct investment (FDI; 2005–07 avg.) 84. Disbursements for (U.S.\$'000,000): tourism (2007)⁵ 92; remittances (2008) 72; FDI (2005–07 avg.) 40.

Household income and expenditure. Average household size (2008³) 2.6; income per household: n.a.; sources of income: n.a.; expenditure (1996)⁶: 7; housing 26.5%, transportation and communications 19.9%, food 14.7%, household furnishings 8.8%, recreation and education 8.2%, clothing and footwear 7.5%.

Population economically active (2008): total 96,416; activity rate of total population 48.4% (participation rates [2001]: ages 15–64, 68.7%; female [2006] 49.0%; unemployed 9.7%).

New Caledonia

Official name: Territoire des Nouvelle-Calédonie et Dépendances (Territory of New Caledonia and Dependencies)¹.

Political status:² unique collectivity (France) with one legislative house (Congress³ [54]).

Chief of state: President of France.

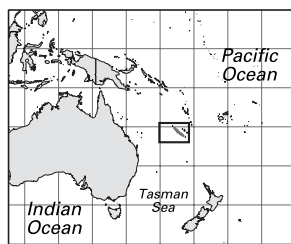
Heads of government: High Commissioner (for France); President of the Government (for New Caledonia).

Capital: Nouméa.

Official language: none⁴.

Official religion: none.

Monetary unit: CFP franc (CFPF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFPF 83.37; 1 £ = CFPF 135.28.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2004 census
Loyauté (Loyalty)	Wé	765	1,981	22,080
Lifou		466	1,207	10,320
Maré		248	642	7,401
Ouvéa		51	132	4,359
Nord (Northern)	Koné	3,305	8,561	44,474
Bélep, Îles		27	70	930
New Caledonia (part)		3,278	8,491	43,544
Sud (Southern)	Nouméa	3,102	8,033	164,235
New Caledonia (part)		3,043	7,881	162,395
Pins, île des		59	152	1,840
TOTAL		7,172	18,575	230,789

Demography

Population (2009): 251,000.

Density (2009): persons per sq mi 35.0, persons per sq km 13.5.

Urban-rural (2005): urban 63.7%; rural 36.3%.

Sex distribution (2008⁵): male 50.42%; female 49.58%.

Age breakdown (2008⁵): under 15, 26.7%; 15–29, 24.1%; 30–44, 22.8%; 45–59, 15.7%; 60–74, 8.2%; 75–84, 2.0%; 85 and over, 0.5%.

Population projection: (2020) 290,000; (2030) 320,000.

Doubling time: 54 years.

Ethnic composition (1996): Melanesian 45.3%, of which local (Kanak) 44.1%, Vanuatuan 1.2%; European 34.1%; Wallisian or Futunan 9.0%; Indonesian 2.6%; Tahitian 2.6%; Vietnamese 1.4%; other 5.0%.

Religious affiliation (2000): Roman Catholic 54.2%; Protestant 14.0%; unaffiliated/other Christian 18.8%; Muslim 2.7%; nonreligious 5.8%; other 4.5%.

Major communes (2004): Nouméa 91,386 (urban agglomeration 146,245); Mont-Dore 24,195; Dumbéa 18,602; Païta 12,062; Poindimié 4,824.

Vital statistics

Birth rate per 1,000 population (2008): 16.2 (world avg. 20.3); (2007) within marriage 30.8%, outside of marriage 69.2%.

Death rate per 1,000 population (2008): 4.7 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 2.20.

Marriage/divorce rates per 1,000 population: (2008) 3.6/(2004) 1.1.

Life expectancy at birth (2007): male 71.8 years; female 80.3 years.

Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) 132.0; diseases of the circulatory system 117.5; poisonings and violence 72.6; diseases of the respiratory system 49.1; accidents 25.6.

National economy

Budget (2008). Revenue: CFPF 163,834,000,000 (direct taxes 36.3%; indirect taxes 29.1%; subsidies 4.3%; other 30.3%). Expenditures: CFPF 184,661,000,000 (current expenditure 93.3%; development expenditure 6.7%).

Public debt: n.a.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 16,500, yams 12,500, corn (maize) 6,800, vegetables 6,400, cassava 3,200, sweet potatoes 3,200, beef 3,100, squash (2008) 2,525, potatoes 2,400, pork 2,050; livestock (number of live animals) 115,000 cattle, 29,000 pigs, 600,000 chickens; roundwood 4,800 cu m, of which fuelwood, n.a.; fisheries production 5,441, of which tuna (2008) 1,993, shrimp (2008) 1,295⁷ (from aquaculture 35%). Mining and quarrying (2008): nickel ore 6,172,000, of which nickel content 102,583; cobalt (2007) 1,920 (recovered). Manufacturing (metric tons; 2008): cement (2007) 134,000; ferronickel (metal content) 38,548; nickel matte (metal content) 13,564; other manufactures include beer, copra cake, and soap. Energy production (consumption): electricity (kW-hr; 2008) 1,872,000,000 (1,872,000,000); coal (metric tons; 2006) none (283,000); petroleum products (metric tons; 2006) none (693,000).

Land use as % of total land area (2007): in temporary crops 0.5%, in permanent crops 0.2%, in pasture 13.1%, forest area 39.2%.

Population economically active (2004): total 96,406; activity rate of total population 41.8% (participation rates: over age 14, 57.1%; female [1996] 39.7%; registered unemployed [July 2008–June 2009] 6.8%).

Price index (December 2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index ⁸	95.7	96.6	97.5	100.0	101.5	103.3	107.1

Gross national income (2008): U.S.\$9,280,000,000 (U.S.\$37,630 per capita).

Structure of gross domestic product and labour force

	2004		2006	
	in value CFPF '000,000	% of total value	labour force ⁹	% of labour force ⁹
Agriculture, fishing	10,105	1.8	2,176	2.9
Mining	55,336	9.8	1,151	1.6
Public utilities	9,392	1.7	765	1.0
Manufacturing	29,530	5.2	6,645	9.0
Construction	46,496	8.2	7,054	9.6
Transp. and commun.	39,517	7.0	3,887	5.3
Trade, hotels	76,720	13.6	12,273	16.6
Finance, real estate	69,048	12.2	7,205	9.8
Pub. admin., defense	99,253	17.5	22,491	30.5
Services	84,662	15.0	10,090	13.7
Other	45,469 ¹⁰	8.0 ¹⁰	...	...
TOTAL	565,528	100.0	73,737	100.0

Household income and expenditure. Average household size (2004) 3.6; average annual income per household, n.a.; sources of income (2008): wages and salaries 67.1%, transfer payments 18.3%, self-employment 9.6%, other 5.0%; expenditure (2008): housing and energy 30.8%, food and beverages 19.5%, transportation 19.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 197; remittances (2008) 600; foreign direct investment (FDI; 2005–07 avg.) 343. Disbursements for (U.S.\$'000,000): tourism (2007) 149; remittances (2008) 56; FDI (2005–07 avg.) 24.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−811.8	−627.0	−659.7	−862.3	−779.5	−1,636.5
% of total	34.3%	23.7%	22.8%	27.5%	19.1%	33.4%

Imports (2007): U.S.\$2,427,300,000 (machinery and apparatus 19.6%; mineral fuels 14.1%, of which refined petroleum 13.0%; road vehicles 12.4%; food 8.5%; chemicals and chemical products 7.0%). **Major import sources:** France 26.6%; Singapore 13.6%; Australia 10.7%; China 5.5%; Germany 5.0%.

Exports (2007): U.S.\$1,647,800,000 (ferronickel 57.5%; nickel ore and concentrate 24.4%; nickel matte 14.1%; shrimp 0.9%). **Major export destinations:** Japan 24.1%; France 15.8%; Taiwan 13.1%; China 12.1%; Spain 8.5%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 3,375 mi, 5,432 km (paved [1993] 52%). Vehicles: passenger cars (2005) 105,159; trucks and buses (1997) 23,000. Air transport (2008)¹²: passenger-km 1,498,000,000; metric ton-km cargo 26,127,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	115	498	PCs	2007	...	...
Telephones				Dailies	2007	26 ¹³	107 ¹³
Cellular	2008	197 ¹⁴	797 ¹⁴	Internet users	2008	85	345
Landline	2008	63	255	Broadband	2008	26 ¹⁴	103 ¹⁴

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling through some primary education 38.1%; primary 9.5%; lower secondary 6.4%; upper secondary 11.8%; vocational 19.8%; higher 14.4%. **Literacy** (2002): total population age 15 and over literate 91.0%; males literate 92.0%; females literate 90.0%.

Education (2005)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	1,883	37,245	19.8	...
Secondary/Voc. (age 11–17)	2,727	31,987	11.7	...
Tertiary	111	2,926	26.4	... (age 18–22)

Health: physicians (2008) 550 (1 per 448 persons); hospital beds (2007) 696 (1 per 348 persons); infant mortality rate per 1,000 live births (2008) 6.1; undernourished population (2002–04) 20,000 (10% of total population based on the consumption of a minimum daily requirement of 1,920 calories).

Military

Total active duty personnel (November 2008): 1,510 French troops (army 66.2%, navy 33.8%).

¹Locally known as Kanaky. ²The Nouméa Accord granting New Caledonia limited autonomy was signed in May 1998; future referendum concerning possible independence are to be held between 2014 and 2018. ³Operates in association with 3 provincial assemblies. ⁴Kanak languages and French have special recognition per Nouméa Accord. ⁵January 1. ⁶Within Nouméa urban agglomeration. ⁷Export production only. ⁸As of December. ⁹Employed only. ¹⁰Taxes and subsidies less imputed bank service charges. ¹¹Imports c.i.f.; exports f.o.b. ¹²Air Calédonie International only. ¹³Circulation of daily newspapers. ¹⁴Subscribers.

Internet resources for further information:

- L'Institut d'Emission d'Outre-Mer
<http://www.ieom.fr>
- Institut de la statistique et des études économiques Nouvelle-Calédonie
<http://www.isee.nc>

New Zealand

Official name: New Zealand (English); Aotearoa (Maori).

Form of government: constitutional monarchy with one legislative house (House of Representatives [122]).

Chief of state: British Monarch, represented by Governor-General.

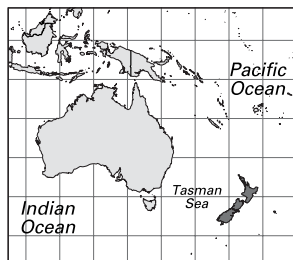
Head of government: Prime Minister.

Capital: Wellington.

Official languages: English; Maori.

Official religion: none.

Monetary unit: New Zealand dollar (NZ\$); valuation (Sept. 1, 2009)
1 U.S.\$ = NZ\$1.46; 1 £ = NZ\$2.37.



Household income and expenditure (2006–07). Average household size (2007) 2.8; average annual income per household NZ\$67,973 (U.S.\$47,982); sources of income: wages and salaries 73.9%, transfers 12.3%, self-employment 6.2%; expenditure: housing and energy 23.4%, food 16.3%, transportation 14.2%, recreation and culture 10.1%.

Gross national income (GNI; 2008): U.S.\$119,246,000,000 (U.S.\$27,940 per capita); purchasing power parity GNI (U.S.\$25,090 per capita).

Structure of gross domestic product and labour force

	2006		2007	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	7,190	6.8	154,400	6.9
Mining	3,800	3.6	5,100	0.2
Public utilities			8,800	0.4
Manufacturing	15,800	14.9	274,400	12.3
Construction	4,830	4.6	183,100	8.2
Transp. and commun.	7,620	7.2	115,400	5.2
Trade, hotels	15,900	15.0	485,700	21.7
Finance, real estate			320,400	14.3
Pub. admin., defense	46,900	44.2	136,100	6.1
Services			461,700	20.7
Other	3,960	3.7	90,300 ⁹	4.0 ⁹
TOTAL	106,000	100.0	2,235,400	100.0

Public debt (external, outstanding; 2008): n.a.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 5,406; remittances (2008) 626; foreign direct investment (FDI; 2005–07 avg.) 4,163. Disbursements for (U.S.\$'000,000): tourism (2007) 3,066; remittances (2008) 1,202; FDI (2005–07 avg.) 961.

Foreign trade¹⁰

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
NZ\$'000,000	+705	-1,420	-1,996	-4,044	-3,526	-2,850
% of total	1.1%	2.4%	3.1%	6.2%	4.8%	3.8%

Imports (2006): NZ\$40,774,000,000 (machinery and apparatus 21.4%, mineral fuels 14.9%, vehicles 11.7%, aircraft 4.2%, plastics 3.8%). **Major import sources:** Australia 20.1%; China 12.2%; U.S. 12.1%; Japan 9.1%; Germany 4.4%.

Exports (2006): NZ\$34,619,000,000 (dairy products 20.6%, beef and sheep meat 12.1%, wood and paper [all forms] 9.4%, machinery and apparatus 8.6%, aluminum 4.3%, fish 3.7%, fruit 3.7%). **Major export destinations:** Australia 20.5%; U.S. 13.1%; Japan 10.3%; China 5.4%; U.K. 4.9%.

Transport and communications

Transport. Railroads (2006): route length 4,128 km; passenger-km, n.a.; metric ton-km cargo (1999–2000) 4,040,000,000. Roads (2007): total length 93,748 km (paved 65%). Vehicles (2007): passenger cars 2,775,717; trucks and buses 558,412. Air transport (2007)¹¹: passenger-km 28,423,000,000; metric ton-km cargo 906,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,338	576	PCs	2005	2,077	507
Telephones				Dailies	2007	711 ¹²	216 ¹²
Cellular	2008	4,620 ¹³	1,092 ¹³	Internet users	2008	3,047	720
Landline	2008	1,750	414	Broadband	2008	915 ¹³	216 ¹³

Education and health

Educational attainment (2007). Percentage of population ages 15 and over having: no formal schooling to incomplete primary education 26.8%; primary 9.0%; vocational 29.8%; secondary 15.0%; higher 19.4%. **Literacy:** virtually 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	22,083	350,810	15.9	99
Secondary/Voc. (age 11–17)	35,509	522,325	14.7	92 ¹⁴
Tertiary	14,603	237,784	16.3	80 (age 18–22)

Health: physicians (2006) 9,547 (1 per 434 persons); hospital beds (2002) 23,825 (1 per 165 persons); infant mortality rate per 1,000 live births (2008) 5.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 9,278 (army 51.2%, navy 21.8%, air force 27.0%). **Military expenditure as percentage of GDP** (2008): 1.1%; per capita expenditure U.S.\$286.

¹Statutory number is 120 seats, actual current number is 122 seats. ²Includes nearby islands, islets, or water areas that are within regional councils. ³Includes Stewart Island (Rakiura). Stewart Island's area is 1,681 sq km. ⁴Detail does not add to total given because of rounding. ⁵A unitary authority that is administered by a city council or district council with regional powers. ⁶Distant islands (including adjacent water areas) outside of regional councils. ⁷January 1. ⁸As of February. ⁹Including 79,800 unemployed. ¹⁰Import figures are f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹¹Air New Zealand only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴2001–02.

Internet resource for further information:

• Statistics New Zealand/Te Tari Tatau <http://www.stats.govt.nz>

Area and population

	area	population		area	population
Islands		2008 estimate	Islands		2008 estimate
Regional Councils	sq km		Regional Councils	sq km	
North Island ²	116,219	3,250,700	South Island ^{2, 3}	152,229 ⁴	1,017,300
Auckland	6,059	1,414,800	Canterbury	44,638	552,800
Bay of Plenty	12,277	269,900	Marlborough		
Gisborne (district) ⁵	8,355	46,000	(district) ⁵	10,781	44,500
Hawke's Bay	14,111	152,700	Nelson (city) ⁵	444	44,700
Manawatu-			Otago	31,241	203,500
Wanganui	22,206	229,200	Southland ³	32,079	93,000
Northland	13,789	154,700	Tasman (district) ⁵	9,771	46,500
Taranaki	7,257	107,500	West Coast	23,276	32,300
Waikato	24,025	402,200	offshore islands ⁶	2,244	600
Wellington	8,140	473,700	TOTAL	270,692	4,268,600

Demography

Population (2009): 4,317,000.

Density (2009): persons per sq mi 41.3, persons per sq km 15.9.

Urban-rural (2007): urban 86.0%; rural 14.0%.

Sex distribution (2007): male 48.96%; female 51.04%.

Age breakdown (2007): under 15, 21.1%; 15–29, 20.8%; 30–44, 21.8%; 45–59, 19.5%; 60–74, 11.2%; 75 and over, 5.6%.

Population projection: (2020) 4,742,000; (2030) 5,068,000.

Ethnic composition (2006): European 67.6%, of which NZ European 59.1%; Maori (local Polynesian) 14.6%; Asian 9.2%, of which Chinese 3.7%; other Pacific peoples (mostly other Polynesian) 6.9%; other 1.7%.

Religious affiliation (2006): Christian 51.1%, of which Anglican 13.3%, Roman Catholic 12.2%, Presbyterian 9.2%, Methodist 2.9%, Maori (indigenous) Christian 1.6%; Hindu 1.6%; Buddhist 1.3%; Muslim 1.0%; nonreligious 31.1%; unknown 12.9%; other 1.0%.

Major urban agglomerations (2008): Auckland 1,313,200; Christchurch 382,200; Wellington 381,900; Hamilton 197,300; Napier 122,600.

Vital statistics

Birth rate per 1,000 population (2008): 15.1 (world avg. 20.3); within marriage 51.9%; outside of marriage 48.1%.

Death rate per 1,000 population (2008): 6.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 2.18.

Marriage/divorce rates per 1,000 population (2008): 5.1/2.3.

Life expectancy at birth (2006): male 78.0 years; female 82.2 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 267.2, of which ischemic heart disease 141.7; malignant neoplasms (cancers) 194.6; accidents 25.9; diabetes mellitus 20.5.

National economy

Budget (2007). Revenue: NZ\$65,859,000,000 (tax revenue 85.3%, of which individual income taxes 41.3%; nontax revenue 14.5%; social contributions 0.2%). Expenditures: NZ\$60,247,000,000 (social protection 33.9%; education 16.7%; health 16.7%; defense 3.2%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 505,000, barley 400,000, apples 380,000, kiwifruit 315,000, wheat 275,000, grapes 190,000, green onions 175,000; livestock (number of live animals) 40,000,000 sheep, 9,650,000 cattle; roundwood 20,258,000 cu m, of which fuelwood, none; fisheries production 600,868 (from aquaculture 19%); aquatic plants 192 (from aquaculture, none). Mining and quarrying (2007): limestone/marl 5,092,000; gold 10,762 kg; silver 10,568 kg. Manufacturing (value added in U.S.\$'000,000; 2005): food products 4,175; fabricated metals 1,350; printing and publishing 1,250; paper products 1,175; wood products (excl. furniture) 1,125. Energy production (consumption): electricity (kW-hr; 2007–08) 42,728,000,000 ([2006] 37,390,000,000); hard coal (metric tons; 2007–08) 2,178,000 ([2006] 196,000); lignite (metric tons; 2007–08) 2,855,000 ([2006] 4,783,000); crude petroleum (barrels; 2007–08) 20,607,500 ([2006] 35,016,000); petroleum products (metric tons; 2007–08) 5,187,000 ([2006] 6,026,000); natural gas (cu m; 2007–08) 4,290,200,000 ([2006] 3,700,000,000).

Land use as % of total land area (2007): in temporary crops 3.2%, in permanent crops 0.2%, in pasture 42.4%, forest area 31.2%.

Population economically active (2007): total 2,235,400; activity rate 52.8% (participation rates: ages 15–64, 76.9%; female 46.3%; unemployed [July 2007–June 2008] 3.6%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.9	95.1	97.2	100.0	103.2	106.5	110.4
Hourly earnings index ⁹	91.5	93.7	98.2	100.0	105.3	110.3	115.3

Nicaragua

Official name: República de Nicaragua
(Republic of Nicaragua).

Form of government: unitary multiparty
republic with one legislative house
(National Assembly [92¹]).

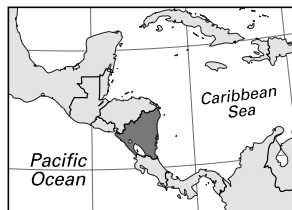
Head of state and government: President.
Capital: Managua.

Official language: Spanish.

Official religion: none.

Monetary unit: córdoba (C\$);

valuation (Sept. 1, 2009) 1 U.S.\$ =
C\$20.51; 1 £ = C\$33.27.



Area and population

Departments	Capitals	area ²		population 2005 census ³
		sq mi	sq km	
Boaco	Boaco	1,613	4,177	150,636
Carazo	Jinotepe	417	1,081	166,073
Chinandega	Chinandega	1,862	4,822	378,970
Chontales	Juigalpa	2,502	6,481	153,932
Estelí	Estelí	861	2,230	201,548
Granada	Granada	402	1,040	168,186
Jinotega	Jinotega	3,561	9,222	331,335
León	León	1,984	5,138	355,779
Madriz	Somoto	659	1,708	132,459
Managua	Managua	1,338	3,465	1,262,978
Masaya	Masaya	236	611	289,988
Matagalpa	Matagalpa	2,627	6,804	469,172
Nueva Segovia	Ocotol	1,348	3,491	208,523
Rio San Juan	San Carlos	2,912	7,541	95,596
Rivas	Rivas	835	2,162	156,283
Autonomous regions				
North Atlantic	Puerto Cabezas	12,782	33,106	314,130
South Atlantic	Bluefields	10,525	27,260	306,510
TOTAL LAND AREA		46,464	120,340 ⁴	
INLAND WATER		3,874	10,034	
TOTAL		50,337 ⁴	130,373 ⁴	5,142,098

Demography

Population (2009): 5,743,000.

Density (2009)⁵: persons per sq mi 123.6, persons per sq km 47.7.

Urban-rural (2005): urban 55.9%; rural 44.1%.

Sex distribution (2008): male 50.03%; female 49.97%.

Age breakdown (2008): under 15, 34.6%; 15–29, 31.3%; 30–44, 19.3%; 45–59, 9.8%; 60–74, 3.1%; 75–84, 0.9%; 85 and over, 1.0%.

Population projection: (2020) 6,682,000; (2030) 7,387,000.

Doubling time: 36 years.

Ethnic composition (2000): mestizo (Spanish/Indian) 63.1%; white 14.0%; black 8.0%; multiple ethnicities 5.0%; other 9.9%.

Religious affiliation (2005): Roman Catholic 58.5%; Protestant/independent Christian 23.2%, of which Evangelical 21.6%, Moravian 1.6%; nonreligious 15.7%; other 2.6%.

Major cities (2005)⁶: Managua 908,892; León 139,433; Chinandega 95,614; Masaya 92,598; Estelí 90,294.

Vital statistics

Birth rate per 1,000 population (2008): 23.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 4.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 19.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.63.

Marriage/divorce rates per 1,000 population (2006): 4.2/1.1.

Life expectancy at birth (2008): male 69.1 years; female 73.4 years.

Major causes of death per 100,000 population (2002)⁷: diseases of the circulatory system 131.0; accidents, injuries, and violence 69.3; malignant neoplasms 60.6; communicable diseases 49.0; diabetes mellitus 28.1.

National economy

Budget (2008). Revenue: U.S.\$1,209,700,000 (tax revenue 92.6%, of which taxes on goods and services 32.7%, taxes on international trade 30.0%, tax on income and profits 29.8%; nontax revenue 7.4%). Expenditures: U.S.\$1,641,600,000 (education 20.7%; health 14.4%; economic services 14.4%; defense and public order 11.4%).

Public debt (external, outstanding; 2007): U.S.\$2,144,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 4,875,000, corn (maize) 569,948, rice 302,697, dry beans 189,425, peanuts (groundnuts) 116,682, cassava 115,000, sorghum 90,335, coffee 81,818, oranges 72,000, bananas 47,072; livestock (number of live animals) 3,600,000 cattle, 268,000 horses; roundwood 6,095,800 cu m, of which fuelwood 98%; fisheries production 37,959, of which lobster 3,752 (from aquaculture 30%). Mining and quarrying (2007): gold 2,059 kg. Manufacturing (value added in C\$'000,000; 2003⁸): food 1,917; textiles and wearing apparel 969; beverages 713; wood products (including furniture) 503. Energy production (consumption): electricity (kW-hr; 2006) 2,958,000,000 (3,011,000,000); coal, none (none); crude petroleum (barrels; 2006) none (5,989,000); petroleum products (metric tons; 2006) 763,000 (1,286,000); natural gas, none (none).

Household income and expenditure. Average household size (2005) 4.9; expenditure (1999)⁹: food and beverages 41.8%, education 9.8%, housing 9.8%, transportation 8.5%.

Population economically active (2006): total 2,204,300; activity rate of total population 39.9% (participation rates: ages 10 and over [2005] 55.0%; female [2005] 35.2%; officially unemployed [2008] 6.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	79.9	84.1	91.2	100.0	109.1	121.3	145.3

Gross national income (GNI; 2008): U.S.\$6,126,000,000 (U.S.\$1,080 per capita); purchasing power parity GNI (U.S.\$2,620 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value C\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry	21,048.8	17.1	609,100	27.6
Mining	1,418.8	1.2	6,700	0.3
Manufacturing	20,938.4	17.0	289,200	13.1
Construction	6,839.8	5.5	100,700	4.6
Public utilities	3,625.5	2.9	6,500	0.3
Transp. and commun.	6,592.9	5.3	89,000	4.0
Trade, restaurants	16,997.4	13.8	481,100	21.8
Finance, real estate	15,185.3	12.3	70,000	3.2
Pub. admin., defense	15,303.5	12.4	437,600	19.9
Services	8,086.0	6.6		
Other	7,270.8 ¹⁰	5.9 ¹⁰	114,500 ¹¹	5.2 ¹¹
TOTAL	123,307.3 ⁴	100.0	2,204,300 ⁴	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 255; remittances (2008) 818; foreign direct investment (FDI; 2005–07 avg.) 279; official development assistance (2007) 834. Disbursements for (U.S.\$'000,000): tourism (2007) 121; remittances, n.a.; FDI (2005–07 avg.) 16. **Land use** as % of total land area (2007): in temporary crops 16.3%, in permanent crops 2.0%, in pasture 35.1%, forest area 41.5%.

Foreign trade¹²

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-1,116	-1,266	-1,520	-1,724	-2,073	-2,529
% of total	48.0%	45.6%	47.0%	45.6%	46.5%	45.9%

Imports (2006): U.S.\$2,741,000,000 (chemicals and chemical products 16.7%, machinery and apparatus 15.6%, crude petroleum 13.2%, refined petroleum 10.8%, food 9.7%). **Major import sources:** U.S. 22.8%; Mexico 14.8%; China 7.6%; Venezuela 6.8%; Costa Rica 5.4%.

Exports (2006): U.S.\$759,000,000 (coffee 26.4%, bovine meat 10.3%, crustaceans 9.3%, gold 7.7%, raw sugar 6.6%, peanuts [groundnuts] 5.2%). **Major export destinations:** U.S. 46.5%; Mexico 6.2%; Canada 6.0%; Spain 4.5%; Honduras 4.4%.

Transport and communications

Transport. Railroads: ¹³. Roads (2004): total length 18,669 km (paved [2002] 11%). Vehicles (2007): passenger cars 101,899; trucks and buses 187,526. Air transport (2000): passenger-km 72,200,000; metric ton-km cargo (2003) 200,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	648	123	PCs	2005	220	43
Telephones				Dailies	2007	175 ¹⁴	48 ¹⁴
Cellular	2008	3,039 ¹⁵	536 ¹⁵	Internet users	2008	185	33
Landline	2008	312	55	Broadband	2006	19 ¹⁵	3.6 ¹⁵

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling 20.1%; 1–3 years 16.6%; 4–6 years 27.0%; 7–9 years 16.1%; 10–12 years 10.5%; vocational 2.3%; incomplete university 2.6%; complete university 4.4%; unknown 0.4%. **Literacy** (2005): total population age 15 and over literate 78.0%; males literate 78.1%; females literate 77.9%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	29,039	966,206	33.3	90
Secondary/Voc. (age 12–16)	13,657	448,258	32.8	43
Tertiary	...	103,577 ¹⁶	...	18 ¹⁶ (age 17–21)

Health (2003): physicians 2,076 (1 per 2,538 persons); hospital beds 5,030 (1 per 1,047 persons); infant mortality rate (2005) 26.4; undernourished population (2003–05) 1,200,000 (22% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 12,000 (army 83.3%, navy 6.7%, air force 10.0%). **Military expenditure as percentage of GDP** (2008): 0.6%; per capita expenditure U.S.\$7.

¹Includes the runner-up in the 2006 presidential election and the immediate past president. ²Lakes and lagoons are excluded from the areas of departments and autonomous regions. ³Unadjusted final figures. ⁴Detail does not add to total given because of rounding. ⁵Based on land area. ⁶Populations of urban area of *municipios*. ⁷Estimates. ⁸At prices of 1994. ⁹Weights of consumer price index components. ¹⁰Taxes less imputed bank service charges. ¹¹Unemployed. ¹²Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹³Public railroad service ended in January 1994; private rail service (2004) 4 mi (6 km). ¹⁴Circulation. ¹⁵Subscribers. ¹⁶2002–03.

Internet resources for further information:

- Central Bank of Nicaragua <http://www.bcn.gob.ni>
- Instituto Nacional de Estadísticas y Censos <http://www.inide.gob.ni>

1 U.S.\$ = CFAF 458.60;
1 £ = CFAF 744.12.



Area and population		area		population
Regions	Capitals	sq mi	sq km	2008 estimate
Agadez	Agadez	242,117	627,080	437,210
Diffa	Diffa	56,763	147,017	446,651
Dosso	Dosso	12,255	31,740	1,921,202
Maradi	Maradi	15,143	39,219	2,865,219
Tahoua	Tahoua	41,080	106,397	2,524,514
Tillabéri	Tillabéri	35,336	91,521	2,396,411
Zinder	Zinder	56,437	146,170	2,672,314
City				
Niamey	Niamey	155	402	1,033,295
TOTAL		459,286	1,189,546	14,296,816

Major cities (2001): Niamey 707,951 (urban agglomeration [2007] 915,000); Zinder 170,575; Maradi 148,017; Agadez 78,289; Tahoua 73,002.

major cause of death per 100,000 population (2002): infectious and parasitic diseases (significantly malaria, meningitis, pneumonia, and diarrhea) 1,697; diseases of the circulatory system 121; malignant neoplasms (cancers) 50; diseases of the respiratory system 34.

Gross national income (GNI; 2008): U.S.\$4,823,000,000 (U.S.\$330 per capita); purchasing power parity GNI (U.S.\$680 per capita).

Structure of gross domestic product and labour force				
	2008			
	in value CFAP '000,000	% of total value	labour force ^{4, 5}	% of labour force ^{4, 5}
Agriculture, forestry, fishing	1,010,389	43.3	72,000	2.0
Mining and quarrying	106,358	4.6	29,000	0.8
Manufacturing	116,925	5.0	907,000	25.7
Construction	57,028	2.4	421,000	11.9
Public utilities	29,745	1.3	79,000	2.2
Transp. and commun.	148,234	6.4	342,000	9.7
Trade, hotels	322,528	13.8	704,000	19.9
Finance, real estate	...	...	205,000	5.8
Pub. admin., defense	194,288	8.3	...	...
Services	194,454	8.3	775,000	21.9
Other	153,149 ⁶	6.6 ⁶		
TOTAL	2,333,098	100.0	3,535,000 ⁷	100.0 ⁷

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): millet 3,489,400, cowpeas 1,548,000, sorghum 1,311,100, dry onions 373,600, peanuts (groundnuts) 305,000, sugarcane 187,800, cassava 110,300, squash 106,000, tomatoes 89,800, cabbages 83,200, pimento 25,800; livestock (num-

Population economically active (2006): total 6,139,000; activity rate of total population 42.6% (participation rates: over age 15, 83.5%; female 41.9%; registered unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.0	92.5	92.8	100.0	100.0	100.1	111.4

Land use as % of total land area (2007): in temporary crops 11.6%, in permanent crops 0.01%, in pasture 22.7%, forest area 1.0%.

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
CFAF '000,000	-171,100	-202,411	-196,552	-273,612	-201,909	-185,193
% of total	42.4%	44.2%	37.4%	48.7%	32.0%	22.6%

Exports (2008): CFAF 316,412,000,000 (uranium 62.6%; livestock 23.7%, of which cattle 9.5%; gold 5.6%; onions 4.2%). **Major export destinations:** France 36.8%; Nigeria 25.0%; U.S. 14.2%; Japan 10.4%; Switzerland 5.6%.

Transport. Railroads: none. Roads (2008): total length 11,774 mi, 18,949 km (paved 21%). Vehicles (2005): passenger cars 21,360; trucks and buses, n.a. Air transport (2007)¹¹: passenger arrivals 64,904, passenger departures 60,297; cargo unloaded 1.394 metric tons, cargo loaded 149 metric tons.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	150	13	PCs	2005	10	0.8
Telephones				Dailies	2007	4.0 ¹²	0.3 ¹²
Cellular	2008	1,898 ¹³	129 ¹³	Internet users	2008	80	5.4
Landline	2008	65	4.4	Broadband	2008	0.6 ¹³	0.04 ¹³

Educational attainment (2006)^{10, 14}. Percentage of population age 25 and over having: no formal schooling/unknown 86.2%; incomplete primary education 6.9%; complete primary 1.0%; incomplete secondary 3.7%; complete secondary 0.4%; higher 0.9%. **Literacy** (2007–08): total population age 15 and over literate 29.0%; males literate 42.8%; females literate 17.1%.

Education (2005–06)	2005–06			enrollment rate (%)
	teachers	students	student/teacher ratio	
Primary (age 7–12)	28,163	1,126,073	40.0	43
Secondary/Voc. (age 13–19)	7,257	216,961	29.9	9
Tertiary	1,095	11,208	10.2	1 (age 20–24)

Health (2008): physicians¹⁵ 427 (1 per 34,548 persons); hospital beds (2007) 2,934 (1 per 4,845 persons); infant mortality rate per 1,000 live births 118.9; undernourished population (2002–04) 3,900,000 (32% of total population based on the consumption of a minimum daily requirement of 1,800 calories).

Total active duty personnel (November 2008): 5,300 (army 98.1%, air force 1.9%). *Military expenditure as percentage of GDP* (2007): 1.0%; *per capita expenditure* U.S.\$3.

¹Constitution suspended by military-backed president in May 2009; new interim constitution promulgated by the president on Aug. 18, 2009, following referendum.
²Statutory number 1. ³Estimate of the U.S. Bureau of the Census International Database (December 2008 update). ⁴Excluding nomadic population. ⁵January 1. ⁶Import taxes and duties. ⁷Detail does not add to total given because of rounding. ⁸2007. ⁹Crude petroleum production is expected to begin in 2010. ¹⁰Niameny only. ¹¹Niameny airport.
¹²Circulation of *Le Sahel Quotidien* only. ¹³Subscribers. ¹⁴Based on a 2006 demographic and health survey of 14,945 persons age 25 and over. ¹⁵Public health institutions only.

- **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Nigeria

Official name: Federal Republic of Nigeria.

Form of government: federal republic with two legislatures (Senate [109]; House of Representatives [360]).

Head of state and government: President.

Capital: Abuja.

Official language: English.

Official religion: none.

Monetary unit: Nigerian naira (₦); valuation (Sept. 1, 2009)

1 U.S.\$ = ₦154.05; 1 £ = ₦249.96.



Area and population					
	area	population		area	population
	sq km	2006 census		sq km	2006 census
States			States		
Abia	6,320	2,845,380	Kebbi	36,800	3,256,541
Adamawa	36,917	3,178,950	Kogi	29,833	3,314,043
Akwa Ibom	7,081	3,902,051	Kwara	36,825	2,365,353
Anambra	4,844	4,177,828	Lagos	3,345	9,113,605
Bauchi	45,837	4,653,066	Nassarawa	27,117	1,869,377
Bayelsa	10,773	1,704,515	Niger	76,363	3,954,772
Benue	34,059	4,253,641	Ogun	16,762	3,751,140
Borno	70,898	4,171,104	Ondo	14,606	3,460,877
Cross River	20,156 ¹	2,892,988 ¹	Osun	9,251	3,416,959
Delta	17,698	4,112,445	Oyo	28,454	5,580,894
Ebonyi	5,670	2,176,947	Plateau	30,913	3,206,531
Edo	17,802	3,233,366	Rivers	11,077	5,198,716
Ekiti	6,353	2,398,957	Sokoto	25,973	3,702,676
Enugu	7,161	3,267,837	Taraba	54,473	2,294,800
Gombe	18,768	2,365,040	Yobe	45,502	2,321,339
Imo	5,530	3,927,563	Zamfara	39,762	3,278,873
Jigawa	23,154	4,361,002			
Kaduna	46,053	6,113,503	Federal Capital Territory		
Kano	20,131	9,401,288	Abuja	7,315	1,406,239
Katsina	24,192	5,801,584	TOTAL	923,768¹	140,431,790

Demography

Population (2009): 154,729,000.

Density (2009): persons per sq mi 433.8, persons per sq km 167.5.

Urban-rural (2007): urban 47.7%; rural 52.3%.

Sex distribution (2006): male 50.80%; female 49.20%.

Age breakdown (2005): under 15, 43.1%; 15–29, 28.2%; 30–44, 15.3%; 45–59, 8.6%; 60–74, 4.0%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 193,252,000; (2030) 226,651,000.

Ethnic composition (2000): Yoruba 17.5%; Hausa 17.2%; Igbo (Ibo) 13.3%; Fulani 10.7%; Ibibio 4.1%; Kanuri 3.6%; Egba 2.9%; Tiv 2.6%; Igbira 1.1%; Nupe 1.0%; Edo 1.0%; Ijo 0.8%; detribalized 0.9%; other 23.3%.

Religious affiliation (2003): Muslim (predominantly Sunni) 50.5%; Christian 48.2%, of which Protestant 15.0%, Roman Catholic 13.7%, other (mostly independent Christian) 19.5%; other 1.3%.

Major urban agglomerations (2007): Lagos 9,466,000; Kano 3,140,000; Ibadan 2,628,000; Abuja 1,576,000; Kaduna 1,442,000; Benin City 1,190,000.

Vital statistics

Birth rate per 1,000 population (2007): 39.9 (world avg. 20.3).

Death rate per 1,000 population (2007): 16.8 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 5.30.

Life expectancy at birth (2007): male 46.4 years; female 47.3 years.

Adult population (ages 15–49) *living with HIV* (2007): 3.1%² (world avg. 0.8%).

Major causes of death per 100,000 population (2002): HIV/AIDS c. 258; respiratory infections c. 182; malaria c. 181; cardiovascular diseases c. 167.

National economy

Budget (2008)³. Revenue: ₦2,411,000,000,000 (petroleum revenue 83.3%, of which tax on profits and royalties 39.8%; nonpetroleum revenue 16.7%, of which companies' income tax 6.3%). Expenditures: ₦2,451,000,000,000 (current expenditure 65.3%; capital expenditure 34.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 45,750,000, yams 37,150,000, sorghum 10,500,000, sugarcane 10,290,000, oil palm fruit 8,500,000, corn (maize) 7,800,000, millet 7,700,000, taro 5,485,000, rice 4,677,400, peanuts (groundnuts) 3,835,600, sweet potatoes 3,490,000, cowpeas 3,150,000, plantains 2,800,000, cashews 660,000, cocoa beans 500,000, melon seeds 488,500, ginger 138,000, sesame seeds 100,000; livestock 28,583,000 goats, 23,993,500 sheep, 16,258,560 cattle; roundwood 71,418,000 cu m, of which fuelwood 87%; fisheries production 615,507 (from aquaculture 14%). Mining and quarrying (2007): limestone 3,300,000; marble 200,000. Manufacturing (value added in ₦'000,000; 2008): refined petroleum 44,297; cement 18,036; other unspecified (particularly food, beverages, and textiles) 543,259. Energy production (consumption): electricity (kW-hr; 2006) 23,110,000,000 (23,110,000,000); coal (metric tons; 2007) 530,000 ([2006] 8,000); crude petroleum (barrels; 2008) 767,700,000 ([2006] 43,800,000); petroleum products (metric tons; 2006) 5,319,000 (10,344,000); natural gas (cu m; 2007) 46,046,000,000 ([2006] 10,730,000,000).

Household income and expenditure. Avg. household size (2005) 4.7; expenditures (2003)⁴: food 63.8%, housing/energy 18.1%, transportation 4.2%.

Land use as % of total land area (2007): in temporary crops 40.1%, in permanent crops 3.3%, in pasture 42.8%, forest area 11.3%.

Gross national income (GNI; 2008): U.S.\$175,622,000,000 (U.S.\$1,160 per capita); purchasing power parity GNI (U.S.\$1,940 per capita).

Structure of gross domestic product and labour force

	2008		2005	
	in value ₦'000,000,000	% of total value	labour force	% of labour force
Agriculture, fishing	7,359	30.9	37,487,000	58.6
Crude petroleum/mining	9,336	39.2	89,000	0.1
Manufacturing	606 ⁵	2.5 ⁵	1,173,000	1.8
Construction	293	1.2	353,000	0.6
Public utilities	50	0.2	551,000	0.9
Transp. and commun.	768	3.2	537,000	0.8
Trade, hotels	3,578	15.0	259,000	0.4
Finance, real estate	1,421	6.0	441,000	0.7
Pub. admin., defense	210	0.9	6,547,000	10.3
Services	221	0.9	16,496,000	25.8
Other	—	—	—	—
TOTAL	23,842	100.0	63,932,000⁶	100.0

Public debt (external, outstanding; December 2008): U.S.\$3,704,000,000.

Population economically active (2006)⁷: total 44,112,000; activity rate 30.5% (participation rates: ages 15–64, 55.5%; female 35.5%; unofficially unemployed [2007] c. 60%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	64.7	73.8	84.8	100.0	108.2	114.1	127.3

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 215; remittances (2008) 9,980; foreign direct investment (FDI; 2005–07 avg.) 10,463; official development assistance (2007) 2,042. Disbursements for (U.S.\$'000,000): tourism (2007) 2,444; remittances (2008) 103; FDI (2005–07 avg.) 230.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
₦'000,000	+583	+1,439	+3,474	+3,077	+3,771	+4,504
% of total	16.2%	30.5%	31.5%	26.6%	30.2%	31.1%

Imports (2008): ₦4,991,000,000,000 (basic manufactures 33.0%; chemicals and chemical products 25.0%; machinery and transport equipment 22.0%; food and live animals 6.0%). **Major import sources**⁸: U.S. 14.4%; China 10.5%; France 9.4%; U.K. 7.9%; Netherlands 7.4%.

Exports (2008): ₦9,495,000,000,000 (crude petroleum 92.2%; other petroleum sector 6.8%; cocoa beans 0.3%). **Major export destinations**⁹: U.S. 23.0%; Spain 9.3%; China 6.0%; Brazil 5.0%; Italy 4.1%.

Transport and communications

Transport. Railroads (2005): length (2006) 3,505 km; passenger-km 75,170,000; metric ton-km cargo 18,027,000. Roads (2004): total length 193,200 km (paved 15%). Vehicles (2007): passenger cars 4,560,000. Air transport (2008): passenger-km 2,136,000,000; metric ton-km cargo 7,368,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	8,393	64	PCs	2007	1,182	8.0
Telephones				Dailies	2007	510 ¹⁰	3.5 ¹⁰
Cellular	2008	62,989 ¹¹	417 ¹¹	Internet users	2008	11,000	73
Landline	2008	1,308	8.7	Broadband	2008	26 ¹¹	0.2 ¹¹

Education and health

Educational attainment (2003)¹². Percentage of population age 25 and over having: no formal schooling/unknown 50.4%; primary education 20.4%; secondary 20.1%; higher 9.1%. **Literacy** (2007): total population age 15 and over literate 73.1%; males literate 79.4%; females literate 67.0%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	586,749 ¹³	23,017,129 ¹³	39.2 ¹³	63
Secondary/Voc. (age 12–17)	159,283	6,397,581	40.2	...
Tertiary	37,031 ¹⁴	1,391,527	34.8 ¹⁴	10 (age 18–22)

Health (2005): physicians 42,563 (1 per 3,234 persons); hospital beds 85,523 (1 per 1,609 persons); infant mortality rate per 1,000 live births (2007) 109.0; undernourished population (2002–04) 11,400,000 (9% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): 80,000 (army 77.5%, navy 10.0%, air force 12.5%). **Military expenditure as percentage of GDP** (2007): 0.7%; per capita expenditure U.S.\$7.

¹Includes the area of Bakassi Peninsula, which was formally ceded by Nigeria to Cameroon in August 2006 and officially handed over in August 2008. ²Statistically derived midpoint of range. ³Federal budget only. ⁴Weights of consumer price index components. ⁵Manufacturing includes petroleum refining. ⁶Detail does not add to total given because of rounding. ⁷ILO estimates. ⁸Nonpetroleum imports only (81.6% of all imports). ⁹Crude petroleum exports only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²Based on the 2003 Nigeria Demographic and Health Survey of 35,173 people, about two-thirds of whom live in rural areas. ¹³2005–06. ¹⁴2003–04.

Internet resources for further information:

- National Bureau of Statistics <http://www.nigerianstat.gov.ng/>
- Central Bank of Nigeria <http://www.cenbank.org>

Northern Mariana Islands

Official name: Commonwealth of the Northern Mariana Islands.

Political status: self-governing commonwealth in association with the United States, having two legislative houses (Senate [9]; House of Representatives [20])¹.

Chief of state: President of the United States.

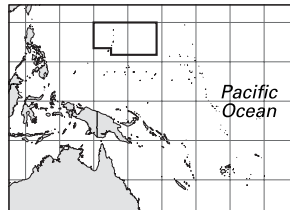
Head of government: Governor.

Seat of government: on Saipan².

Official languages: Chamorro, Carolinian, and English.

Official religion: none.

Monetary unit: dollar (U.S.); valuation (Sept. 1, 2009) 1 U.S.\$ = £0.62.



Area and population		area		population
Municipal councils	Major villages	sq mi	sq km	2005 estimate
Northern Islands ³	...	55.3	143.2	3
Rota (island)	Songsong	32.8	85.0	2,490
Saipan (island)	San Antonio	46.5	120.4	60,608
Tinian ⁴	San Jose	41.9	108.5	2,829
TOTAL		176.5 ⁵	457.1 ⁵	65,927

Demography

Population (2009): 51,000⁶.

Density (2009): persons per sq mi 289.0, persons per sq km 111.6.

Urban-rural (2005): urban 71.4%; rural 28.6%.

Sex distribution (2008): male 48.01%; female 51.99%.

Age breakdown (2008): under 15, 26.0%; 15–29, 25.7%; 30–44, 24.0%; 45–59, 18.9%; 60–74, 4.6%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 49,000; (2030) 56,000.

Doubling time: 36 years.

Ethnic composition (2005)⁷: Asian 52.4%, of which Filipino 30.6%, Chinese 15.4%, Korean 2.3%; Pacific Islanders 37.2%, of which Chamorro 22.9%, Micronesian/Palauan 13.6%; white 1.7%; multiethnic 8.3%; other 0.4%.

Religious affiliation (2000): Christian 88.9%, of which Roman Catholic 72.7%, independent Christian 7.0%, Protestant 6.8%; Buddhist 5.3%; other 5.8%.

Major village groups (2005)⁸: Garapan 11,196; San Antonio 6,104; Susupe–Chalan Kanoa 5,911.

Vital statistics

Birth rate per 1,000 population (2008): 22.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 3.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 19.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.30.

Life expectancy at birth (2008): male 73.9 years; female 79.3 years.

Major causes of death per 100,000 population (1998): heart diseases 51; malignant neoplasms (cancers) 40; cerebrovascular disease 22; perinatal conditions 20; accidents 18.

National economy

Budget (2006). Revenue: U.S.\$192,030,000 (tax revenue 82.4%, of which personal and corporate income taxes 50.9%, excise tax 12.7%; nontax revenue 17.6%). Expenditures: U.S.\$195,600,000 (2001; health 20.4%, education 20.1%, general government 15.0%, social services 12.0%, public safety 9.3%).

Public debt (external, outstanding): n.a.

Gross domestic product (2005): U.S.\$1,000,000,000 (U.S.\$13,350 per capita).

Structure of labour force		
	2005	
	labour force	% of labour force
Agriculture, forestry, and fishing	249	0.6
Mining and quarrying	173	0.4
Manufacturing (garments)	10,217	26.5
Manufacturing (other)	771	2.0
Construction	1,640	4.3
Public utilities	27	0.1
Transp. and commun.	885	2.3
Trade, restaurants	7,602	19.7
Finance, insurance, and real estate	821	2.1
Pub. admin., defense	3,153	8.2
Services	8,083	21.0
Other	4,912 ⁹	12.7
TOTAL	38,533 ¹⁰	100.0 ¹¹

Production (metric tons except as noted). Agriculture, forestry, fishing (2002): bananas 98, cucumbers 97, sweet potatoes 78, cabbages 76, taro 73, eggplant 45, yams 45; livestock (number of live animals) 2,242 pigs, 1,319 cattle, 14,190 chickens; roundwood, n.a.; fisheries production (2007) 231 (from aquaculture, none). Mining and quarrying: negligible amount of quarrying for building material. Manufacturing (value of sales in U.S.\$'000,000; 2007): garments 160; bricks, tiles, and cement 9; printing and related activities 5; food products 4. Energy production (consumption): electricity, n.a. (n.a.); coal, none (none); crude petroleum, none (none); petroleum products, n.a. (n.a.); natural gas, none (none).

Population economically active (2005): total 38,533; activity rate of total population 58.4% (participation rates: ages 16 and over, 79.2%; female 54.0%; unemployed [2007] 4.6%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	99.6	97.4	98.3	100.0	97.6	110.8	116.1

Household income and expenditure. Average household size (2005) 4.1; average income per household (2004) U.S.\$25,172; sources of income (2004): wages and salaries 85.7%, transfer payments 9.3%, self-employment 2.4%, other 2.6%; expenditure (2003)¹²: transportation 33.5%, housing and energy 27.7%, food 19.0%, education and communications 5.7%, recreation 2.4%, medical care 2.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2002) 225; remittances (2008) 76.8; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 2.2%, in permanent crops 2.2%, in pasture 2.2%, forest area 72.2%.

Foreign trade

Balance of trade (current prices)

	2005	2006	2007
U.S.\$'000,000
% of total

Imports (2004): U.S.\$664,400,000 ([1997] clothing and accessories 37.0%, foodstuffs 9.6%, petroleum and petroleum products 8.2%, transport equipment and parts 5.0%, construction materials 4.2%). **Major import sources** (1997): Guam 35.6%, Hong Kong 24.0%, Japan 14.1%, South Korea 9.6%, United States 7.6%.

Exports (2007): U.S.\$319,200,000¹³ (garments and accessories 99.2%, of which women's/girls' blouses, pullovers, sweatshirts 60.5%; remainder 0.8%). **Major export destinations:** nearly all to the United States.

Transport and communications

Transport. Railroads: none. Roads (2003): total length c. 225 mi, c. 360 km (paved, nearly 100%). Vehicles (2002): passenger cars 11,983; trucks and buses 4,858. Air transport (1999)¹⁴: aircraft landings 23,853; boarding passengers 562,364.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1999	4.1	59	PCs	2005	...	...
Telephones				Dailies	2007	7 ¹⁵	101 ¹⁵
Cellular	2004	20 ¹⁶	266 ¹⁶	Internet users	2008	...	...
Landline	2008	25	289	Broadband	2008	...	...

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling 0.4%; incomplete/complete primary education 8.1%; some secondary 10.9%; completed secondary 43.4%; some postsecondary 21.3%; completed undergraduate 13.4%; advanced degree 2.5%. **Literacy** (2000): c. 100%.

Education (2002–03)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	717	12,880	18.0	...
Secondary/Voc. (age 12–17)	504	2,383	4.7	...
Tertiary ¹⁷				... (age 18–22)

Health (2004): physicians 40¹⁸ (1 per 1,956 persons); hospital beds 86¹⁸ (1 per 885 persons); infant mortality rate per 1,000 live births (2008) 6.1; undernourished population, n.a.

Military

The United States is responsible for military defense; in 2009 the Northern Island of Farallon de Medinilla continued to be used as a target range by the U.S. military.

¹In November 2008 residents elected their first nonvoting delegate to the U.S. Congress. ²Executive and legislative branches meet at Capital Hill; the judiciary meets at Susupe.

³Comprises the islands of Agrihan, Pagan, and Alamagan, as well as seven other uninhabited islands; the Northern Islands are administered as part of Saipan municipal council because of the forced removal of the population owing to volcanic activity. ⁴Comprises Tinian island and Aguijan island. ⁵Area measured at high tide; at low tide, total dry land area is 184.0 square mi (476.6 square km). ⁶Estimate of U.S. Bureau of the Census International Database (June 2009 update). ⁷Includes aliens. ⁸All villages are unincorporated census-designated places. ⁹Includes 1,744 not adequately defined and 1,869 unemployed. ¹⁰Of which ethnic Chamorro 16.6%, other (significantly Filipino and Chinese) 83.4%. ¹¹Detail does not add to total given because of rounding. ¹²Weights of consumer price index components. ¹³To U.S. only. ¹⁴Saipan International Airport only. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷Northern Marianas College; 2000–01. ¹⁸Saipan Commonwealth Health Center only.

Internet resource for further information:

• CNMI: Central Statistics Division
<http://www.commerce.gov.mp>

Norway

Official name: Kongeriket Norge
(Kingdom of Norway).

Form of government: constitutional monarchy with one legislative house (Storting, or Parliament [169]).

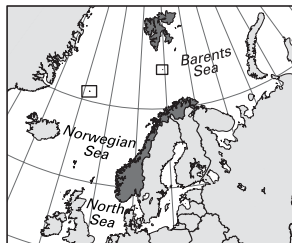
Chief of state: King.

Head of government: Prime Minister.
Capital: Oslo.

Official languages: Norwegian; Sami¹.

Official religion: Evangelical Lutheran.

Monetary unit: Norwegian krone (pl. kroner; NOK); valuation (Sept. 1, 2009)
1 U.S.\$ = NOK 6.02; 1 £ = NOK 9.77.



Area and population

	area	population		area	population
	sq km	2008 estimate		sq km	2008 estimate
Mainland counties			Mainland counties		
Akershus	4,918	523,272	Sor-Trøndelag	18,856	284,773
Aust-Agder	9,158	106,842	Telemark	15,299	167,102
Buskerud	14,911	253,006	Troms	25,870	155,061
Finmark	48,616	72,560	Vest-Agder	7,276	166,976
Hedmark	27,400	189,586	Vestfold	2,224	227,798
Hordaland	15,440	465,817	SUBTOTAL	323,782²	4,769,073
More og Romsdal	15,114	247,933			
Nord-Trøndelag	22,415	130,192	Overseas Arctic territories		
Nordland	38,460	235,124	Jan Mayen	377 ³	4
Oppland	25,190	183,851	Svalbard	61,020 ^{2,3}	4
Oslo	454	568,809	SUBTOTAL	61,397	—
Ostfold	4,182	267,039	TOTAL	385,179	4,769,073
Rogaland	9,376	416,943			
Sogn og Fjordane	18,623	106,389			

Demography

Population (2009): 4,828,000.

Density (2009)⁵: persons per sq mi 37.9, persons per sq km 14.6.

Urban-rural (2005): urban 77.4%; rural 22.6%.

Sex distribution (2009⁶): male 49.90%; female 50.10%.

Age breakdown (2009⁶): under 15, 19.0%; 15–29, 19.1%; 30–44, 21.7%; 45–59, 19.5%; 60–74, 13.3%; 75–84, 5.1%; 85 and over, 2.3%.

Population projection: (2020) 5,374,000; (2030) 5,842,000.

Ethnic composition (2009⁶): Norwegian (nonimmigrant) 89.4%; other 10.6%⁷, of which from Europe 4.2%, Asia 3.9%, Africa 1.3%.

Religious affiliation (2004⁸): Evangelical Lutheran 85.7%; other Christian 4.5%; Muslim 1.8%; other/nonreligious 8.0%.

Major cities (2008⁹): Oslo 560,484 (urban agglomeration 856,915); Bergen 247,746; Trondheim 165,191; Stavanger 119,586; Bærum 108,144.

Vital statistics

Birth rate per 1,000 population (2008): 12.7 (world avg. 20.3); within marriage 45.0%; outside of marriage 55.0%.

Death rate per 1,000 population (2008): 8.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 4.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.96.

Marriage/divorce rates per 1,000 population (2008): 5.3/2.1.

Life expectancy at birth (2008): male 78.3 years; female 83.0 years.

Major causes of death per 100,000 population (2007): circulatory diseases 310.5; malignant neoplasms (cancers) 227.3; respiratory diseases 90.2.

National economy

Budget (2007). Revenue: NOK 1,146,890,000,000 (tax revenue 57.5%, nontax revenue 24.5%, social security 18.0%). Expenditures: NOK 736,004,000,000 (social security and welfare 41.5%, general public services 17.5%, health 16.6%, education 5.8%, defense 5.0%, transportation 4.5%).

Public debt (June 2009): U.S.\$101,447,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): barley 580,000, wheat 380,000, potatoes 380,000, oats 260,000; livestock (number of live animals) 2,400,000 sheep, 930,000 cattle; roundwood 10,465,000 cu m, of which fuelwood 22%; fisheries production 3,209,140 (from aquaculture 26%); aquatic plants production 134,671 (from aquaculture, none). Mining and quarrying (2007): olivine sand 3,000,000, ilmenite concentrate 882,000, iron ore 630,000⁹. Manufacturing (value added in NOK '000,000; 2008): machinery and equipment 55,474; food products, beverages, and tobacco 34,589; ships and oil platforms 26,139; base metals 18,798; printing/publishing 17,010. Energy production (consumption): electricity (kW-hr; 2008) 142,632,000,000 ([2006] 22,518,000,000); coal (metric tons; 2007) 3,995,000 (1,115,000); crude petroleum (barrels; 2008) 743,700,000 ([2006] 94,800,000); petroleum products (metric tons; 2006) 22,993,000 (11,936,000); natural gas (cu m; 2008) 99,403,000,000 ([2007] 6,512,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,222; remittances (2008) 684; foreign direct investment (FDI; 2005–07 avg.) 4,163. Disbursements for (U.S.\$'000,000): tourism (2007) 14,032; remittances (2008) 4,776; FDI (2005–07 avg.) 18,092.

Population economically active (2006): total 2,446,000; activity rate of total population 52.5% (participation rates: ages 15–64, 80.8%; female 47.1%; unemployed [July 2008–June 2009] 2.9%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	95.7	98.0	98.5	100.0	102.3	103.1	107.0
Monthly earnings index	88.6	92.8	96.7	100.0	104.1	110.0	116.5

Gross national income (GNI; 2008): U.S.\$415,249,000,000 (U.S.\$87,070 per capita); purchasing power parity GNI (U.S.\$58,500 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value NOK '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	27,678	1.1	77,000	3.1
Mining	5,495	0.2	4,000	0.2
Crude petroleum and natural gas	665,390	26.1	31,000	1.3
Manufacturing	217,675	8.5	271,000	11.1
Construction	110,887	4.4	167,000	6.8
Public utilities	60,716	2.4	16,000	0.7
Transp. and commun.	150,249	5.9	156,000	6.4
Trade, hotels	211,478	8.3	421,000	17.2
Finance, real estate	316,363	12.4	311,000	12.7
Pub. admin., defense	99,012	3.9	143,000	5.8
Services	431,856	16.9	764,000	31.2
Other	251,523	9.9	85,000 ¹⁰	3.5 ¹⁰
TOTAL	2,548,322	100.0	2,446,000	100.0

Household income and expenditure. Average household size (2002) 2.2; average annual net income per household (2004) NOK 359,300 (U.S.\$53,302); sources of income (2004): wages and salaries 63.3%, transfers 22.1%, self-employment 6.0%; expenditure (2003–05): housing 20.7%, transportation 18.1%, recreation and culture 12.3%, food 10.5%.

Land use as % of total land area (2007): in temporary crops 1.2%, in permanent crops 0.02%, in pasture 2.2%, forest area 31.0%.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
NOK '000,000	+197,741	+226,591	+303,850	+368,385	+328,603	+425,345
% of total	26.1%	26.0%	30.1%	30.9%	25.9%	30.3%

Imports (2007): NOK 470,681,000,000 (machinery and apparatus 24.8%, of which nonelectrical machinery and equipment 11.6%; base and fabricated metals 10.7%; road vehicles 10.2%; chemicals and chemical products 8.6%; metal ore and metal scrap 6.7%). **Major import sources:** Sweden 14.7%; Germany 13.6%; U.K. 6.9%; Denmark 6.4%; China 6.0%.

Exports (2007): NOK 799,284,000,000 (crude petroleum 39.9%, natural gas 19.3%, machinery and apparatus 6.8%, refined petroleum 4.8%, aluminum 4.4%, fish 3.6%, nickel 2.4%). **Major export destinations:** U.K. 26.2%; Germany 12.3%; Netherlands 10.3%; France 8.0%; Sweden 6.5%.

Transport and communications

Transport. Railroads (2007): route length 4,087 km; passenger-km 3,432,000,000; metric ton-km cargo 2,476,000,000. Roads (2007): total length 92,920 km (paved 80%). Vehicles: passenger cars (2008⁶) 2,153,730; trucks and buses (2007) 538,225. Air transport (2008)¹²: passenger-km 8,194,000,000; metric ton-km cargo 7,646,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	7,110	1,557	PCs	2007	2,959	629
Telephones				Dailies	2007	2,222 ¹³	472 ¹³
Cellular	2008	5,287 ¹⁴	1,109 ¹⁴	Internet users	2008	4,237	889
Landline	2008	1,928	404	Broadband	2008	1,608 ¹⁴	337 ¹⁴

Education and health

Educational attainment (2007). Percentage of population age 16 and over having: primary and lower secondary education 29.6%; higher secondary 41.3%; higher 24.8%; unknown 4.3%. **Literacy** (2000): virtually 100% literate.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	41,161 ¹⁵	429,680	10.5 ¹⁵	98
Secondary/Voc. (age 13–18)	45,505 ¹⁵	412,311	8.8 ¹⁵	96
Tertiary	18,169	214,711	11.8	78 (age 19–23)

Health: physicians (2006) 17,523 (1 per 266 persons); hospital beds (2007) 22,882 (1 per 206 persons); infant mortality rate (2008) 2.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 19,100 (army 34.0%, navy 16.5%, air force 14.2%, central support 31.4%, other 3.9%). **Military expenditure as percentage of GDP** (2008): 1.2%; per capita expenditure U.S.\$1,013.

¹Official locally. ²Includes area of freshwater lakes. ³Includes area of glaciers. ⁴Persons on Jan Mayen and Svalbard are normally registered as residents on the mainland. The population of Jan Mayen on July 1, 2008, was 20; the population of Svalbard on Jan. 1, 2008, was 2,449, including Norwegian settlements 1,821, the Russian settlement 620, the Polish settlement 8. ⁵Population density calculated with reference to 329,847 sq km area free of mainland freshwater lakes (18,312 sq km), Svalbard freshwater lakes (395 sq km), Svalbard glaciers (36,500 sq km), and Jan Mayen glaciers (125 sq km). ⁶January 1. ⁷Including 2nd generation immigrants. ⁸Population of municipalities. ⁹Metal content. ¹⁰Includes 84,000 unemployed. ¹¹Imports c.i.f.; exports f.o.b. ¹²SAS (Norwegian part) and Widerøe only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵2003–04.

Oman

Official name: Salṭanat ʿUmān (Sultanate of Oman).

Form of government: monarchy with two advisory bodies (State Council [70]; Consultative Council [84]).

Head of state and government: Sultan.

Capital: Muscat¹.

Official language: Arabic.

Official religion: Islam.

Monetary unit: rial Omani (RO);

valuation (Sept. 1, 2009)

1 RO = U.S.\$2.60 = £1.60.



Area and population		area ²		population
Regions	Capitals	sq mi	sq km	2008 estimate
Al-Bāṭinah	Ar-Rustāq; Ṣuḥār	4,850	12,500	760,454
Ad-Dākhiliyah	Nizwā	12,300	31,900	308,730
Ash-Sharqiyyah	Ibrā; Ṣūr	14,050	36,400	367,966
Al-Wuṣṭā	Haymā; Ṣayy	30,750	79,700	28,426
Az-Zāhirah	ʿIbrī	17,000 ³	44,000 ³	154,154
Governorates				
Al-Buraymī ⁴		3	3	104,413
Masqat	Muscat (Masqat)	1,500	3,900	834,760
Musandam	Khaṣab	700	1,800	35,473
Zufār (Dhofar)	Salālah	38,350	99,300	273,052
TOTAL		119,500	309,500	2,867,428 ⁵

Demography

Population (2009): 2,845,000⁶.

Density (2009): persons per sq mi 23.8, persons per sq km 9.2.

Urban-rural (2005): urban 71.5%; rural 28.5%.

Sex distribution (2008): male 50.54%; female 49.46%.

Age breakdown (2008): under 15, 35.2%; 15–29, 38.5%; 30–44, 16.3%; 45–59, 6.3%; 60–74, 3.1%; 75 and over, 0.6%.

Population projection: (2020) 3,495,000; (2030) 4,048,000.

Doubling time: 32 years.

Ethnic composition (2000): Omani Arab 48.1%; Indo-Pakistani 31.7%, of which Balochi 15.0%, Bengali 4.4%, Tamil 2.5%; other Arab 7.2%; Persian 2.8%; Zanzibari (blacks originally from Zanzibar) 2.5%; other 7.7%.

Religious affiliation (2005): Muslim c. 89%, of which Ibāḍiyyah c. 75%, Sunni c. 8%, Shīʿī c. 6%; Hindu c. 5%; Christian c. 5%; other c. 1%.

Major cities (2007)⁷: As-Sīb 268,259; Matrah 203,159⁸; Bawshar 193,778⁸; Salālah 185,780; Ṣuḥār 119,983; Muscat 28,987 (urban agglomeration 620,000).

Vital statistics

Birth rate per 1,000 population (2008): 24.2 (world avg. 20.3).

Death rate per 1,000 population (2008): 2.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 21.7 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2008): n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2008): 3.19.

Life expectancy at birth (2008): male 73.2 years; female 75.4 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 126, of which ischemic heart disease 63; infectious and parasitic diseases 39; malignant neoplasms (cancers) 37; accidents and injuries 35; diabetes mellitus 17.

National economy

Budget (2008). Revenue: RO 7,829,400,000 (oil revenue 67.5%; natural gas revenue 11.6%; nontax revenue 11.0%; tax revenue 8.9%; other 1.0%). Expenditures: RO 7,556,700,000 (current expenditure 58.5%, of which defense 23.5%, education 9.8%, social security and welfare 6.6%, health 3.4%; capital expenditure 30.2%; other 11.3%).

Public debt (external, outstanding; 2006): U.S.\$819,000,000.

Gross national income (2008): U.S.\$49,812,200,000 (U.S.\$17,884 per capita); purchasing power parity GNI, n.a.

Structure of gross national product and labour force				
	2008		2003	
	in value RO '000,000	% of total value	labour force ⁹	% of labour force ⁹
Agriculture, forestry, fishing	234.6	1.0	58,114	7.9
Oil and natural gas	11,816.6 ¹⁰	51.3 ¹⁰	20,115	2.7
Other mining	42.0	0.2		
Manufacturing	2,359.5 ¹⁰	10.2 ¹⁰	59,492	8.1
Construction	1,100.1	4.8	118,257	16.0
Public utilities	196.8	0.9	4,045	0.5
Transp. and commun.	1,319.9	5.7	27,674	3.8
Trade, restaurants, hotels	2,194.4	9.5	109,157	14.8
Finance, real estate	1,480.9	6.4	25,200	3.4
Pub. admin., defense	1,280.8	5.6	162,742	22.1
Services	1,271.2	5.5	137,420	18.7
Other	-247.7 ¹¹	-1.1 ¹¹	14,408	2.0
TOTAL	23,049.0 ¹²	100.0	736,624	100.0

Household income and expenditure. Average household size (2003) 6.8; expenditure (2000)¹³: food and nonalcoholic beverages 29.9%, transportation/communications 22.2%, housing 15.3%, clothing/footwear 7.2%, energy 6.0%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 260,000, vegetables and melons 206,700, goat's milk 85,000, tomatoes 41,000, bananas 26,000, goat meat 23,500, camel meat 6,800; livestock (number of live animals; 2008) 1,652,400 goats, 373,500 sheep, 319,900 cattle, 124,500 camels; roundwood, n.a.; fisheries production 151,834 (from aqua-

culture, negligible). Mining and quarrying (2008): limestone 3,604,452; chromite (gross weight) 784,082; marble 457,146; gypsum 321,746. Manufacturing (value added in U.S.\$'000,000; 2006): petroleum products 1,754; cement, bricks, and ceramics 367; chemicals and chemical products 333; food and food products 158; fabricated metal products 83; base metals 52; furniture 40; beverages 40. Energy production (consumption): electricity (kW-hr; 2008) 16,048,100,000 ([2007] 11,191,000,000); coal, none (none); crude petroleum (barrels; 2008–09) 277,100,000 ([2008] 29,565,000); petroleum products (metric tons; 2006) 4,172,000 (4,265,000); natural gas (cu m; 2008) 30,288,712,000 (13,460,000,000).

Population economically active (2007): total 968,782; activity rate of total population 35.5% (participation rates: ages 15–64, 55.2%; female 19.6%; unemployed [2004] 15%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.3	97.4	98.2	100.0	103.2	109.4	122.6

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 645; remittances (2008) 39; foreign direct investment (FDI; 2005–07 avg.) 1,896. Disbursements for (U.S.\$'000,000): tourism (2007) 744; remittances (2008) 5,181; FDI (2005–07 avg.) 377.

Land use as % of total land area (2007): in temporary crops 0.2%, in permanent crops 0.1%, in pasture 5.5%, forest area 0.01%.

Foreign trade¹⁴

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
RO '000,000	+2,162	+1,831	+3,793	+4,109	+3,350	+5,689
% of total	30.0%	21.6%	35.8%	32.9%	21.4%	24.4%

Imports (2008): RO 8,814,500,000 ([2007] motor vehicles and parts 24.1%; non-electrical machinery and equipment 17.8%; food and live animals 8.3%; iron and steel 8.2%; chemicals and chemical products 6.4%). **Major import sources:** U.A.E. 27.2%; Japan 15.6%; U.S. 5.7%; China 4.6%; India 4.5%.

Exports (2008): RO 14,503,000,000 (domestic exports 89.5%, of which crude petroleum 58.0%, liquefied natural gas 11.0%, refined petroleum 6.9%; reexports 10.5%, of which motor vehicles and parts 9.1%). **Major export destinations:** China c. 28.4%; U.A.E. c. 10.9%; Japan c. 8.1%; Thailand c. 6.7%; South Korea c. 6.3%.

Transport and communications

Transport. Railroads: none. Roads (2009¹⁵): total length 33,278 mi, 53,556 km (paved 44%). Vehicles (2004¹⁵): passenger cars 308,663; trucks and buses 109,118. Air transport (2008)¹⁶: passenger-km 3,551,000,000; metric ton-km cargo 20,000,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	1,557	633	PCs	2006	180	67
Telephones				Dailies	2007	234 ¹⁷	86 ¹⁷
Cellular	2008	3,219 ¹⁸	1,156 ¹⁸	Internet users	2008	465	167
Landline	2008	274	98	Broadband	2008	32 ¹⁸	12 ¹⁸

Education and health

Educational attainment (2003). Percentage of population age 10 and over having: no formal schooling (illiterate) 15.9%; no formal schooling (literate) 22.3%; primary 35.3%; secondary 17.0%; higher technical 3.3%; higher undergraduate 5.2%; higher graduate 0.7%; other 0.3%. **Literacy** (2007): percentage of total population age 15 and over literate 84.4%; males literate 89.4%; females literate 77.5%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	20,105 ¹⁹	278,461	14.3 ¹⁹	73
Secondary/Voc. (age 12–17)	19,277 ¹⁹	306,377	15.5 ¹⁹	79
Tertiary	2,959	69,018	23.3	25 (age 18–22)

Health (2008): physicians 5,194 (1 per 536 persons); hospital beds 5,473 (1 per 509 persons); infant mortality rate per 1,000 live births 10.3; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 42,600 (army 58.7%, navy 9.9%, air force 11.7%, royal household/foreign troops 19.7%). **Military expenditure as percentage of GDP** (2007): 8.1%; per capita expenditure U.S.\$1,185.

¹Many ministries are located in adjacent Bawshar. ²Approximate; no comprehensive survey of surface area has ever been carried out in Oman. ³Az-Zāhirah includes Al-Buraymī. ⁴Created in October 2006. ⁵Includes 900,248 expatriates. ⁶Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁷Populations of districts (2nd-order administrative subdivisions). ⁸Within Muscat urban agglomeration. ⁹Employed only; includes 424,178 expatriate workers and 312,446 Omani workers. ¹⁰Oil and natural gas excludes petroleum products; Manufacturing includes petroleum products. ¹¹Taxes less subsidies and less imputed bank service charges. ¹²Detail does not add to total given because of rounding. ¹³Weights of consumer price index components. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵January 1. ¹⁶Data for Oman Air only. ¹⁷Circulation of daily newspapers. ¹⁸Subscribers. ¹⁹2005–06.

Internet resources for further information:

- Ministry of National Economy <http://www.mone.gov.om>
- Central Bank of Oman <http://www.cbo-oman.org>

Pakistan

Official name: Islamic Republic of Pakistan.

Form of government: federal republic with two legislative houses (Senate [100]; National Assembly [342]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Islamabad.

Official language: ¹.

Official religion: Islam.

Monetary unit: Pakistani rupee (PKR); valuation (Sept. 1, 2009) 1 U.S.\$ = PKR 82.90; 1 £ = PKR 134.51.



Area and population

		area	population	
Provinces	Capitals	sq mi	sq km	2006 estimate ³
Balochistan	Quetta	134,051	347,190	8,004,000
North-West Frontier	Peshawar	28,773	74,521	21,392,000
Punjab	Lahore	79,284	205,345	86,255,000
Sindh (Sind)	Karachi	54,407	140,914	35,864,000
Federally Administered Tribal Areas	admin. centre is Peshawar	10,509	27,220	3,621,000
Federal Capital Area				
Islamabad	—	350	906	1,124,000
TOTAL		307,374	796,096	156,260,000

Demography

Population (2009): 174,579,000⁴.

Density (2009)⁵: persons per sq mi 512.7, persons per sq km 198.0.

Urban-rural (2008): urban 35.3%; rural 64.7%.

Sex distribution (2007): male 51.89%; female 48.11%.

Age breakdown (2007): under 15, 37.2%; 15–29, 29.9%; 30–44, 16.8%; 45–59, 10.2%; 60–74, 4.7%; 75–84, 1.0%; 85 and over, 0.2%.

Population projection⁴: (2020) 204,274,000; (2030) 231,495,000.

Ethnic composition (2000): Punjabi 52.6%; Pashtun 13.2%; Sindhi 11.7%; Urdu-speaking muhajirs 7.5%; Balochi 4.3%; other 10.7%.

Religious affiliation (2000): Muslim 96.1%⁶; Christian 2.5%; Hindu 1.2%; others (including Ahmadiyah) 0.2%.

Major urban agglomerations (2007): Karachi 12,130,000; Lahore 6,577,000; Faisalabad 2,617,000; Rawalpindi 1,858,000; Multan 1,522,000; Gujranwala 1,513,000; Hyderabad 1,459,000; Peshawar 1,303,000.

Vital statistics

Birth rate per 1,000 population (2008): 25.0 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.7 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 3.13.

Life expectancy at birth (2007): male 64.3 years; female 64.4 years.

Major cause of death per 100,000 population (2003): childhood diseases 126.7; infectious and parasitic diseases 104.0; diseases of the circulatory system 96.4; diseases of the respiratory system 67.0; accidents and violence 42.6.

National economy

Budget (2007–08). Revenue: PKR 1,368,139,000,000 (tax revenue 75.3%, of which income/corporate profits 28.4%, sales tax 27.4%, customs 11.3%; non-tax revenue 24.7%). Expenditures: PKR 1,353,660,000,000 (general public service 47.4%; defense 20.3%; economic affairs 5.8%; public order and police 1.8%; education 1.8%).

Public debt (external, outstanding; June 2008): U.S.\$40,243,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 54,752,000, wheat 23,520,000, rice 8,300,000, seed cotton 6,500,000, corn (maize) 3,240,000, potatoes 2,622,300, mangoes 2,250,000, onions 2,100,000, chickpeas 842,000, sunflower seeds 560,000, dates 510,000; livestock (number of live animals) 53,800,000 goats, 29,600,000 cattle, 27,300,000 buffalo, 26,500,000 sheep, 900,000 camels; roundwood 29,222,600 cu m, of which fuelwood 90%; fisheries production (2007–08) 640,000 (from aquaculture 23%). Mining and quarrying (2007–08): limestone 30,825,000; rock salt 1,872,000; gypsum 682,000; kaolin (2007) 39,000. Manufacturing (value of production in PKR '000,000,000; 2000–01): textiles 321; food products 189; refined petroleum and coke 94; industrial chemicals 71; ginning and baling of fibre 56; transport equipment 47; pharmaceuticals 47. Energy production (consumption) in '000: electricity (kW-hr; 2007–08) 109,021,000 ([2006–07] 72,712,000); coal (metric tons; 2007–08) 3,482 ([2006–07] 7,894); crude petroleum (barrels; 2007–08) 25,610 ([2006] 84,000); petroleum products (metric tons; 2006) 9,793 ([2006–07] 16,847); natural gas (cu m; 2007–08) 40,981,000 ([2006–07] 34,601,000).

Land use as % of total land area (2007): in temporary crops 27.9%, in permanent crops 1.0%, in pasture 6.5%, forest area 2.4%.

Population economically active (2007): total 50,331,000⁷; activity rate of total population 31.8% (participation rates: ages 15–64, 53.7%; female 20.7%; officially unemployed 5.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	82.9	85.3	91.7	100.0	107.9	116.1	139.7

Gross national income (GNI; 2008): U.S.\$162,930,000,000 (U.S.\$980 per capita); purchasing power parity GNI (U.S.\$2,700 per capita).

Structure of gross domestic product and labour force

	2007–08		2007	
	in value PKR '000,000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture, forestry, fishing	2,016,950	19.3	20,780,000	41.3
Mining, quarrying	306,696	2.9	52,000	0.1
Manufacturing	1,892,778	18.1	6,454,000	12.8
Construction	277,141	2.6	3,127,000	6.2
Public utilities	158,617	1.5	360,000	0.7
Transp. and commun.	1,174,090	11.2	2,569,000	5.1
Trade, hotels	1,760,491	16.8	6,872,000	13.7
Finance, real estate	818,458	7.8	544,000	1.1
Pub. admin., defense	577,554	5.5	6,868,000	13.6
Services	923,324	8.8		
Other	572,095 ⁸	5.5 ⁸	2,705,000 ⁹	5.4 ⁹
TOTAL	10,478,194	100.0	50,331,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 276; remittances (2008) 7,032; foreign direct investment (FDI; 2005–07 avg.) 3,936; official development assistance (2007) 2,212. Disbursements for (U.S.\$'000,000): tourism (2007) 1,593; remittances (2008) 3.0; FDI (2005–07 avg.) 84.

Household income and expenditure (2005–06). Average household size (2006–07) 6.5; income per household PKR 147,912 (U.S.\$2,472); sources of income: self-employment 39.7%, wages and salaries 35.3%, real estate 13.7%, transfer payments 10.5%; expenditure: food and beverages 43.1%, housing and energy 23.1%, transportation and communications 6.2%, clothing 5.7%.

Foreign trade

Balance of trade (current prices)

	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
U.S.\$'000,000	–1,208	–4,514	–8,441	–9,711	–15,295	–12,456
% of total	4.6%	13.5%	20.3%	21.9%	27.5%	24.5%

Imports (2007–08): U.S.\$35,417,333,000 (refined petroleum 17.4%; machinery and apparatus 16.2%; chemicals and chemical products 14.4%; crude petroleum 12.2%; food 10.0%). **Major import sources:** U.A.E. 14.5%; Saudi Arabia 10.2%; China 8.6%; Kuwait 6.9%; Singapore 4.8%.

Exports (2007–08): U.S.\$20,122,394,000 (textiles 49.8%, of which woven cotton fabric 11.5%, knitwear 10.5%, bedding 6.9%, ready-made garments 5.5%, cotton yarn 5.3%; rice 5.6%; petroleum products 3.7%). **Major export destinations:** U.S. 18.6%; U.A.E. 8.6%; U.K. 5.3%; Afghanistan 5.1%; Germany 4.1%.

Transport and communications

Transport. Railroads (2007): length (2005–06) 11,515 km; passenger-km 25,821,000,000; metric ton-km cargo 5,876,000,000. Roads (2007–08): total length 264,853 km (paved 67%). Vehicles (2007): passenger cars 1,440,072; trucks and buses 357,455. Air transport (2008): passenger-km 13,920,000,000; metric ton-km cargo 319,800,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2006	7,972	51	PCs	2005	803	5.2
Telephones				Dailies	2007	9,935 ¹⁰	61 ¹⁰
Cellular	2008	88,020 ¹¹	497 ¹¹	Internet users	2008	18,500	105
Landline	2008	4,416	25	Broadband	2008	168 ¹¹	0.9 ¹¹

Education and health

Educational attainment: n.a. **Literacy** (2006–07): total population age 15 and over literate 52%; males literate 65%; females literate 38%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–9)	450,027	17,979,190	40.0	66 ¹²
Secondary/Voc. (age 10–16)	197,082 ¹³	9,145,084	41.9 ¹³	32
Tertiary	52,245	954,698	18.3	5 (age 17–21)

Health: physicians (2008¹⁴) 127,859 (1 per 1,280 persons); hospital beds (2007¹⁴) 103,285 (1 per 1,585 persons); infant mortality rate (2007) 68.0; undernourished population (2003–05) 35,000,000 (23% of total population based on the consumption of a minimum daily requirement of 1,750 calories).

Military

Total active duty personnel (November 2008): 617,000 (army 89.1%, navy 3.6%, air force 7.3%). **Military expenditure as percentage of GDP** (2008): 2.8%; per capita expenditure U.S.\$21.

¹English may be used for official purposes. Urdu is the national (not yet official) language as of July 2009. ²Excludes 33,125 sq mi (85,793 sq km) area of Pakistani-administered Jammu and Kashmir (comprising both Azad Kashmir [AK; 5,134 sq mi (13,297 sq km)] and the Northern Areas [NA; 27,991 sq mi (72,496 sq km)]); NA name changed to Gilgit-Baltistan in August 2009. ³Excludes Afghan refugees and the populations of AK (2009; 3,890,000) and NA (2009; 1,009,000). ⁴Per U.S. Bureau of the Census International Database (June 2009 update) including Afghan refugees and AK and NA. ⁵Includes AK and NA. ⁶Mostly Sunni, with Shi'i constituting about 17% of total population. ⁷Excludes armed forces. ⁸Indirect taxes less subsidies. ⁹Includes 25,000 inadequately defined and 2,680,000 unemployed. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2005–06. ¹³2003–04. ¹⁴January 1.

Internet resources for further information:

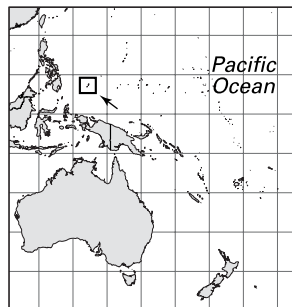
http://www.finance.gov.pk/finance_economic_survey.aspx

• Statistics Division: Government of Pakistan <http://www.statpak.gov.pk>

• State Bank of Pakistan <http://www.sbp.org.pk>

Palau

Official name: Beluu er a Belau (Palauan); Republic of Palau (English).
Form of government: republic with two legislative houses (Senate [13]; House of Delegates [16]).
Head of state and government: President.
Capital: Melekeok¹.
Official languages: Palauan; English.
Official religion: none.
Monetary unit: U.S. dollar (U.S.\$); valuation (Sept. 1, 2009) 1 U.S.\$ = £0.62.



Area and population

States	area		population
	sq mi	sq km	2005 census
Aimeliik	20	52	270
Airai	17	44	2,723
Angaur	3	8	320
Hatohobei	1	3	44
Kayangel	1	3	188
Koror	7	18	12,676
Melekeok	11	28	391
Ngaraard	14	36	581
Ngarchelong	4	10	488
Ngardmau	18	47	166
Ngaremlengui	25	65	317
Ngatpang	18	47	464
Ngchesar	16	41	254
Ngwal	10	26	223
Peleliu	5	13	702
Sonsorol	1	3	100
Other			
Rock Islands	18	47	—
TOTAL	188²	488²	19,907

Demography

Population (2009): 20,400.
Density (2009): persons per sq mi 108.5, persons per sq km 41.8.
Urban-rural (2005): urban 70.0%; rural 30.0%.
Sex distribution (2007): male 53.53%; female 46.47%.
Age breakdown (2007): under 15, 24.1%; 15–29, 22.8%; 30–44, 28.0%; 45–59, 16.8%; 60–74, 5.3%; 75–84, 2.4%; 85 and over, 0.6%.
Population projection: (2020) 22,000; (2030) 23,000.
Ethnic composition (2005)³: Palauan (Micronesian/Malay/Melanesian admixture) 65.2%; Asian 30.3%, of which Filipino 21.6%, Vietnamese 2.3%; other Micronesian 3.1%; white 1.1%; other 0.3%.
Religious affiliation (2005)³: Roman Catholic 51.0%; Protestant 26.7%; Modenkei (marginal Christian sect) 8.9%; other Christian 1.8%; other 11.6%.
Major towns (2005): Koror 10,743; Meyuns 1,153; Kloulklubed 680.

Vital statistics

Birth rate per 1,000 population (2007): 12.4 (world avg. 20.3).
Death rate per 1,000 population (2007): 7.9 (world avg. 8.5).
Natural increase rate per 1,000 population (2007): 4.5 (world avg. 11.8).
Marriage/divorce rates per 1,000 population (2006): n.a./n.a.
Total fertility rate (avg. births per childbearing woman; 2007): 2.00.
Life expectancy at birth (2008): male 66.3 years; female 72.1 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 244, of which ischemic heart disease 82, cerebrovascular disease 78; infectious and parasitic diseases 138; malignant neoplasms (cancers) 61; diseases of the respiratory system 45; injuries and accidents 34.

National economy

Budget (2007–08). Revenue: U.S.\$80,900,000 (grants 48.4%; tax revenue 42.1%; nontax revenue 9.5%). Expenditures: U.S.\$98,800,000 (current expenditure 77.4%; capital expenditure 22.6%).
Production (metric tons except as noted). Agriculture, forestry, fishing (value of sales in U.S.\$; 2001): eggs (2003) 638,750, cabbages 116,948, cucumbers 44,009, green onions 23,043, eggplants 18,938, cassava 15,150, bean sprouts 14,274, taro 13,122; livestock (number of live animals; 2001) 702 pigs, 21,189 poultry; roundwood, n.a.; fisheries production (2007) 1,003 (from aquaculture 2%). Mining and quarrying: n.a. Manufacturing: includes handicrafts and small items. Energy production (consumption): electricity (kW-hr; 2006) 151,000,000 (151,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (66,000); natural gas, none (none).
Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 90; remittances (2007) n.a.; foreign direct investment (FDI; 2005–07 avg.) 1.67; official development assistance (2007) 22. Disbursements for (U.S.\$'000,000): tourism (2006) 1.4; remittances (2007) n.a.
Land use as % of total land area (2007): in temporary crops c. 2%, in permanent crops c. 4%, in pasture c. 7%, forest area c. 88%⁴.
Population economically active (2005): total 10,203; activity rate of total population 51.3% (participation rates: over age 15, 69.1%; female 39.1%; unemployed 4.2%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.5	91.7	96.3	100.0	104.4	107.9	120.8

Gross national income (GNI; 2008): U.S.\$175,000,000 (U.S.\$8,650 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value U.S.\$'000	% of total value	labour force	% of labour force
Agriculture	2,097	1.3	451	4.4
Fisheries	3,500	2.1	310	3.0
Mining	180	0.1	...	...
Manufacturing	822	0.5	259	2.5
Public utilities	7,027	4.3	5	5
Construction	25,099	15.3	1,365	13.4
Transportation and communications	12,655	7.7	769 ⁵	7.5 ⁵
Trade, hotels	50,382	30.7	1,670	16.4
Finance, real estate	13,337	8.1	182	1.8
Public administration, defense	32,340	19.7	1,734	17.0
Services	12,568	7.6	3,037	29.8
Other	4,280 ⁶	2.6 ⁶	426 ⁷	4.2 ⁷
TOTAL	164,289²	100.0	10,203	100.0

Public debt (gross external debt; 2006–07): U.S.\$22,857,000.
Household income and expenditure. Average household size (2005) 3.9; annual average income per household (2006) U.S.\$19,759; sources of income (2006): wages and salaries 57.8%, imputed rent 18.2%, social security 9.6%, customs 3.9%, other 10.5%; expenditure (2006): imputed rent 18.6%, housing and energy 16.9%, food 16.4%, transportation 10.8%, health, personal care, and education 6.0%, cash gifts given 4.4%, alcohol, tobacco, and betel nut 3.4%, other 23.5%.

Foreign trade

Balance of trade (current prices)

	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07
U.S.\$'000	–76,367	–79,833	–101,398	–91,765	–101,690	–81,206
% of total	65.2%	82.6%	89.6%	85.7%	78.9%	80.1%

Imports (2006–07): U.S.\$91,287,000 (mineral fuels and lubricants 37.5%; machinery and transport equipment 17.6%; beverages and tobacco products 14.9%; food and live animals 9.4%; chemicals and chemical products 8.7%).
Major import sources (2006–07): U.S. 33.2%; Singapore 24.8%; Guam 11.2%; Japan 9.6%; The Philippines 7.6%; Taiwan 5.9%.
Exports (2006–07): U.S.\$10,081,000 (mostly high-grade tuna and garments).
Major export destinations (2003): Japan 86.7%; Vietnam 5.9%; Zambia 4.6%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 38 mi, 61 km (paved 59%). Vehicles (2004): passenger cars and trucks 7,247. Air transport (2003): passenger arrivals 80,017, passenger departures 78,608.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1997	11	606	PCs	2007	...	...
Telephones				Dailies	2007	0	0
Cellular	2008	12 ⁸	592 ⁸	Internet users	2007	5.4	268
Landline	2008	7.5	370	Broadband	2007	0.1 ⁹	5.0 ⁹

Education and health

Educational attainment (2005). Percentage of population age 25 and over having: no formal schooling 1.9%; incomplete primary education 9.0%; complete primary 3.9%; incomplete secondary 14.9%; complete secondary 42.2%; some postsecondary 10.0%; vocational 4.1%; higher 14.0%. **Literacy** (2005): total population age 15 and over literate 99.7%; males literate 99.6%; females literate 99.8%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–10)	153	1,913	12.5	96 ⁹
Secondary/Voc. (age 11–17)	126 ⁹	2,282	15.1 ⁹	...
Tertiary	34 ¹⁰	650 ¹⁰	19.1 ¹⁰	40 ¹¹ (age 18–22)

Health: physicians (2006) 26 (1 per 771 persons); hospital beds (2004) 135 (1 per 147 persons); infant mortality rate per 1,000 live births (2007) 7.2; undernourished population, n.a.

Military

The United States is responsible for the external security of Palau, as specified in the Compact of Free Association of Oct. 1, 1994.

¹Formal transfer of capital to Melekeok on Babelthup from Koror took place Oct. 1, 2006; many ministries and offices remained in Koror in late 2009. ²Detail does not add to total given because of rounding. ³Population age 18 and over only. ⁴Forest area overlaps with other categories. ⁵Transportation and communications includes Public utilities. ⁶Import duties less imputed bank service charges. ⁷Unemployed. ⁸Subscribers. ⁹1999–2000. ¹⁰2007–08; Palau Community College. ¹¹2001–02.

Internet resources for further information:

- Department of the Interior: Office of Insular Affairs <http://www.doi.gov/oia>
- Palau Office of Planning and Statistics <http://www.palau.gov.net/stats>

Panama

Official name: República de Panamá (Republic of Panama).

Form of government: multiparty republic with one legislative house (National Assembly [71]).

Head of state and government: President.

Capital: Panama City.

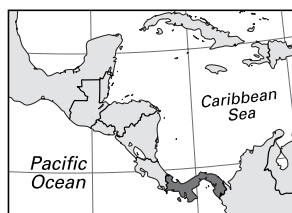
Official language: Spanish.

Official religion: none.

Monetary unit: balboa (B);

valuation (Sept. 1, 2009)

1 U.S.\$ = B 1.00; 1 £ = B 1.62.



Area and population

		area		population
Provinces	Capitals	sq mi	sq km	2007 estimate
Bocas del Toro	Bocas del Toro	1,793	4,644	110,585
Chiriquí	David	2,543	6,585	414,048
Coclé	Penonomé	1,911	4,950	229,816
Colón	Colón	1,880	4,868	239,206
Darién	La Palma	4,593	11,897	44,953
Herrera	Chitré	912	2,363	111,144
Los Santos	Las Tablas	1,469	3,805	89,849
Panamá	Panamá City	4,418	11,443	1,689,304
Veraguas	Santiago	4,116	10,660	224,939
Indigenous districts				
Emberá	Unión Chocoe	1,693	4,384	9,397
Kuna Yala (San Blas)	El Porvenir	904	2,341	37,031
Ngöbe Buglé	Llano Tugri	2,624	6,795	139,509
WATER AREA		264	683	—
TOTAL		29,119¹	75,417¹	3,339,781

Demography

Population (2009): 3,454,000.

Density (2009): persons per sq mi 118.6, persons per sq km 45.8.

Urban-rural (2005): urban 70.8%; rural 29.2%.

Sex distribution (2007): male 50.43%; female 49.57%.

Age breakdown (2007): under 15, 29.9%; 15–29, 25.7%; 30–44, 21.9%; 45–59, 13.5%; 60–74, 6.7%; 75 and over, 2.3%.

Population projection: (2020) 4,027,000; (2030) 4,488,000.

Ethnic composition (2000): mestizo 58.1%; black and mulatto 14.0%; white 8.6%; Amerindian 6.7%; Asian 5.5%; other 7.1%.

Religious affiliation (2008): Roman Catholic (including nominal) c. 75%; Protestant/independent Christian c. 20%; Mormon c. 1%; Jewish c. 0.3%; Muslim c. 0.3%; other c. 3.4%.

Major cities/districts (2000/2007): Panama City 415,964/845,684 (urban agglomeration [2007] 1,281,000); San Miguelito 352,936²; Colón 52,286/205,557; Arraiján 63,753/203,207; La Chorrera 54,823/153,778; David 76,481/141,710.

Vital statistics

Birth rate per 1,000 population (2007): 20.2 (world avg. 20.3); (2006) within marriage 17.3%; outside of marriage 82.7%.

Death rate per 1,000 population (2007): 4.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 15.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.62.

Marriage/divorce rates per 1,000 population (2007): 3.4/0.9.

Life expectancy at birth (2007): male 73.7 years; female 79.5 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 122.2; malignant neoplasms (cancers) 74.6; accidents and violence 44.7; diseases of the respiratory system 41.2.

National economy

Budget (2007). Revenue: B 4,433,000,000 (tax revenue 48.1%, of which indirect taxes 22.5%, income taxes 22.2%; nontax revenue 32.9%, of which revenue from Panama Canal 10.5%; capital revenue 16.9%). Expenditures: B 4,432,000,000 (current expenditure 78.1%, of which debt servicing 30.7%, education 14.4%, health 13.5%, public order 5.6%; development expenditure 21.9%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,800,000, bananas 440,000, rice 280,000, canteloupes and other melons 130,000, plantains 95,200, corn (maize) 73,000, pineapples 71,002, oil palm fruit 70,000, coffee 14,300, papayas 7,588; livestock (number of live animals) 1,650,000 cattle, 300,000 pigs, 190,000 horses; roundwood 1,346,900 cu m, of which fuelwood 87%; fisheries production 215,569 (from aquaculture 4%). Mining and quarrying (2007): limestone 270,000; gold 2,059 kg. Manufacturing (value added in B '000,000; 2006): food and food products 468; beverages 167; cement, bricks, and ceramics 82; printing and publishing 64; structural metal products 61. Energy production (consumption): electricity (kW-hr; 2006) 5,962,000,000 (5,913,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (1,922,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 4.1; average annual income per household (1997–98) B 12,180 (U.S.\$12,180); sources of income, n.a.; expenditure (2001): food c. 22%, energy c. 18%, health care c. 14%, education c. 4%, other c. 42%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,185; remittances (2008) 196; foreign direct investment (FDI; 2005–07 avg.) 1,787. Disbursements for (U.S.\$'000,000): tourism (2007) 307; remittances (2008) 198; FDI (2005–07 avg.) 2,095.

Population economically active (2006): total 1,332,059; activity rate of total population 39.8% (participation rates: ages 15–64, 66.9%; female 37.1%; unemployed [October 2009] 6.6%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	96.4	96.7	96.9	100.0	102.1	106.4	115.7

Gross national income (GNI; 2008): U.S.\$20,973,000,000 (U.S.\$6,180 per capita); purchasing power parity GNI (U.S.\$11,650 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value B '000,000 ³	% of total value ³	labour force	% of labour force
Agriculture, fishing	1,120	6.0	193,078	14.5
Mining	254	1.4	2,310	0.2
Manufacturing	1,168	6.3	105,200	7.9
Construction	1,101	5.9	102,799	7.7
Public utilities	514	2.9	8,452	0.6
Transp. and commun.	3,965	21.4	90,787	6.8
Trade, restaurants	3,178	17.1	294,042	22.1
Finance, real estate	4,184	22.5	89,020	6.7
Pub. admin.	1,321	7.1	70,291	5.3
Services	915	4.9	253,896	19.0
Other	838 ⁴	4.5 ⁴	122,184 ⁵	9.2 ⁵
TOTAL	18,558	100.0	1,332,059	100.0

Public debt (external, outstanding; 2007): U.S.\$8,267,000,000.

Land use as % of total land area (2007): in temporary crops 7.4%, in permanent crops 2.0%, in pasture 20.6%, forest area 57.7%.

Foreign trade^{6,7}

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-2,325	-2,701	-3,190	-3,796	-5,748	-7,878
% of total	59.3%	60.2%	62.3%	65.0%	71.9%	77.5%

Imports (2007): U.S.\$6,868,000,000 (machinery and apparatus 19.7%, refined petroleum 17.2%, road vehicles 11.5%, food 9.1%, iron and steel 4.2%). **Major import sources:** U.S. 30.8%; free zones 16.0%; Netherlands Antilles 7.1%; China 5.2%; Japan 4.8%.

Exports (2007): U.S.\$1,120,000,000 (fish 24.4% [including tuna 7.2%], melons and papayas 18.1%, crustaceans and mollusks 10.1%, bananas 10.0%, pineapples 3.8%). **Major export destinations:** U.S. 35.7%; France 10.2%; Sweden 5.6%; China 5.6%; U.K. 5.5%.

Transport and communications

Transport. Railroads (2007)⁸: route length 77 km; (2005) passenger-km 44,734,000,000; (2005) metric ton-km cargo 138,104,000,000. Roads (2006): total length 13,365 km (paved 34%). Vehicles (2007): passenger cars 436,205; trucks and buses 194,615. Panama Canal traffic (2007–08): oceangoing transits 13,048; cargo 213,081,000 metric tons. Air transport (2007)⁹: passenger-km 7,944,000,000; metric ton-km cargo (2005) 37,226,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	620	195	PCs	2007	154	46
Telephones				Dailies	2007	188 ¹⁰	55 ¹⁰
Cellular	2008	3,805 ¹¹	1,119 ¹¹	Internet users	2008	779	229
Landline	2008	496	146	Broadband	2008	158 ¹¹	46 ¹¹

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling 8.9%; primary 36.4%; secondary 33.9%; undergraduate 14.4%; graduate 1.5%; other/unknown 4.9%. **Literacy** (2005): total population age 15 and over literate 93.0%; males literate 93.6%; females literate 92.4%.

Education (2006–07)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	18,183	446,176	24.5	98
Secondary/Voc. (age 12–17)	16,847	260,694	15.5	64 ¹²
Tertiary ¹²	11,528	130,838	11.3	45 (age 18–22)

Health (2007): physicians 4,524 (1 per 739 persons); hospital beds 7,689 (1 per 435 persons); infant mortality rate per 1,000 live births 14.7; undernourished population (2002–04) 700,000 (23% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): none¹³. **Paramilitary expenditure as percentage of GDP** (2008): 0.9%; per capita expenditure U.S.\$66.

¹Detail does not sum to total given because of rounding. ²District adjacent to Panama City within Panama City urban agglomeration. ³At prices of 1996. ⁴Taxes and import duties less imputed bank service charges and less subsidies. ⁵Includes 121,360 unemployed. ⁶Imports c.i.f.; exports f.o.b. ⁷Excludes trade passing through Colón Free Zone (2007 imports c.i.f. U.S.\$7,633,000,000; 2007 reexports f.o.b. U.S.\$8,523,000,000, of which textiles and clothing 24.2%, machinery and apparatus 23.9%). ⁸All data for Panama Canal Railway. ⁹COPA only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2005–06. ¹³Military abolished 1990; 12,000-member paramilitary includes air and maritime units.

Internet resource for further information:

• Dirección de Estadística y Censo <http://www.contraloria.gob.pa/inec>

Papua New Guinea

Official names: Independent State of Papua New Guinea¹.

Form of government: constitutional monarchy with one legislative house (National Parliament [109]).

Chief of state: British Monarch represented by Governor-General.

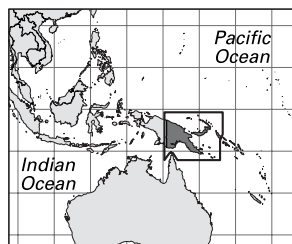
Head of government: Prime Minister.

Capital: Port Moresby.

Official languages: English; Hiri Motu; Tok Pisin.

Official religion: none.

Monetary unit: kina (K); valuation (Sept. 1, 2009) 1 U.S.\$ = K 2.67; 1 £ = K 4.34.



Gross national income (GNI; 2008): U.S.\$6,509,000,000 (U.S.\$1,010 per capita); purchasing power parity GNI (U.S.\$2,000 per capita).

Structure of gross domestic product and labour force

	2007		2000	
	in value K '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	6,342.9	34.2	1,696,271	70.3
Mining and quarrying	4,927.7	26.6	9,282	0.4
Manufacturing	1,070.6	5.8	25,557	1.1
Construction	1,720.3	9.3	48,312	2.0
Public utilities	320.1	1.7	2,208	0.1
Transp. and commun.	396.3	2.1	24,513	1.0
Trade, hotels	1,136.1	6.1	357,581	14.8
Finance, real estate	542.7	2.9	31,129	1.3
Pub. admin., defense	1,629.7	8.8	32,043	1.3
Services			86,391	3.6
Other	464.5 ⁶	2.5 ⁶	100,070	4.1
TOTAL	18,550.9	100.0	2,413,357	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2005) 3.6; remittances (2008) 13; foreign direct investment (FDI; 2005–07 avg.) 41; official development assistance (2007) 317. Disbursements for (U.S.\$'000,000): tourism (2005) 56; remittances (2008) 135; FDI (2005–07 avg.) 5.

Land use as % of total land area (2007): in temporary crops 0.6%, in permanent crops 1.3%, in pasture 0.4%, forest area 64.4%.

Foreign trade⁷

Balance of trade (current prices)

	2004	2005	2006	2007	2008
K '000,000	+3,743	+5,559	+6,767	+6,099	+7,010
% of total	28.5%	37.1%	35.8%	28.2%	29.4%

Imports (2008): K 8,413,300,000 ([2003] nonelectrical machinery 18.5%; food products 14.8%, of which cereals 7.3%; refined petroleum 12.9%; transport equipment 8.8%; chemicals and chemical products 8.4%; fabricated metals 6.3%). **Major import sources:** Australia 42.0%; U.S. 22.7%; Singapore 11.3%; Japan 4.7%; China 3.5%.

Exports (2008): K 15,423,400,000 (gold 30.3%; copper 23.4%; crude petroleum 22.7%; palm oil 6.6%; coffee 3.4%; refined petroleum 3.3%; logs 3.0%; cocoa 2.2%). **Major export destinations:** Australia 44.3%; Japan 13.3%; Philippines 7.8%; Germany 4.8%; South Korea 4.7%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 19,600 km (paved 4%). Vehicles (2002): passenger cars 24,900; trucks and buses 87,800. Air transport: passenger-km (2006)⁸ 748,000,000; metric ton-km cargo (2007) 23,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	130	22	PCs	2005	391	64
Telephones				Dailies	2008	55 ⁹	9.7 ⁹
Cellular	2008	600 ¹⁰	91 ¹⁰	Internet users	2008	120	18
Landline	2008	60	9.1	Broadband	2008	—	—

Education and health

Educational attainment (1990). Percentage of population age 25 and over having: no formal schooling 82.6%; some primary education 8.2%; completed primary 5.0%; some secondary 4.2%. **Literacy (2007):** total population age 15 and over literate 57.8%; males literate 62.1%; females literate 53.4%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	14,860	532,250	35.8	...
Secondary/Voc. (age 13–18)	...	...	...	...
Tertiary	930 ¹¹	9,095 ¹¹	9.8 ¹¹	21 ² (age 19–23)

Health: physicians (2005) 750 (1 per 7,849 persons); hospital beds (2000) 14,516 (1 per 371 persons); infant mortality rate (2008) 60.0; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 3,100 (army 80.6%, maritime element [coastal patrol] 12.9%, air force 6.5%). **Military expenditure as percentage of GDP (2008):** 0.6%; per capita expenditure U.S.\$7.

¹Gau Hedinarai ai Papua-Matamata Guinea (Hiri Motu); Papua-Niugini (Tok Pisin).

²Bougainville formally attained autonomy within Papua New Guinea (PNG) on June 15, 2005. A referendum on possible future independence is to be held between 2014 and 2019. ³Unadjusted total; census total adjusted for undercount equals c. 5,398,000.

⁴PNG has about 1,200 ethnic communities, more than half of which number less than 1,000 people. New Guinea Papuans are predominantly descendants of original arrivals; New Guinea Melanesians are more racially mixed with other Pacific peoples. ⁵According to the 2000 census PNG is 96% Christian. In actuality, many citizens combine Christian faith with some traditional indigenous practices. ⁶Import duties less imputed bank service charges and less subsidies. ⁷Imports f.o.b. in balance of trade and trading partners and c.i.f. in commodities. ⁸Air Niugini only. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹Data for five of the six universities only. ¹²1998–99.

Internet resources for further information:

- Bank of Papua New Guinea <http://www.bankpng.gov.pg>
- National Statistical Office of Papua New Guinea <http://www.nso.gov.pg>

Area and population

Regions/ Provinces	area sq km	population 2000 census	Regions/ Provinces	area sq km	population 2000 census
Highlands	62,400	1,973,996	East Sepik	42,800	343,181
Eastern Highlands	11,200	432,972	Madang	29,000	365,106
Enga	12,800	295,031	Morobe	34,500	539,404
Simbu (Chimbu)	6,100	259,703	Sandaun (West Sepik)	36,300	185,741
Southern Highlands	23,800	546,265	Papua (Southern Coastal)	200,340	1,041,820
Western Highlands	8,500	440,025	Central	29,500	183,983
Islands	57,500	741,538	Gulf	34,500	106,898
Bougainville (autonomous region) ²	9,300	175,160	Milne Bay	14,000	210,412
East New Britain	15,500	220,133	National Capital District	240	254,158
Manus	2,100	43,387	Oro (Northern)	22,800	133,065
New Ireland	9,600	118,350	Western	99,300	153,304
West New Britain	21,000	184,508	TOTAL	462,840	5,190,763³
Momase (Northern Coastal)	142,600	1,433,432			

Demography

Population (2009): 5,941,000.

Density (2009): persons per sq mi 33.2, persons per sq km 12.8.

Urban-rural (2008): urban 12.0%; rural 88.0%.

Sex distribution (2008): male 51.49%; female 48.51%.

Age breakdown (2008): under 15, 37.7%; 15–29, 27.2%; 30–44, 19.4%; 45–59, 10.3%; 60–74, 4.5%; 75–84, 0.8%; 85 and over, 0.1%.

Population projection: (2020) 7,259,000; (2030) 8,359,000.

Doubling time: 36 years.

Ethnic composition (1983)⁴: New Guinea Papuan 84.0%; New Guinea Melanesian 15.0%; other 1.0%.

Religious affiliation (2005): Protestant/independent Christian 44%; Roman Catholic 22%; traditional beliefs 34%⁵.

Major cities (2006): Port Moresby 289,900; Lae 75,600; Arawa (on Bougainville) 40,300; Mount Hagen 34,900; Popondetta 30,400; Mendi 28,600.

Vital statistics

Birth rate per 1,000 population (2008): 29.3 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 19.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.7.

Life expectancy at birth (2008): male 55.0 years; female 60.0 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases c. 249, of which tuberculosis c. 54; cardiovascular diseases c. 153, of which ischemic heart disease c. 71; perinatal conditions c. 85; respiratory infections c. 65; accidents c. 53.

National economy

Budget (2008). Revenue: K 7,128,000,000 (tax revenue 77.4%, of which corporate taxes 38.0%, income tax 14.8%, excise duties 6.6%; grants 15.8%; non-tax revenue 6.8%). Expenditures: K 7,003,400,000 (current expenditure 52.0%, of which interest payments 5.3%; capital expenditure 26.9%; other expenditure 21.1%).

Public debt (external, outstanding; June 2009): U.S.\$1,044,390,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): oil palm fruit 1,400,000, bananas 870,000, coconuts 677,000, sweet potatoes 520,000, game meat (2005) 330,000, yams 290,000, taro 260,000, green corn (maize) 235,000, coffee 75,400, cacao 50,300, tea 9,000, natural rubber 4,700; livestock (number of live animals) 1,800,000 pigs; roundwood 7,241,000 cu m, of which fuelwood 76%; fisheries production 263,960 (from aquaculture, negligible). Mining and quarrying (2007): copper (metal content) 169,184; gold 65,000 kg; silver 51,300 kg. Manufacturing (value of exports in K '000,000; 2008–09): palm oil 788.8; refined petroleum products 486.5; forest products 367.9; coconut oil 99.8; copra 28.8. Energy production (consumption): electricity (kW-hr; 2007) 2,885,000,000 (2,683,000,000); coal (metric tons; 2004) none (1,000); crude petroleum (barrels; 2008) 13,906,500 (12,045,000); natural gas (cu m; 2008) 100,000,000 (100,000,000); petroleum products (metric tons; 2006) 842,000 (1,242,000).

Population economically active (2007): total 3,100,000; activity rate 54.5% (participation rates: ages 15–64 [2000] 73.2%; female 49.2%; officially unemployed [2004] 1.9%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	83.8	96.2	98.3	100.0	102.4	103.3	114.4

Paraguay

Official name: República del Paraguay (Spanish); Tetã Paraguáye (Guarani) (Republic of Paraguay).

Form of government: multiparty republic with two legislative houses (Chamber of Senators [45¹]; Chamber of Deputies [80]).

Head of state and government: President.

Capital: Asunción.

Official languages: Spanish; Guaraní.

Official religion: none².

Monetary unit: guaraní (plural guaraníes; ₵); valuation (Sept. 1, 2009) 1 U.S.\$ = ₵4,965; 1 £ = ₵8,056.



Area and population

	area	population		area	population
	sq km	2007 estimate		sq km	2007 estimate
Departments			Departments		
Alto Paraguay	82,349	11,561	Itapúa	16,525	517,047
Alto Paraná	14,895	703,507	Misiones	9,556	113,644
Amambay	12,933	123,861	Ñeembucú	12,147	82,846
Boquerón	91,669	52,987	Paraguari	8,705	237,998
Caaguazú	11,474	474,261	Presidente Hayes	72,907	98,094
Caazapá	9,496	150,155	San Pedro	20,002	350,840
Canindeyú	14,667	171,633			
Central	2,465	1,860,841	Capital district		
Concepción	18,051	190,035	Asunción	117	519,076
Cordillera	4,948	266,927	TOTAL	406,752	6,119,642 ³
Guairá	3,846	194,330			

Demography

Population (2009): 6,349,000.

Density (2009): persons per sq mi 40.4, persons per sq km 15.6.

Urban-rural (2006): urban 57.1%; rural 42.9%.

Sex distribution (2006): male 50.57%; female 49.43%.

Age breakdown (2006): under 15, 35.4%; 15–29, 28.8%; 30–44, 17.4%; 45–59, 11.4%; 60–74, 5.2%; 75 and over, 1.8%.

Population projection: (2020) 7,533,000; (2030) 8,483,000.

Doubling time: 36 years.

Ethnic composition (2000): mixed (white/Amerindian) 85.6%; white 9.3%, of which German 4.4%, Latin American 3.4%; Amerindian 1.8%; other 3.3%.

Religious affiliation (2002): Roman Catholic 89.6%; Protestant (including all Evangelicals) 6.2%; other Christian 1.1%; nonreligious/atheist 1.1%; traditional beliefs 0.6%; other/unknown 1.4%.

Major urban areas (2002)⁴: Asunción (2006) 519,361 (urban agglomeration [2007] 1,870,000); Ciudad del Este 222,274; San Lorenzo 204,356⁵; Luque 170,986⁵; Capiatá 154,274⁵.

Vital statistics

Birth rate per 1,000 population (2007): 25.0 (world avg. 20.3).

Death rate per 1,000 population (2007): 5.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 19.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 3.30.

Marriage/divorce rates per 1,000 population (2005): 3.4⁶/n.a.

Life expectancy at birth (2007): male 69.6 years; female 73.8 years.

Major causes of death per 100,000 population (2004): diseases of the circulatory system 90.8; malignant neoplasms (cancers) 50.0; accidents 44.2; diseases of the respiratory system 26.5; infectious and parasitic diseases 17.6.

National economy

Budget (2006–07): Revenue: ₵10,174,723,000,000 (tax revenue 65.2%, of which VAT 28.5%, income tax 10.9%, taxes on international trade 8.5%; nontax revenue including grants 34.8%). Expenditures: ₵9,682,282,000,000 (current expenditure 77.3%, of which wages and salaries 42.9%; capital expenditure 22.7%).

Public debt (external, outstanding; December 2007): U.S.\$2,197,000,000.

Population economically active (2006): total 2,735,646; activity rate 46.0% (participation rates: ages 15–64 [2002] 61.4%; female 38.5%; unemployed 11.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	78.6	89.7	93.6	100.0	109.6	118.5	130.5
Earnings index ⁷	77.5	91.0	91.8	100.0	112.1	118.0	123.2

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 5,100,000, soybeans 3,900,000, sugarcane 3,400,000, corn (maize) 1,003,000, wheat 675,000, cow's milk 375,000, cattle meat 220,000, oranges 190,000, seed cotton 185,000, oil palm fruit 130,000, rapeseed 100,000, pig meat 99,000, maté 87,500, dry beans 78,000, sesame seed 53,000; livestock (number of live animals) 10,000,000 cattle, 1,600,000 pigs, 17,000,000 chickens; roundwood 10,296,400 cu m, of which fuelwood 61%; fisheries production 22,100 (from aquaculture 10%). Mining and quarrying (2007): dimension stone 70,000; kaolin 66,000. Manufacturing (value added in U.S.\$'000,000; 2002): food products 253; chemicals and chemical products 77; beverages 67; tobacco products 40; plastic products 36; printing and publishing 31; textiles and wearing apparel 24; leather and hides 19. Energy production (consumption): electricity (kW-hr; 2006) 53,774,000,000⁸ (8,076,000,000); coal, none (none); crude petroleum (barrels; 2006) none

(negligible); petroleum products (metric tons; 2006) negligible (1,201,000); natural gas, none (none).

Gross national income (GNI; 2008): U.S.\$13,574,000,000 (U.S.\$2,180 per capita); purchasing power parity GNI (U.S.\$4,820 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value	% of total	labour	% of labour
	₵'000,000,000	value	force	force
Agriculture, forestry, fishing	13,533.4	22.0	847,161	32.4
Mining	68.9	0.1	5,711	0.2
Manufacturing	7,901.7	12.8	248,035	9.5
Construction	3,269.5	5.3	140,872	5.4
Public utilities	1,048.0	1.7	17,263	0.6
Transp. and commun.	4,863.5	7.9	95,622	3.6
Trade, hotels, restaurants	12,641.5	20.6	583,346	22.3
Finance, real estate	2,211.1	3.6	98,969	3.8
Pub. admin., defense	5,640.0	9.2	580,729	22.2
Services	4,665.6	7.6	—	—
Other	5,668.4 ⁹	9.2 ⁹	—	—
TOTAL	61,511.7³	100.0	2,617,708	100.0

Household income and expenditure. Average household size (2007) 4.3.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 102; remittances (2008) 503; foreign direct investment (FDI; 2005–07 avg.) 138; official development assistance (2007) 108. Disbursements for (U.S.\$'000,000): tourism (2007) 109; remittances (2008) n.a.; FDI (2005–07 avg.) 6.

Land use as % of total land area (2007): in temporary crops 10.8%, in permanent crops 0.2%, in pasture 40.3%, forest area 45.6%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–624	–1,031	–1,564	–3,348	–3,502	–3,968
% of total	20.1%	24.1%	31.7%	46.8%	38.6%	31.4%

Imports (2006): U.S.\$5,254,271,000 (machinery and apparatus 35.9%; mineral fuels 13.2%; transport equipment 11.5%; chemicals and chemical products 6.3%; food, beverages, and tobacco products 6.1%). **Major import sources:** China 27.0%; Brazil 20.0%; Argentina 13.6%; Japan 8.3%; U.S. 6.4%.

Exports (2006): U.S.\$1,906,367,000¹⁰ (soybeans 23.0%; meat 22.3%; cereals 11.4%; flour 7.5%; vegetable oils 6.2%; wood 5.2%). **Major export destinations:** Uruguay 22.0%; Brazil 17.2%; Russia 11.9%; Argentina 8.8%; Chile 6.9%.

Transport and communications

Transport. Railroads (2006): operational route length 36 km; passenger-km, n.a.; metric ton-km cargo, n.a. Roads (2000): total length 29,500 km (paved 51%). Vehicles (2007): passenger cars 240,728; trucks 248,086. Air transport (2005)¹¹: passenger-km 501,000,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	1,300	224	PCs	2005	460	78
Telephones				Dailies	2007	125 ¹²	30 ¹²
Cellular	2008	5,791 ¹³	928 ¹³	Internet users	2008	694	111
Landline	2008	363	58	Broadband	2008	94 ¹³	15 ¹³

Education and health

Educational attainment (2003). Percentage of population age 15 and over having: no formal schooling 4.1%; incomplete primary education 30.2%; complete primary 30.8%; secondary 26.9%; higher 8.0%. **Literacy** (2005): percentage of total population age 15 and over literate 94.9%; males 95.9%; females 93.9%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	33,434 ¹⁴	933,995	27.8 ¹⁴	94
Secondary/Voc. (age 12–17)	44,440 ¹⁴	529,309	11.8 ¹⁴	57
Tertiary	...	156,167	...	26 (age 18–22)

Health: physicians (2005) 5,517 (1 per 873 persons); hospital beds (2007) 5,766 (1 per 1,063 persons); infant mortality rate per 1,000 live births (2007) 32.4; undernourished population (2003–05) 700,000 (11% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): 10,650 (army 71.4%, navy 18.3%, air force 10.3%). **Military expenditure as percentage of GDP** (2008): 0.9%; per capita expenditure U.S.\$22.

¹Excludes 2 former presidents serving as senators-for-life in July 2009. ²Roman Catholicism, although not official, enjoys special recognition in the constitution. ³Detail does not add to total given because of rounding. ⁴Unadjusted final census figures. ⁵Within Asunción urban agglomeration. ⁶Civil registry records only. ⁷Minimum wage. ⁸Paraguay is the world's second largest net exporter of electricity. ⁹Taxes on products. ¹⁰Electricity exports are excluded; contracted value of electricity sold (2006): to Brazil U.S.\$210,000,000; to Argentina, n.a. In September 2009 Brazil agreed to pay Paraguay U.S.\$360,000,000 annually for electricity from the shared Itaipú hydroelectric dam. ¹¹Transportes Aéreos del Mercosur only. ¹²Circulation. ¹³Subscribers. ¹⁴2003–04.

Internet resources for further information:

- Banco Central del Paraguay <http://www.bcp.gov.py>
- Dirección General Estadística, Encuestas y Censos <http://www.dgeec.gov.py>

Peru

Official name: República del Perú (Spanish) (Republic of Peru).
Form of government: unitary multiparty republic with one legislative house (Congress [120]).
Head of state and government: President, assisted by Prime Minister.
Capital: Lima.
Official languages: Spanish; Quechua (locally); Aymara (locally).
Official religion: none¹.
Monetary unit: nuevo sol (S/.); valuation (Sept. 1, 2009)
 1 U.S.\$ = S/. 2.95; 1 £ = S/. 4.79.



Area and population					
area			population		
sq km			2007 census		
Departments			Departments	sq km	2007 census
Amazonas	39,249	375,993	Lambayeque	14,213	1,112,868
Ancash	35,915	1,063,459	Lima	34,802	8,445,211
Apurímac	20,896	404,190	Loreto	368,852	891,732
Arequipa	63,345	1,152,303	Madre de Dios	85,301	109,555
Ayacucho	43,815	612,489	Moquegua	15,734	161,533
Cajamarca	33,318	1,387,809	Pasco	25,320	280,449
Callao	147	876,877	Piura	35,892	1,676,315
Cusco	71,986	1,171,403	Puno	71,999 ²	1,268,441
Huancavelica	22,131	454,797	San Martin	51,253	728,808
Huánuco	36,849	762,223	Tacna	16,076	288,781
Ica	21,328	711,932	Tumbes	4,669	200,306
Junín	44,197	1,232,611	Ucayali	102,411	432,159
La Libertad	25,500	1,617,050	TOTAL	1,285,198 ²	27,419,294 ³

Demography

Population (2009): 28,887,000.
Density (2009): persons per sq mi 58.2, persons per sq km 22.5.
Urban-rural (2007): urban 75.9%; rural 24.1%.
Sex distribution (2007): male 49.68%; female 50.32%.
Age breakdown (2007): under 15, 30.5%; 15–29, 27.5%; 30–44, 20.4%; 45–59, 12.5%; 60–74, 6.4%; 75–84, 2.0%; 85 and over, 0.7%.
Population projection: (2020) 32,493,000; (2030) 35,127,000.
Doubling time: 50 years.
Ethnic composition (2000): Quechua 47.0%; mestizo 31.9%; white 12.0%; Aymara 5.4%; Japanese 0.5%; other 3.2%.
Religious affiliation (2005): Roman Catholic c. 85%, of which practicing weekly c. 15%; Protestant c. 7%; independent Christian c. 4%; other c. 4%.
Major cities (2007): metropolitan Lima 8,472,935; Arequipa 749,291; Trujillo 682,834; Chiclayo 524,442; Piura 377,496; Iquitos 370,962.

Vital statistics

Birth rate per 1,000 population (2007): 20.2 (world avg. 20.3).
Death rate per 1,000 population (2007): 6.2 (world avg. 8.5).
Marriage/divorce rates per 1,000 population (2004): 1.0/0.1.
Total fertility rate (avg. births per childbearing woman; 2007): 2.46.
Life expectancy at birth (2007): male 68.3 years; female 72.0 years.
Major causes of death per 100,000 population (2002): diseases of the circulatory system 113; malignant neoplasms (cancers) 112; accidents, poisoning, and violence 60; diseases of the respiratory system 27; diabetes mellitus 14.

National economy

Budget (2008). Revenue: S/. 68,352,000,000 (tax revenue 85.2%, of which VAT 46.2%, taxes on income and profits 35.3%; nontax revenue 14.8%). Expenditures: S/. 60,073,000,000 (current expenditure 76.9%; capital expenditure 14.6%; debt service 8.5%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2007)⁴: sugarcane 8,246,406; potatoes 3,388,147; rice 2,455,809; plantains 1,837,384; corn (maize) 1,361,656; asparagus 283,473; quinoa 34,000; livestock (number of live animals) 14,580,000 sheep, 5,421,000 cattle, 4,962,000 llamas and alpacas; roundwood 9,448,000 cu m, of which fuelwood 79%; fisheries production 7,250,075 (from aquaculture 1%). Mining and quarrying (2008): iron ore 5,243,000⁵; zinc 1,371,000⁵; copper 1,036,700⁵; lead 317,700⁵; molybdenum 16,100⁵; silver 3,465⁵; gold 174,700 kg. Manufacturing (value in U.S.\$'000,000; 2007): food products 4,066; wearing apparel 1,326; paints, soaps, pharmaceuticals 1,233; cement, bricks, and ceramics 1,081; refined petroleum products 862; base metals 802; structural/fabricated metal products 752. Energy production (consumption): electricity (kW-hr; 2006) 27,358,000,000 (27,358,000,000); coal (metric tons; 2007) 127,900 (1,192,000); crude petroleum (barrels; 2008) 28,000,000 (2006) 56,600,000; petroleum products (metric tons; 2006) 9,193,000 (6,412,000); natural gas (cu m; 2006) 2,249,000,000 (2,249,000,000).

Household income and expenditure. Average household size (2005) 4.3; expenditure (1990): food 29.4%, recreation and education 13.2%, household durables 10.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,938; remittances (2008) 2,200; foreign direct investment (FDI; 2005–07 avg.) 3,796; official development assistance (2007) 263. Disbursements for (U.S.\$'000,000): tourism (2007) 1,007; remittances (2008) 137; FDI (2005–07 avg.) 470.

Population economically active (2006): total 13,762,000⁶; activity rate of total population 49.9%⁶ (participation rates: ages 15–64, 74.7%⁶; female 44.7%⁶; officially unemployed⁷ [August 2008–July 2009] 8.5%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.8	94.9	98.4	100.0	102.0	103.8	109.8

Gross national income (GNI; 2008): U.S.\$114,960,000,000 (U.S.\$3,990 per capita); purchasing power parity GNI (U.S.\$7,980 per capita).

Structure of gross domestic product and labour force

	2007		2008	
	in value S/. '000,000	% of total value	labour force ⁸	% of labour force ⁸
Agriculture, forestry, fishing	20,403	6.1	769,700	7.7
Mining and quarrying	38,413	11.5	98,800	1.0
Manufacturing	48,811	14.5	1,316,600	13.1
Construction	20,395	6.1	512,000	5.1
Public utilities	6,011	1.8	35,800	0.3
Transp. and commun.	28,622	8.5	907,000	9.0
Trade, hotels	53,859	16.0	2,831,600	28.2
Finance, real estate	41,842	12.5	578,700	5.8
Pub. admin., defense	22,194	6.6	423,200	4.2
Services	26,853	8.0	1,972,100	19.6
Other	28,327 ⁹	8.4 ⁹	604,900 ¹⁰	6.0 ¹⁰
TOTAL	335,730	100.0	10,050,400	100.0

Public debt (external, outstanding; 2007): U.S.\$19,669,000,000.

Land use as % of total land area (2007): in temporary crops 2.9%, in permanent crops 0.7%, in pasture 13.3%, forest area 53.6%.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+846	+2,997	+5,284	+8,933	+8,301	+3,157
% of total	4.9%	13.2%	17.9%	23.1%	17.5%	5.3%

Imports (2007): U.S.\$20,494,000,000 (machinery and apparatus 23.0%, chemicals and chemical products 14.6%, crude petroleum 13.4%, food 8.4%, base and fabricated metals 8.3%). **Major import sources:** U.S. 17.7%; China 12.1%; Brazil 9.2%; Ecuador 7.4%; Argentina 5.5%.

Exports (2007): U.S.\$27,800,000,000 (ores/concentrates 32.3%, of which copper 16.5%, zinc 8.3%, molybdenum 3.5%; gold 15.0%; food 12.8%, of which fish meal 4.6%; petroleum 8.7%; refined copper 8.6%; apparel/clothing accessories 5.1%). **Major export destinations:** U.S. 19.4%; China 10.9%; Switzerland 8.4%; Japan 7.8%; Canada 6.6%.

Transport and communications

Transport. Railroads: route length (2006) 1,720 km; (2005) passenger-km 125,756,000; (2006) metric ton-km cargo 1,164,378,000. Roads (2006): total length 78,986 km (paved 14%). Vehicles (2007): passenger cars 917,110; trucks and buses 525,277. Air transport (2007): passenger-km 6,472,300,000; metric ton-km cargo 148,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	4,592	172	PCs	2005	2,800	103
Telephones				Dailies	2007	...	...
Cellular	2008	20,952 ¹²	734 ¹²	Internet users	2008	7,128	250
Landline	2008	2,878	101	Broadband	2008	726 ¹²	25 ¹²

Education and health

Educational attainment (2005). Percentage of population age 15 and over having: no formal schooling 11.8%; less than complete primary education 24.3%; complete primary 11.5%; incomplete secondary 15.3%; complete secondary 19.0%; higher 18.1%. **Literacy** (2005): total population age 15 and over literate 91.6%; males 95.6%; females 87.7%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	184,005	4,026,316	21.9	96
Secondary/Voc. (age 12–16)	172,723	2,760,349	16.0	72
Tertiary	56,070 ¹³	952,437	14.8 ¹³	35 (age 17–21)

Health (2007): physicians 41,788 (1 per 672 persons); hospital beds 44,195 (1 per 635 persons); infant mortality rate 30.5; undernourished population (2002–04) 3,300,000 (12% of total population based on the consumption of a minimum daily requirement of 1,820 calories).

Military

Total active duty personnel (November 2008): 114,000 (army 64.9%, navy 20.2%, air force 14.9%). **Military expenditure as percentage of GDP** (2008): 1.1%; per capita expenditure U.S.\$47.

¹The state recognizes Roman Catholicism as an important element in the historical and cultural development of Peru. ²Includes the 4,996 sq km area of the Peruvian part of Lake Titicaca. ³Unadjusted figure; adjusted census total equals 28,220,764. ⁴In 2007 Peru ranked second in the world in coca production; 290 metric tons of cocaine were produced. ⁵Metal content. ⁶ILO estimate. ⁷Metropolitan Lima only. ⁸Excludes rural areas. ⁹Import duties and other taxes. ¹⁰Unemployed. ¹¹Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹²Subscribers. ¹³2001–02.

Internet resources for further information:

- Instituto Nacional de Estadística e Informática (Spanish) <http://wwwinei.gob.pe>
- Banco Central de Reserva del Peru <http://www.bcrp.gob.pe>

Philippines

Official name: Republika ng Pilipinas (Filipino); Republic of the Philippines (English).

Form of government: unitary republic with two legislative houses (Senate [24]; House of Representatives [240]).

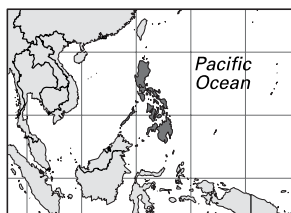
Chief of state and head of government: President.

Capital: Manila¹.

Official languages: Filipino; English.

Official religion: none.

Monetary unit: piso² (P); valuation (Sept. 1, 2009) 1 U.S.\$ = P 48.76; 1 £ = P 79.11.



Area and population

	area	population		area	population
Regions	sq km	2007 census	Regions	sq km	2007 census
Autonomous Region in Muslim Mindanao (ARMM)	19,196	4,120,795	Davao	27,172	4,156,653
Bicol	18,035	5,109,798	Eastern Visayas	21,988	3,912,936
Calabarzon	30,149	3,051,487	Ilocos	12,821	4,545,906
Caraga	16,052	11,743,110	Mimaropa	29,199	2,559,791
Central Luzon	19,324	2,293,480	National Capital	633	11,553,427
Central Visayas	15,582	6,398,628	Northern Mindanao	15,617	3,952,437
Cordillera Administrative	16,745	1,520,743	Soccsksargen	15,890	3,829,081
			Western Visayas	20,158	6,843,643
			Zamboanga Peninsula	18,154	3,230,094
			TOTAL	316,294 ^{3, 4}	88,574,614 ⁵

Demography

Population (2009): 91,983,000.

Density (2009)⁶: persons per sq mi 794.1, persons per sq km 306.6.

Urban-rural (2007): urban 64.0%; rural 36.0%.

Sex distribution (2005): male 50.38%; female 49.62%.

Age breakdown (2005): under 15, 35.6%; 15–29, 28.4%; 30–44, 18.8%; 45–59, 11.2%; 60–74, 4.9%; 75–84, 1.0%; 85 and over, 0.1%.

Population projection: (2020) 109,683,000; (2030) 124,384,000.

Ethnic composition (2000): Tagalog 20.9%; Visayan (Cebu) 19.0%; Ilocano 11.1%; Hiligaynon (Visaya) 9.4%; Waray-Waray (Binisaya) 4.7%; Central Bikol (Naga) 4.6%; Filipino mestizo 3.5%; Pampango 3.1%; other 23.7%.

Religious affiliation (2005): Roman Catholic 64.9%; independent Christian 17.7%⁷; Muslim 5.1%; Protestant 5.0%; traditional beliefs 2.2%; other 5.1%.

Major cities (2007): Quezon City 2,679,450⁸; Manila 1,660,714 (National Capital Region 11,553,427); Calocan 1,378,856⁸; Davao 1,363,337; Cebu City 798,809; Zamboanga 774,407; Pasig 617,301⁸; Taguig 613,343⁸.

Vital statistics

Birth rate per 1,000 population (2005): 24.1 (world avg. 20.3).

Death rate per 1,000 population (2005): 5.6 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2005): 3.41.

Life expectancy at birth (2005): male 67.0 years; female 72.9 years.

Marriage/divorce rates per 1,000 population (2005): 6.2⁹.

Major causes of death per 100,000 population (2004): circulatory diseases 148.4; respiratory diseases 61.8; malignant neoplasms (cancers) 49.0; accidents and violence 41.3; tuberculosis 31.3.

National economy

Budget (2007). Revenue: P 1,047,500,000,000 (tax revenue 89.1%, of which income taxes 40.7%, taxes on international trade 20.0%; nontax revenues 10.9%). Expenditures: P 1,145,030,000,000 (debt service 24.2%, education 14.3%, transportation and communications 10.0%, public order 5.7%, social protection 4.8%, defense 4.7%, health 1.6%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 25,300,000, rice 16,000,000, coconuts 15,580,000, bananas 7,000,000, corn (maize) 6,730,000, vegetables 5,747,000, pineapples 1,900,000, pig meat 1,501,000; livestock (number of live animals) 13,250,000 pigs, 3,365,000 buffalo, 136,000,000 chickens; roundwood 15,794,000 cu m, of which fuelwood 80%; fisheries production 3,209,349 (from aquaculture 22%); aquatic plants production 1,505,421 (from aquaculture 100%). Mining and quarrying (2007): nickel 84,740¹⁰; chromite 31,592; copper 22,862¹⁰; gold 38,792 kg. Manufacturing (value added in U.S.\$'000,000; 2003): petroleum products 1,980; electronic products 1,696; food products 1,338; paints/soaps/pharmaceuticals 983; beverages 813; motor vehicles 559. Energy production (consumption): electricity (kW-hr; 2006) 56,818,000,000 (56,818,000,000); hard coal (metric tons; 2006) 180,000 (3,600,000); lignite (metric tons; 2006) 3,072,000 (6,401,000); crude petroleum (barrels; 2006) 182,000 (78,262,000); petroleum products (metric tons; 2006) 9,823,000 (11,852,000); natural gas (cu m; 2006) 2,969,000,000 (2,969,000,000).

Household income and expenditure. Average household size (2007) 4.8; income per family (2006) P 173,000 (U.S.\$3,371); sources of income (2000): wages 52.1%, self-employment 25.1%, receipts from abroad 11.1%; expenditure (2005): food and nonalcoholic beverages 46.5%, household furnishings 12.1%, transportation and communications 9.9%, energy 4.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,931; remittances (2008) 18,643; foreign direct investment (FDI; 2005–07 avg.) 2,568. Disbursements for (U.S.\$'000,000): tourism (2007) 1,615; remittances (2008) 44; FDI (2005–07 avg.) 1,245.

Gross national income (GNI; 2008): U.S.\$170,410,000,000 (U.S.\$1,890 per capita); purchasing power parity GNI (U.S.\$3,900 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value P '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	1,102,756	14.9	11,841,000	32.7
Mining	110,989	1.5	134,000	0.4
Manufacturing	1,656,524	22.3	3,070,000	8.5
Construction	346,295	4.7	1,691,000	4.7
Public utilities	235,617	3.2	114,000	0.3
Transp. and commun.	508,828	6.8	2,470,000	6.8
Trade, hotels, restaurants	1,088,198	14.6	7,270,000	20.1
Finance, real estate	817,506	11.0	1,153,000	3.2
Pub. admin., defense	519,583	7.0	1,552,000	4.3
Services	1,036,916	14.0	3,962,000	11.0
Others	—	—	2,908,000 ¹¹	8.0 ¹¹
TOTAL	7,423,213 ¹²	100.0	36,165,000	100.0

Public debt (external, outstanding; June 2008): U.S.\$35,019,000,000.

Population economically active (2007): total 36,434,000; activity rate c. 41% (participation rates: ages 15 and over, 63.6%; female [2006] 39.4%; unemployed [April 2007–March 2008] 7.2%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	84.7	87.7	92.9	100.0	106.3	109.2	119.4

Land use as % of total land area (2007): in temporary crops 17.1%, in permanent crops 16.4%, in pasture 5.0%, forest area 23.0%.

Foreign trade¹³

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–5,884	–6,345	–6,422	–8,232	–6,668	–7,270
% of total	7.7%	8.1%	7.5%	9.1%	6.6%	6.7%

Imports (2006): U.S.\$54,078,000,000 (electronic components 33.6%, petroleum 14.1%, chemical products 7.4%, parts for office machines/computers 6.6%, food 5.9%). **Major import sources:** U.S. 16.2%; Japan 14.2%; Singapore 8.4%; Taiwan 7.9%; China 7.2%; South Korea 6.2%.

Exports (2006): U.S.\$47,410,000,000 (microcircuits/transistors 35.8%, computers/office machines/parts 17.2%, apparel and clothing accessories 5.5%, food 3.8%). **Major export destinations:** U.S. 18.3%; Japan 16.7%; Netherlands 10.1%; China 9.8%; Hong Kong 7.8%; Singapore 7.4%.

Transport and communications

Transport. Railroads (2004): route length 897 km; passenger-km 83,400,000; metric ton-km cargo (2000) 660,000,000. Roads (2003): total length 200,037 km (paved 10%). Vehicles (2007): passenger cars 751,100; trucks and buses 311,400. Air transport (2008): passenger-km 17,868,000,000; metric ton-km cargo 265,380,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Television	2003	14,770	182	PCs	2005	4,521	54
Telephones	2003	14,770	182	Dailies	2006	3,954 ¹⁴	68 ¹⁴
Cellular	2008	68,102 ¹⁵	754 ¹⁵	Internet users	2008	5,618	62
Landline	2008	3,905	43	Broadband	2007	968 ¹⁵	11 ¹⁵

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling 3.8%; primary education 38.5%; incomplete secondary 12.5%; complete secondary 17.2%; technical 5.9%; incomplete undergraduate 11.8%; complete undergraduate 7.3%; graduate 0.7%; unknown 2.3%. **Literacy** (2003): total population age 15 and over literate 92.6%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	375,978	13,006,648	34.6	91
Secondary/Voc. (age 12–15)	169,075	6,301,582	37.3	60
Tertiary	112,941 ¹⁶	2,483,988	21.3 ¹⁶	28 (age 16–20)

Health: physicians (2005) 98,210 (1 per 865 persons); hospital beds (2007) 92,561 (1 per 956 persons); infant mortality rate (2007) 21.9; undernourished population (2003–05) 13,300,000 (16% of total population based on the consumption of a minimum daily requirement of 1,750 calories).

Military

Total active duty personnel (November 2008): 106,000 (army 62.3%, navy 22.6%, air force 15.1%); reserve 131,000. **Military expenditure as percentage of GDP** (2008): 0.7%; per capita expenditure U.S.\$12.

¹Other government offices and ministries are located in Quezon City and other Manila suburbs. ²Piso in Filipino; peso in English and Spanish. ³Sum of regional areas, including coastal water; actual reported total area is 300,000 sq km. ⁴Land area excluding inland water is 298,170 sq km. ⁵Reported total; summed total of 88,542,991 excludes 29,344 persons residing in a disputed area between the National Capital Region and Calabarzon and 2,279 Filipinos residing in embassies abroad. ⁶Based on actual reported total area. ⁷Includes indigenous Catholics and Protestants. ⁸Within the National Capital Region. ⁹Divorce was illegal in mid-2009. ¹⁰Metal content. ¹¹Unemployed. ¹²Detail does not add to total given because of rounding. ¹³Imports c.i.f.; exports f.o.b. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶2004–05.

Internet resources for further information:

- National Statistics Office <http://www.census.gov.ph>
- Bangko Sentral ng Pilipinas <http://www.bsp.gov.ph>

Poland

Official name: Rzeczpospolita Polska (Republic of Poland).

Form of government: unitary multiparty republic with two legislative houses (Senate [100]; Sejm [460]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Warsaw.

Official language: Polish.

Official religion: none¹.

Monetary unit: złoty (zł); valuation

(Sept. 1, 2009) 1 U.S.\$ = zł 2.88;

1 £ = zł 4.67.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2009 ² estimate
Dolnośląskie	Wrocław	7,702	19,947	2,876,600
Kujawsko-Pomorskie	Bydgoszcz/Toruń	6,939	17,972	2,068,800
Łódzkie	Łódź	7,034	18,219	2,545,500
Lubelskie	Lublin	9,700	25,122	2,159,800
Lubuskie	Gorzów Wielkopolski/Zielona Góra	5,401	13,988	1,009,600
Małopolskie	Kraków	5,862	15,183	3,292,800
Mazowieckie	Warsaw (Warszawa)	13,729	35,558	5,213,900
Opolskie	Opole	3,634	9,412	1,031,900
Podkarpackie	Rzeszów	6,890	17,845	2,100,400
Podlaskie	Białystok	7,794	20,187	1,190,800
Pomorskie	Gdańsk	7,070	18,310	2,224,900
Śląskie	Katowice	4,762	12,334	4,642,900
Świętokrzyskie	Kielce	4,521	11,710	1,271,200
Warmińsko-Mazurskie	Olsztyn	9,333	24,173	1,427,700
Wielkopolskie	Poznań	11,516	29,827	3,403,200
Zachodniopomorskie	Szczecin	8,839	22,892	1,693,300
TOTAL		120,726	312,679	38,153,400 ³

Demography

Population (2009): 38,146,000.

Density (2009): persons per sq mi 316.0, persons per sq km 122.0.

Urban-rural (2009²): urban 61.1%; rural 38.9%.

Sex distribution (2009⁴): male 48.29%; female 51.71%.

Age breakdown (2009⁴): under 15, 15.2%; 15–29, 23.4%; 30–44, 20.7%; 45–59, 22.1%; 60–74, 12.4%; 75–84, 5.0%; 85 and over, 1.2%.

Population projection: (2020) 38,026,000; (2030) 37,040,000.

Ethnic composition (2000): Polish 90.0%; Ukrainian 4.0%; German 4.0%; Belarusian 0.5%; Kashubian 0.4%; other 1.1%.

Religious affiliation (end of 2007): Roman Catholic 88.6%; other Catholic 0.1%; Polish Orthodox 1.3%; Protestant 0.4%; Jehovah's Witness 0.3%; other (mostly nonreligious) 9.3%.

Major cities (2009⁴): Warsaw 1,709,781; Kraków 754,624; Łódź 747,152; Wrocław 632,162; Poznań 557,264; Gdańsk 455,581; Szczecin 406,941.

Vital statistics

Birth rate per 1,000 population (2008): 10.9 (world avg. 20.3); within marriage 80.1%; outside of marriage 19.9%.

Death rate per 1,000 population (2008): 10.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 0.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.39.

Marriage/divorce rates per 1,000 population (2008): 6.8/1.7.

Life expectancy at birth (2008): male 71.3 years; female 80.0 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 449.6; malignant neoplasms (cancers) 251.4; accidents, poisoning, and violence 64.9; diseases of the respiratory system 51.0.

National economy

Budget (2008). Revenue: zł 253,547,000,000 (VAT 40.1%; excise tax 19.9%; income tax 15.2%; corporate taxes 10.7%). Expenditures: zł 277,893,000,000 (social security and welfare 29.6%; public debt 9.0%; national defense 5.0%; education 4.8%; public safety 4.5%).

Gross national income (GNI; 2008): U.S.\$453,034,000,000 (U.S.\$11,880 per capita); purchasing power parity GNI (U.S.\$17,310 per capita).

Structure of gross domestic product and labour force				
	2007		2008	
	in value zł '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	44,553	3.8	2,120,000	12.3
Mining	23,171	2.0	225,000	1.3
Manufacturing	194,763	16.6	2,992,000	17.4
Public utilities	34,292	2.9	334,000	2.0
Construction	73,459	6.2	1,360,000	7.9
Transp. and commun.	72,188	6.1	1,190,000	6.9
Trade, restaurants, hotels	200,663	17.1	2,635,000	15.3
Finance, real estate	195,808	16.6	1,381,000	8.0
Pub. admin., defense	59,624	5.1	1,013,000	5.9
Services	130,921	11.1	2,567,000	14.9
Other	147,295 ⁵	12.5 ⁵	1,385,000 ⁶	8.1 ⁶
TOTAL	1,176,737	100.0	17,202,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): potatoes 10,462,000, wheat 9,275,000, sugar beets 8,715,000, triticale 4,460,000, barley 3,619,000, rye 3,449,000, apples 2,831,000, rapeseed 2,106,000, cabbage 1,201,000, carrots 817,000, sour cherries 202,000, currants 197,000; livestock (number of live animals; 2009²) 14,279,000 pigs, 5,700,000 cattle, (2007) 1,450,000 beehives; roundwood (2007) 35,934,563 cu m, of which

fuelwood 10%; fisheries production (2007) 187,448 (from aquaculture 19%). Mining and quarrying (2007): sulfur (2008–09) 494,800; copper ore (metal content of concentrate) 505,900; silver (recoverable metal content) 1,250. Manufacturing (value of sales in zł '000,000; 2008): food products 127,127; transportation equipment 94,790; mineral fuels 59,077; fabricated metal products 49,928; chemicals and chemical products 47,526. Energy production (consumption): electricity ('000,000 kW-hr; 2008–09) 151,968 ([2007] 154,000); hard coal ('000 metric tons; 2008–09) 81,441 ([2007] 85,337); lignite ('000 metric tons; 2008–09) 59,322 ([2007] 57,528); crude petroleum (barrels; 2008) 5,593,000 ([2007] 148,538,000); petroleum products (metric tons; 2008–09) 26,507,000 ([2007] 25,322,000); natural gas (cu m; 2008–09) 5,263,280,900 ([2007] 16,549,000,000).

Public debt (external, outstanding; August 2009): U.S.\$53,287,900,000.

Population economically active (2008): total 17,202,000; activity rate of total population 45.1% (participation rates: ages 15–64, 64.4%; female 45.2%; unemployed [October 2008–September 2009] 10.4%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.8	94.6	97.9	100.0	101.1	103.5	108.0
Monthly earnings index	88.9	92.6	96.3	100.0	104.9	113.2	124.7

Household income and expenditure (2008). Average household size 2.9; average per capita disposable annual income zł 12,079 (U.S.\$4,110); sources of income: wages 53.6%, transfers 28.6%, self-employment 8.8%; expenditure: food, beverages, and tobacco 28.2%, housing and energy 18.9%, transportation 10.1%, recreation and culture 7.9%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 10,599; remittances (2008) 10,727; foreign direct investment (FDI; 2005–07 avg.) 15,714. Disbursements for (U.S.\$'000,000): tourism (2007) 7,753; remittances (2008) 1,716; FDI (2005–07 avg.) 5,210.

Land use as % of total land area (2007): in temporary crops 39.7%, in permanent crops 1.3%, in pasture 10.8%, forest area 30.4%.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
zł '000,000	-56,189	-53,494	-39,411	-50,251	-70,273	-91,645
% of total	11.9%	8.9%	6.4%	6.8%	8.3%	10.2%

Imports (2008): zł 497,028,300,000 (electrical equipment 13.2%; chemical products 13.0%; mineral fuels 11.2%; transportation equipment 11.2%; machinery and apparatus 11.0%; base and fabricated metals 10.9%). **Major import sources:** Germany 23.0%; Russia 9.7%; China 8.1%; Italy 6.5%; France 4.7%.

Exports (2008): zł 405,383,100,000 (transportation equipment 17.4%; base and fabricated metals 12.9%; electrical equipment 12.4%; machinery and apparatus 12.3%; food products 10.1%; chemical products 5.9%; furniture 5.7%). **Major export destinations:** Germany 25.0%; France 6.2%; Italy 6.0%; U.K. 5.8%; Czech Republic 5.7%.

Transport and communications

Transport. Railroads (2008): length (2009⁴) 20,196 km; passenger-km 20,389,000,000; metric ton-km cargo 52,043,000,000. Roads (2008⁴)⁸: total length 383,100 km (paved 68%). Vehicles (2009⁴): passenger cars 16,080,000; trucks and buses 2,802,000. Air transport (2008): passenger-km 9,438,000,000; metric ton-km cargo 106,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2009 ⁴	7,091 ⁹	186 ⁹	PCs	2004	7,362	191
Telephones				Dailies	2007	4,464 ¹⁰	117 ¹⁰
Cellular	2009 ⁴	44,086 ⁹	1,156 ⁹	Internet users	2008	18,679	490
Landline	2009 ⁴	8,690	228	Broadband	2008	4,791 ⁹	126 ⁹

Education and health

Educational attainment (2008⁴). Percentage of population age 13 and over having: no formal schooling/incomplete primary education 2.0%; complete primary 20.2%; lower secondary/vocational 27.9%; upper secondary and post-secondary 33.4%; university 16.5%. **Literacy** (2008): virtually 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	231,609	2,602,020	11.2	96
Secondary/Voc. (age 13–18)	261,050	3,316,939	12.7	94
Tertiary	98,223	2,145,687	21.8	66 (age 19–23)

Health (2008): physicians⁴ 78,229 (1 per 487 persons); hospital beds⁴ 227,845 (1 per 167 persons); infant mortality rate per 1,000 live births 5.6; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 121,808 (army 51.5%, navy 8.9%, air force 19.2%, joint staff 20.4%). **Military expenditure as percentage of GDP** (2008): 1.8%; per capita expenditure U.S.\$224.

¹Roman Catholicism has special recognition per 1997 concordat with Vatican City.
²July 1. ³Detail does not add to total given because of rounding. ⁴January 1. ⁵Taxes less subsidies. ⁶Includes 1,355,000 unemployed. ⁷Imports c.i.f.; exports f.o.b. ⁸Public roads only. ⁹Subscribers. ¹⁰Circulation of daily newspapers.

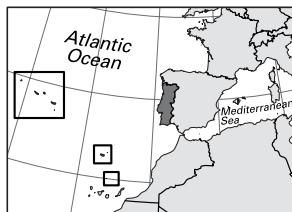
Internet resource for further information:

• Central Statistical Office

<http://www.stat.gov.pl/english/index.htm>

Portugal

Official name: República Portuguesa (Portuguese Republic).
Form of government: republic with one legislative house (Assembly of the Republic [230]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Lisbon.
Official language: Portuguese.
Official religion: none¹.
Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

		area		population
		sq mi	sq km	2008 ² estimate
Continental Portugal³				
Regions	Principal cities			
Alentejo	Évora	12,182	31,552	760,933
Algarve	Faro	1,929	4,996	426,386
Centro	Coimbra	10,887	28,198	2,385,911
Lisboa (Lisbon)	Lisbon	1,133	2,935	2,808,414
Norte	Porto	8,219	21,286	3,745,236
Insular Portugal				
Autonomous regions				
Açores (Azores)	Ponta Delgado	897	2,322	490,695
Madeira	Funchal	309	801	244,006
TOTAL		35,556	92,090	10,617,575

Demography

Population (2009): 10,639,000.
Density (2009): persons per sq mi 299.2, persons per sq km 115.5.
Urban-rural (2005): urban 57.6%; rural 42.4%.
Sex distribution (2008): male 48.40%; female 51.60%.
Age breakdown (2005): under 15, 15.7%; 15–29, 20.4%; 30–44, 22.6%; 45–59, 19.2%; 60–74, 14.8%; 75–84, 5.9%; 85 and over, 1.4%.
Population projection: (2020) 10,698,000; (2030) 10,552,000.
Ethnic composition (2000): Portuguese 91.9%; mixed race people from Angola, Mozambique, and Cape Verde 1.6%; Brazilian 1.4%; Marrano 1.2%; other European 1.2%; Han Chinese 0.9%; other 1.8%.
Religious affiliation (2000): Christian 92.4%, of which Roman Catholic 87.4%, independent Christian 2.7%, Protestant 1.3%, other Christian 1.0%; nonreligious/atheist 6.5%; Buddhist 0.6%; other 0.5%.
Major cities (2001): Lisbon 564,657 (urban agglom. [2005] 2,761,000); Porto 263,131 (urban agglom. [2005] 1,309,000); Braga 164,192; Coimbra 148,443; Funchal 103,961.

Vital statistics

Birth rate per 1,000 population (2008): 9.8 (world avg. 20.3); within marriage 63.8%; outside of marriage 36.2%.
Death rate per 1,000 population (2008): 9.8 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): 0.0 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2008): 1.37.
Marriage/divorce rates per 1,000 population: (2008) 4.1/(2007) 2.4.
Life expectancy at birth (2008): male 75.5 years; female 81.7 years.
Major causes of death per 100,000 population (2005): diseases of the circulatory system 348.1; malignant neoplasms (cancers) 215.4; diseases of the respiratory system 107.1; diseases of the digestive system 44.0.

National economy

Budget (2005). Revenue: €56,498,000,000 (tax revenue 56.2%, of which taxes of goods and services 33.7%, income taxes 20.3%; social contributions 32.9%). Expenditures: €65,096,000,000 (social protection 35.6%, education 16.1%, health 15.9%, public order 4.5%, defense 3.2%).
Public debt (2007): U.S.\$158,000,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): grapes 1,050,000, tomatoes 1,000,000, corn (maize) 646,500, potatoes 638,900, olives 375,000, oranges 200,500, apples 198,200, cork (2008) 165,000; livestock (number of live animals) 3,549,000 sheep, 2,295,450 pigs, 1,407,270 cattle, 37,000,000 chickens; roundwood 10,804,638 cu m, of which fuelwood 5%; fisheries production 260,275 (from aquaculture 3%). Mining and quarrying (2007): marble (2006) 837,000; kaolin (2006) 167,792; copper (metal content) 90,247; tungsten (metal content) 1,067. Manufacturing (value added in U.S.\$'000,000; 2003): food products 2,148; cement, tiles, and ceramics 1,611; fabricated metals 1,536; wearing apparel 1,527; printing and publishing 1,225; textiles 1,131. Energy production (consumption): electricity (kW-hr; 2006) 49,041,000,000 (54,482,000,000); coal (metric tons; 2006) none (5,467,000); crude petroleum (barrels; 2006) none (97,108,000); petroleum products (metric tons; 2006) 12,036,000 (10,851,000); natural gas (cu m; 2006) none (4,339,000,000).

Population economically active (2006): total 5,587,300; activity rate of total population 52.5% (participation rates: ages 15–64, 73.9%; female 46.6%; unemployed [2008] 7.6%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.5	95.5	97.8	100.0	102.7	105.6	108.4

Gross national income (GNI; 2008): U.S.\$218,405,000,000 (U.S.\$20,560 per capita); purchasing power parity GNI (U.S.\$22,080 per capita).

Structure of gross domestic product and labour force

2006			
	in value €'000,000	% of total value	labour force % of labour force
Agriculture, fishing	3,716	2.4	603,900
Mining			17,600
Manufacturing	21,083	13.6	980,500
Construction	8,488	5.5	553,000
Public utilities	3,779	2.4	26,100
Trade, hotels	23,854	15.4	1,031,200
Finance, real estate	19,731	12.7	384,600
Transp. and commun.	8,762	5.6	239,600
Services			968,700
Pub. admin., defense	44,655	28.7	351,400
Other	21,221 ⁴	13.7 ⁴	430,700
TOTAL	155,289	100.0	5,587,300

Household income and expenditure. Average household size (2004) 3.0; average annual household income (2001) €15,512 (U.S.\$13,881); sources of income (1995): wages and salaries 44.4%, self-employment 23.4%, transfers 22.2%; expenditure (2003): food and nonalcoholic beverages 18.7%, transportation 16.3%, housing and energy 10.7%, restaurants and hotels 10.0%, clothing and footwear 7.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 10,162; remittances (2008) 4,057; foreign direct investment (FDI; 2005–07 avg.) 6,956. Disbursements for (U.S.\$'000,000): tourism (2007) 3,922; remittances (2008) 1,410; FDI (2005–07 avg.) 5,100.

Land use as % of total land area (2007): in temporary crops 11.8%, in permanent crops 6.4%, in pasture 19.9%, forest area 42.2%.

Foreign trade⁵

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	-9,044	-13,011	-17,066	-18,601	-18,971	-22,204
% of total	14.3%	19.7%	24.8%	21.2%	20.6%	22.3%

Imports (2006): €53,162,000,000 (machinery and apparatus 18.7%; chemicals and chemical products 10.9%; road vehicles 10.3%; crude petroleum 9.5%; food 9.3%). **Major import sources** (2007): Spain 29.5%; Germany 12.9%; France 8.4%; Italy 5.2%; Netherlands 4.5%.

Exports (2006): €34,561,000,000 (machinery, equipment, electronics 18.6%; road vehicles/parts 12.5%; base and fabricated metals 7.4%; apparel/clothing accessories 6.8%; chemicals and chemical products 6.5%; food 4.5%; textile yarn, fabrics, made-up articles 3.9%; footwear 3.5%). **Major export destinations** (2007): Spain 27.1%; Germany 12.9%; France 12.3%; U.K. 5.9%; U.S. 4.8%.

Transport and communications

Transport. Railroads (2007): length 2,838 km; passenger-km 3,987,000,000; metric ton-km cargo 2,586,000,000. Roads (2005): total length 76,802 km (paved [2004] 86%). Vehicles (2006): passenger cars 5,234,477; trucks and buses 148,706. Air transport (2008): passenger-km 22,860,000,000; metric ton-km cargo 344,628,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	4,312	413	PCs	2007	1,823	172
Telephones				Dailies	2007	1,065 ⁶	128 ⁶
Cellular	2008	14,910 ⁷	1,396 ⁷	Internet users	2008	4,451	417
Landline	2008	4,121	386	Broadband	2008	1,692 ⁷	159 ⁷

Education and health

Educational attainment (2002). Percentage of population age 25–64 having: no formal schooling through complete primary 67%; complete lower secondary 13%; complete upper secondary 11%; higher 9%. **Literacy** (2002): total population age 15 and over literate 92.5%; males literate 95.2%; females literate 90.3%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	70,795	750,493	10.6	98
Secondary/Voc. (age 12–17)	93,727	661,748	7.1	82
Tertiary	37,434	367,312	9.8	55 (age 18–22)

Health: physicians (2007) 37,904 (1 per 280 persons); hospital beds (2007) 36,178 (1 per 294 persons); infant mortality rate per 1,000 live births (2008) 3.3; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 42,910 (army 62.2%, navy 21.2%, air force 16.6%); U.S. troops (November 2008) 792⁸. **Military expenditure as percentage of GDP** (2007): 1.5%; per capita expenditure U.S.\$319⁹.

¹A 2004 concordat with the Vatican acknowledges the special role of the Roman Catholic Church in Portugal. ²January 1. ³For statistical classification only; the actual first order administration of continental Portugal is based on 18 districts. ⁴Taxes less statistical discrepancy. ⁵Imports c.i.f.; exports f.o.b. ⁶Circulation of daily newspapers. ⁷Subscribers. ⁸Mostly air force personnel stationed at Lajes, Azores. ⁹Including military pensions.

Internet resources for further information:

- Instituto Nacional de Estatística <http://www.ine.pt>
- Banco de Portugal <http://www.bportugal.pt>

Puerto Rico

Official name: Estado Libre Asociado de Puerto Rico (Spanish); Commonwealth of Puerto Rico (English).

Political status: self-governing commonwealth in association with the United States, having two legislative houses (Senate [27¹]; House of Representatives [51¹]).

Chief of state: President of the U.S.

Head of government: Governor.

Capital: San Juan.

Official languages: Spanish; English.

Monetary unit: U.S. dollar (U.S.\$); valuation (Sept. 1, 2009)

1 £ = U.S.\$1.62.



Population (2008 estimate)

Municipalities	population	Municipalities	population	Municipalities	population
Adjuntas	18,338	Fajardo	42,270	Naguabo	24,342
Aguada	46,036	Florida	16,067	Naranjito	29,901
Aguadilla	67,491	Guánica	22,824	Orocovis	24,870
Agua de Buenas	31,601	Guayama	45,298	Patillas	19,941
Aibonito	27,129	Guayanilla	23,686	Peñuelas	29,575
Añasco	30,300	Guaynabo	102,956	Ponce	179,353
Arceibo	102,645	Gurabo	43,764	Quebradillas	28,129
Arroyo	18,954	Hatillo	43,658	Rincón	16,615
Barceloneta	23,106	Hormigueros	17,648	Río Grande	56,695
Barranquitas	30,544	Humacao	60,809	Sabana Grande	27,728
Bayamón	219,740	Isabela	48,134	Salinas	32,241
Cabo Rojo	53,849	Jayuya	18,343	San Germán	37,638
Caguas	143,176	Juana Díaz	53,223	San Juan	422,665
Camuy	39,851	Juncos	41,221	San Lorenzo	44,842
Canóvanas	47,666	Lajas	28,027	San Sebastián	48,095
Carolina	187,438	Lares	37,961	Santa Isabel	22,925
Cataño	26,074	Las Marías	12,216	Toa Alta	81,959
Cayey	47,193	Las Piedras	39,893	Toa Baja	94,799
Ceiba	17,802	Loíza	33,778	Trujillo Alto	87,083
Ciales	20,658	Lquillo	20,561	Utua	34,339
Cidra	48,548	Manatí	49,845	Vega Alta	39,723
Coamo	39,616	Maricao	6,310	Vega Baja	64,879
Comerio	19,276	Maunabo	12,668	Vieques (island)	9,252
Corozal	39,000	Mayagüez	92,996	Villalba	30,367
Culebra (island)	2,138	Moca	44,891	Yabucoa	40,559
Dorado	36,630	Morovis	32,995	Yauco	48,481
				TOTAL	3,954,037

Demography

Area: 3,515 sq mi, 9,104 sq km.

Population (2009): 3,966,000.

Density (2009): persons per sq mi 1,128, persons per sq km 435.6.

Urban-rural (2005): urban 97.6%; rural 2.4%.

Sex distribution (2008): male 47.99%; female 52.01%.

Age breakdown (2008): under 15, 20.3%; 15–29, 21.7%; 30–44, 20.3%; 45–59, 18.6%; 60–74, 13.1%; 75–84, 4.3%; 85 and over, 1.7%.

Population projection: (2020) 4,053,000; (2030) 4,039,000.

Ethnic composition (2000): local white 72.1%; black 15.0%; mixed black/white 10.0%; U.S. white 2.2%; other 0.7%.

Religious affiliation (2000): Roman Catholic c. 74%; Protestant c. 13%; independent Christian c. 6%; Jehovah's Witness c. 2%; nonreligious/atheist c. 2%; Spiritist c. 1%; other c. 2%.

Major metropolitan areas (2008): San Juan 2,608,375; Aguadilla 339,523; Ponce 262,943; San Germán 147,242; Yauco 124,566; Mayagüez 110,644.

Vital statistics

Birth rate per 1,000 population (2008): 12.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.3 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.65.

Marriage/divorce rates per 1,000 population: (2005) 6.0/(2006) 3.92.

Life expectancy at birth (2008): male 74.8 years; female 82.3 years.

Major causes of death per 100,000 population (2005): circulatory diseases 213.2; malignant neoplasms (cancers) 123.7; respiratory diseases 76.1; diabetes mellitus 71.3; infectious and parasitic diseases 41.5.

National economy

Budget. Revenue (2006–07): U.S.\$14,988,600,000 (income taxes 42.6%; federal grants 34.5%; excise taxes 9.8%; charges for services 5.1%). Expenditures: U.S.\$17,158,000,000 (education 25.6%; public housing/welfare 17.8%; general government services 14.8%; health 11.4%; public safety 10.9%; interest on debt 4.7%).

Public debt (June 2009): U.S.\$61,790,000,000.

Production (in metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 350,000, plantains 80,000, bananas 53,500, chicken meat 50,000, oranges 19,500, tomatoes 18,800, pig meat 11,000, cattle meat 9,800, coffee 8,100; livestock (number of live animals) 380,000 cattle, 50,000 pigs, 13,000,000 chickens; roundwood, n.a.; fisheries production 1,719 (from aquaculture 3%). Mining (2006): crushed stone 8,790,000. Manufacturing (value added in U.S.\$'000,000; 2004): chemical products (nearly all drugs and medicine) 20,276; nonelectrical machinery 3,271; professional and scientific equipment 3,211; electrical machinery 1,754; nonalcoholic beverages 1,594. Energy production (consumption): electricity (kW-hr; 2006) 25,800,000,000 (25,800,000,000); coal, none (1,499,000); crude petroleum (barrels; 2008) none (2005) 70,800,000; petroleum products, n.a. (n.a.); natural gas (cu m; 2007) none (736,000,000).

Gross national income (2008): U.S.\$60,800,000,000 (U.S.\$15,399 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	385.9	0.4	22,000	1.5
Manufacturing	38,457.7	41.2	136,000	9.6
Mining			1,000	0.1
Construction	1,991.4	2.1	87,000	6.1
Public utilities			16,000	1.1
Transp. and commun.	6,019.5	6.5	43,000	3.0
Trade	11,810.8	12.7	271,000	19.1
Finance, real estate	16,391.1	17.6	47,000	3.3
Pub. admin., defense	8,762.2	9.4	278,000	19.6
Services	8,866.5	9.5	354,000	24.9
Other	577.8	0.6	165,000 ³	11.6 ³
TOTAL	93,262.9	100.0	1,420,000	100.0 ⁴

Population economically active (2005): total 1,410,000⁵; activity rate of total population 36.0%⁵ (participation rates: ages 16–64, 56.1%⁵; female 43.7%⁵; unemployed [October 2008–September 2009] 14.4%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	72.8	78.4	87.8	100.0	114.6	122.4	134.1

Household income and expenditure. Average family size (2008) 3.2; average annual income per family (2008) U.S.\$45,556; sources of income (2002): wages and salaries 49.7%, transfers 30.6%, rent 7.7%, self-employment 6.1%, other 5.9%; expenditure (2008): health care 15.9%, housing 15.5%, food and nonalcoholic beverages 14.6%, household furnishings 12.6%, transportation 12.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 3,450; remittances, n.a.; foreign direct investment (2005–07 avg.) 27. Disbursements for (U.S.\$'000,000): tourism (2007) 1,192; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 7.0%, in permanent crops 4.2%, in pasture 10.1%, forest area 46.0%.

Foreign trade

Balance of trade (current prices)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
U.S.\$'000,000	+21,426	+16,183	+17,638	+17,489	+14,745	+19,026
% of total	24.1%	17.2%	18.5%	17.0%	14.0%	17.5%

Imports (2007–08): U.S.\$44,928,000,000 (imports for pharmaceutical industry 33.5%, petroleum and coal products 11.5%, base chemicals 7.3%, computers/electronics 6.6%, food 5.8%). **Major import sources** (2006–07): U.S. 50.1%; Ireland 21.0%; Japan 3.7%.

Exports (2007–08): U.S.\$63,954,000,000 (pharmaceuticals and medicine 66.0%, food 7.0%, computers/electronics 6.4%). **Major export destinations** (2006–07): U.S. 77.2%; Netherlands 4.6%; Germany 3.4%.

Transport and communications

Transport. Railroads (2007)⁶: length 59 mi, 96 km. Roads (2008): total length 16,576 mi, 26,676 km (paved 99%). Vehicles (2007): passenger cars 2,421,055; trucks and buses 110,144. Air transport (2006): passenger arrivals and departures 11,450,700; cargo loaded and unloaded 352,396 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	1,290	338	PCs	2007	...	...
Telephones				Dailies	2007	580 ⁷	147 ⁷
Cellular	2005	3,354 ⁸	858 ⁸	Internet users	2008	1,000	253
Landline	2008	1,038	263	Broadband	2006	118 ⁸	30 ⁸

Education and health

Educational attainment (2000). Percentage of population age 25 and over having: no formal schooling to lower secondary education 25.4%; some upper secondary to some higher 56.3%; undergraduate or graduate degree 18.3%.

Literacy (2002): total population age 15 and over literate 94.1%.

Education (2005–06)⁹

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–12)				
Secondary/Voc. (age 13–18)	42,036	563,490	13.4	...
Tertiary	...	67,990	...	... (age 19–23)

Health: physicians (2001) 7,623 (1 per 504 persons); hospital beds (2002) 12,351 (1 per 312 persons); infant mortality rate (2008) 8.3; undernourished population, n.a.

Military

Total active duty U.S. personnel (December 2008): 191¹⁰.

¹Minimum number of seats per constitution; minority parties may have additional representation. ²Data are probably for local population only. ³Unemployed. ⁴Detail does not add to total given because of rounding. ⁵Excludes armed forces. ⁶Privately owned railway for sugarcane transport only. ⁷Circulation of daily newspapers. ⁸Subscribers. ⁹Public schools only. ¹⁰Puerto Rican paramilitary forces (national guard; 2007): 11,000.

Internet resources for further information:

- **Junta de Planificación** <http://www.jp.gobierno.pr>
- **Government Development Bank for Puerto Rico** <http://www.gdb-pur.com/home.en.htm>

Qatar

Official name: Dawlat Qaṭar (State of Qatar).

Form of government: constitutional emirate with one advisory body (Advisory Council [35¹]).

Head of state and government: Emir assisted by Prime Minister.

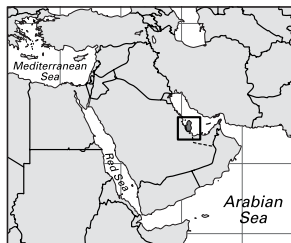
Capital: Doha.

Official language: Arabic.

Official religion: Islam.

Monetary unit: Qatari riyal (QR); valuation (Sept. 1, 2009)

1 U.S.\$ = QR 3.64; 1 £ = QR 5.91.



Area and population

Municipalities	Capitals	area		population
		sq mi	sq km	2006 estimate
Ad-Dawḥah (Doha)	—	61	159	370,656
Al-Ghuwayriyah	Al-Ghuwayriyah	241	623	2,332
Jarayān al-Bāṭinah	Jarayān al-Bāṭinah	922	2,389	7,554
Al-Jumayliyah	Al-Jumayliyah	1,008	2,612	10,565
Al-Khawr	Al-Khawr	386	1,001	37,600
Ar-Rayyān	Ar-Rayyān	345	893	317,227
Ash-Shamāl	Madinat ash-Shamāl	348	902	5,253
Umm Sa'īd	Umm Sa'īd	259	670	14,828
Umm Ṣalāl	Umm Ṣalāl Muḥammad	181	470	37,334
Al-Wakrah	Al-Wakrah	431	1,116	34,716
TOTAL		4,184²	10,836²	838,065³

Demography

Population (2009): 1,661,000.

Density (2009): persons per sq mi 397.0, persons per sq km 153.3.

Urban-rural (2007): urban 95.4%; rural 4.6%.

Sex distribution (2007): male 75.60%; female 24.40%.

Age breakdown (2005): under 15, 21.8%; 15–29, 25.5%; 30–44, 33.7%; 45–59, 16.3%; 60–74, 2.4%; 75 and over, 0.3%.

Population projection: (2020) 2,052,000; (2030) 2,300,000.

Doubling time: 66 years.

Ethnic composition (2000): Arab 52.5%, of which Palestinian 13.4%, Qatari 13.3%, Lebanese 10.4%, Syrian 9.4%; Persian 16.5%; Indo-Pakistani 15.2%; black African 9.5%; other 6.3%.

Religious affiliation (2000): Muslim c. 83%, of which Sunnī c. 73%, Shī'ī c. 10%; Christian c. 10%, of which Roman Catholic c. 6%; Hindu c. 3%; Buddhist c. 2%; nonreligious c. 2%.

Major cities (2004): Ad-Dawḥah (Doha) 339,847; Ar-Rayyān 258,193; Al-Wakrah 26,993; Umm Ṣalāl Muḥammad 25,413; Al-Khawr 18,036.

Vital statistics

Birth rate per 1,000 population (2008): 11.9 (world avg. 20.3).

Death rate per 1,000 population (2008): 1.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 10.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 2.80.

Marriage/divorce rates per 1,000 population (2008): 2.2/0.6.

Life expectancy at birth (2005): male 74.4 years; female 75.8 years.

Major causes of death per 100,000 population (2004): accidents and violence 36.9; diseases of the circulatory system 33.8; malignant neoplasms (cancers) 18.1; endocrine, metabolic, and nutritional disorders 12.2; diseases of the respiratory system 11.4; ill-defined conditions 34.8.

National economy

Budget (2007–08). Revenue: QR 117,790,000,000 (oil and natural gas revenue 60.1%, investment income 25.8%, corporate income tax 7.6%). Expenditures: QR 84,727,000,000 (utilities 11.4%, defense 7.5%, communications 5.6%, health 5.2%, education 5.1%, roads 3.2%, interest payments 2.2%, other 59.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 21,000, tomatoes 5,400, barley 5,000, cantaloupes and other melons 4,300, eggplants 3,200, dry onions 3,000; livestock (number of live animals) 160,000 goats, 120,000 sheep, 14,000 camels, 8,000 cattle, 4,500,000 chickens; roundwood, none; fisheries production 15,226 (from aquaculture, negligible). Mining and quarrying (2007): limestone 1,100,000; gypsum, sand and gravel, and clay are also produced. Manufacturing (value added in QR '000,000; 2005): refined petroleum products 4,502; chemicals and chemical products 2,168; base metals 1,959; bricks, cement, and ceramics 892; fabricated metals 469; wearing apparel 442. Energy production (consumption): electricity (kW-hr; 2006) 15,325,000,000 (15,325,000,000); coal, none (none); crude petroleum (barrels; 2007) 308,600,000 ([2006] 41,797,000); petroleum products (metric tons; 2006) 4,723,000 (2,059,000); natural gas (cu m; 2006) 49,500,000,000 (19,092,000,000).

Household income and expenditure. Average household size (2004) 7.4; income per household: n.a.; sources of income: n.a.; expenditure (2001): housing 17.8%, food and beverages 16.3%, transportation 15.8%, household furnishings 8.6%, clothing and footwear 7.1%, education 5.5%, communications 5.5%.

Population economically active (2004): total 444,133; activity rate of total population 59.7% (participation rates: ages 15 and over, 77.1%; female 15.1%; unemployed 1.5%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	84.1	86.0	91.9	100.0	111.8	127.2	146.4

Gross national income (2008): U.S.\$113,984,000,000 (U.S.\$88,990 per capita).

Structure of gross domestic product and labour force

	2007		2004	
	in value QR '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	250	0.1	12,025	2.7
Oil, natural gas sector, other mining	146,143	56.5	17,997	4.1
Manufacturing	19,179 ⁴	7.4 ⁴	40,039	9.0
Construction	14,634	5.7	117,049	26.4
Public utilities	4,329	1.7	4,364	1.0
Transp. and commun.	9,803	3.8	15,218	3.4
Trade, hotels	12,002	4.6	64,718	14.6
Finance, real estate	31,865	12.3	16,625	3.7
Pub. admin., defense	20,828	8.1	53,438	12.0
Services	3,501	1.4	94,917	21.4
Other	–3,944 ⁵	–1.5 ⁵	7,743 ⁶	1.7 ⁶
TOTAL	258,590	100.0²	444,133⁷	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 874; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 865. Disbursements for (U.S.\$'000,000): tourism (2006) 3,751; remittances (2006–07) c. 5,000; FDI (2005–07 avg.) 1,914.

Land use as % of total land area (2007): in temporary crops 1.6%, in permanent crops 0.3%, in pasture 4.3%, forest area, negligible.

Foreign trade⁸

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+4,179	+8,485	+12,681	+15,702	+17,611	+22,024
% of total	34.0%	46.4%	51.4%	43.8%	34.9%	33.4%

Imports (2006): U.S.\$16,440,000,000 (nonelectrical machinery and equipment 23.5%; iron and steel 13.7%; electrical machinery and apparatus [including parts] 8.6%; road vehicles 6.8%; chemicals and chemical products 5.1%; fabricated metals 4.9%). **Major import sources:** Japan 12.0%; U.S. 9.9%; Germany 9.3%; Italy 9.3%; U.A.E. 6.0%; China 5.8%.

Exports (2006): U.S.\$34,051,000,000 (crude petroleum 46.9%; liquefied natural gas 34.8%; refined petroleum 4.6%; liquefied propane and butane 3.4%; polyethylene 3.3%; urea 2.0%). **Major export destinations:** Japan 41.5%; South Korea 13.9%; Singapore 9.5%; India 4.9%; U.A.E. 4.3%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 7,790 km (paved, n.a.). Vehicles (2004): passenger cars 265,609; trucks and buses 114,115. Air transport (2008): passenger-km 36,204,000,000; metric ton-km cargo 1,639,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	315	412	PCs	2005	145	182
Telephones				Dailies	2007	211 ⁹	303 ⁹
Cellular	2008	1,683 ¹⁰	1,314 ¹⁰	Internet users	2008	436	340
Landline	2008	263	206	Broadband	2008	103 ¹⁰	81 ¹⁰

Education and health

Educational attainment (2004). Percentage of population age 10 and over having: no formal education 34.8%, of which illiterate 10.2%; primary 13.0%; preparatory (lower secondary) 16.2%; secondary 20.0%; postsecondary 15.9%; other 0.1%. **Literacy** (2006): total population age 15 and over literate 89.0%; males literate 89.1%; females literate 88.6%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	5,187	75,451	14.5	94
Secondary/Voc. (age 12–17)	8,954	61,226	6.8	93
Tertiary	1,153	8,881	7.7	16 (age 18–22)

Health (2007): physicians 1,775¹¹ (1 per 691 persons); hospital beds 1,651¹¹ (1 per 743 persons); infant mortality rate per 1,000 live births (2008) 7.7; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 11,800 (army 72.0%, navy 15.3%, air force 12.7%); U.S. troops (November 2008) 444. **Military expenditure as percentage of GDP** (2007): 1.5%; per capita expenditure U.S.\$889.

¹All seats are appointed by the emir. ²Detail does not add to total given because of rounding. ³Official population estimate for 2006 was later revised to 1,041,733. ⁴Excludes oil- and natural gas-related manufacturing. ⁵Import duties less imputed bank service charges. ⁶Including 6,572 unemployed. ⁷Of which Qatari, 50,282. ⁸Imports c.i.f.; exports f.o.b. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹Public sector only.

Internet resources for further information:

- Qatar Statistics Authority <http://www.qsa.gov.qa/eng/index.htm>
- Qatar Central Bank <http://www.qcb.gov.qa>

Réunion

Official name: Département d'Outre-Mer de la Réunion (Overseas Department of Réunion).¹

Political status: overseas department/overseas region (France) with two legislative houses (General Council² [49]; Regional Council³ [45]).

Chief of state: President of France.

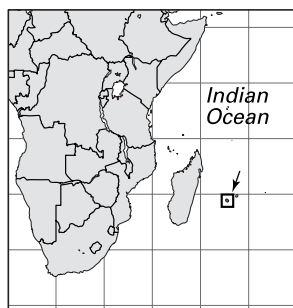
Heads of government: Prefect (for France); President of General Council (for Réunion); President of Regional Council (for Réunion).

Capital: Saint-Denis.

Official language: French.

Official religion: none.

Monetary unit: euro (€); valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

Arrondissements	Capitals	area		population
		sq mi	sq km	2006 ⁴ estimate
Saint-Benoît	Saint-Benoît	284	736	114,279
Saint-Denis	Saint-Denis	111	288	190,624
Saint-Paul	Saint-Paul	208	537	199,457
Saint-Pierre	Saint-Pierre	364	943	277,602
TOTAL		970⁵	2,512⁵	781,962

Demography

Population (2009): 816,000.

Density (2009): persons per sq mi 843.0, persons per sq km 325.5.

Urban-rural (2005): urban 92.4%; rural 7.6%.

Sex distribution (2006⁴): male 48.49%; female 51.51%.

Age breakdown (2005): under 15, 27.0%; 15–29, 23.6%; 30–44, 24.1%; 45–59, 15.0%; 60–74, 7.5%; 75–84, 2.3%; 85 and over, 0.5%.

Population projection: (2020) 918,000; (2030) 994,000.

Doubling time: 51 years.

Ethnic composition (2000): mixed race (black-white-South Asian) 42.6%; local white 25.6%; South Asian 23.0%, of which Tamil 20.0%; Chinese 3.4%; East African 3.4%; Malagasy 1.4%; other 0.6%.

Religious affiliation (2000): Christian 87.8%, of which Roman Catholic 81.8%, Pentecostal 4.2%; Hindu 4.5%; Muslim 4.2%; nonreligious 1.7%; other 1.8%.

Major urban agglomerations (2006⁴): Saint-Denis 168,910; Saint-Pierre 144,329; Saint-Paul 99,291; Le Port 64,390.

Vital statistics

Birth rate per 1,000 population (2007): 18.7 (world avg. 20.3); (2006) within marriage 32.0%, outside of marriage 68.0%.

Death rate per 1,000 population (2007): 5.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 13.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 2.45.

Marriage/divorce rates per 1,000 population: (2006) 3.8/(2004) 2.0.

Life expectancy at birth (2006): male 73.2 years; female 80.9 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 168.6; malignant neoplasms (cancers) 118.8; diseases of the respiratory system 39.1; diseases of the digestive system 32.5; diabetes mellitus 30.4; accidents 29.9.

National economy

Budget (2009)⁷. Revenue: €1,404,900,000 (receipts from French central government and local administrative bodies 66.2%; indirect and direct taxes 26.1%; other subsidies 3.6%; other 4.1%). Expenditures: €1,404,900,000 (social welfare 58.5%; general services 20.4%; other 21.1%).

Public debt (external, outstanding): n.a.

Gross domestic product (2007): U.S.\$18,715,000,000 (U.S.\$23,467 per capita).

Structure of gross domestic product and labour force				
	2005			
	in value €'000,000	% of total value	labour force ⁴ , 8	% of labour force ⁴ , 8
Agriculture, fishing	202	1.7	7,562	3.7
Manufacturing, mining	789	6.6	7,365	3.6
Public utilities			1,550	0.7
Construction	860	7.1	11,835	5.8
Transp. and commun.	720	6.0	9,169	4.5
Trade	1,098 ⁹	9.19	29,976	14.6
Finance, real estate, business services	643	5.3	18,562	9.0
Pub. admin., defense	1,377	11.4	40,984	19.9
Services	5,661 ⁹	46.99	55,474	27.0
Other	711 ¹⁰	5.9 ¹⁰	23,013 ¹¹	11.2 ¹¹
TOTAL	12,061	100.0	205,490	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 1,880,000, corn (maize) 14,000, pineapples 10,000, bananas 9,000, tomatoes 7,000, cauliflower 5,500, potatoes 5,300, green onions 5,000, mangoes 4,500, tangerines 3,800, carrots and turnips 3,800, eggplants 3,200, pimento (allspice) (2005) 800, ginger 80, vanilla 25, geranium essence (2005) 1.9; livestock (number of live animals) 82,000 pigs, 37,000 goats, 33,000 cattle; roundwood 36,100 cu m, of which fuelwood 86%; fisheries production 3,925 (from aquaculture, negligible). Mining and quarrying: gravel and sand

for local use. Manufacturing (value added in €'000,000; 2006): food and beverages 172; construction materials (mostly cement) 98; printing and publishing 50; base and fabricated metals 26. Energy production (consumption): electricity (kW-hr; 2006) 1,710,000,000 (1,710,000,000); petroleum products (metric tons; 2006) none (760,000).

Population economically active (2008): total 317,475; activity rate of total population 39.4% (participation rates: ages 15–64, 59.7%; female 45.8%; unemployed 24.5%).

Price index (2005 = 100)						
	2003	2004	2005	2006	2007	2008
Consumer price index	96.3	97.9	100.0	102.6	104.0	107.0

Household income and expenditure. Average household size (2006) 3.0; average annual income per capita of household (2003) €11,446 (U.S.\$14,456); sources of income (1997): wages and salaries and self-employment 41.8%, transfer payments 41.3%, other 16.9%; expenditure (2001): housing and energy 24.0%, transportation and communications 20.0%, food and beverages 17.0%, recreation and culture 10.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 448; remittances, n.a.; foreign direct investment (FDI) n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.; FDI, n.a.

Land use as % of total land area (2007): in temporary crops c. 13%, in permanent crops c. 1%, in pasture c. 4%, forest area c. 33%.

Foreign trade

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
€'000,000	–3,000	–3,050	–3,427	–3,674	–3,747	–4,269
% of total	86.3%	85.9%	86.7%	88.5%	87.4%	89.2%

Imports (2008): €4,527,400,000 (machinery and equipment 15.1%; food and agricultural products 14.3%; transport equipment 13.5%; mineral fuels 13.4%; pharmaceuticals 7.4%). **Major import sources:** France 56.0%; Singapore 10.1%; China 5.1%; Germany 3.6%; Italy 3.6%.

Exports (2008): €258,500,000 (food products 65.0%, of which sugar 31.7%, fish 18.5%, beverages [mostly rum] 6.3%; machinery and apparatus 10.0%; transportation equipment and parts 7.9%). **Major export destinations:** France 38.6%; Mayotte 10.1%; Germany 7.9%; Japan c. 7%; Madagascar c. 7%.

Transport and communications

Transport. Railroads: ¹² Roads (2001): total length 754 mi, 1,214 km (paved [1991] 79%). Vehicles (1999): passenger cars 190,300; trucks and buses 44,300. Air transport (2007)¹³: passenger-km 3,312,000,000; metric ton-km cargo (2005) 48,547,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	138	185	PCs	2004	278	351
Telephones				Dailies	2007	72 ¹⁴	90 ¹⁴
Cellular	2004	579 ¹⁵	753 ¹⁵	Internet users	2008	280	347
Landline	2008	440	546	Broadband	2004	57 ¹⁵	74 ¹⁵

Education and health

Educational attainment (1999). Percentage of population age 25 and over having: no formal schooling through incomplete secondary education 83.0%; complete secondary 7.4%; some higher 3.9%; complete higher 5.7%. **Literacy** (2003): total population age 15 and over literate 88.9%; males literate 87.0%; females literate 90.8%.

Education (2007–08)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary ¹⁶	6,866	122,517	17.8	...
Secondary/Voc.	9,178	101,467	11.1	...
Tertiary ¹⁷	498	10,348	20.8	...

Health: physicians (2009⁴) 2,068 (1 per 392 persons); hospital beds (2008⁴) 2,956 (1 per 271 persons); infant mortality rate per 1,000 live births (2007) 6.1; undernourished population, n.a.

Military

Total active duty personnel (2008): 1,000 French army and navy personnel¹⁸.

¹Réunion is simultaneously administered as an overseas region (*région d'outre-mer*).

²Assembly for overseas department. ³Assembly for overseas region. ⁴January 1.

⁵Reported total; summed total equals 967 sq mi (2,504 sq km). ⁶Excludes the French overseas territory of French Southern and Antarctic Lands, which is administered from Réunion.

⁷Departmental budget. ⁸Employed only. ⁹Trade excludes restaurants and hotels, and Services includes restaurants and hotels. ¹⁰Taxes less subsidies and less imputed bank service charges. ¹¹Non-salaried employees. ¹²No public railways; railways in use are for sugar industry. ¹³Air Austral only. ¹⁴Circulation of daily newspapers.

¹⁵Subscribers. ¹⁶Includes pre-primary. ¹⁷Université de la Réunion only. ¹⁸Includes troops stationed on Mayotte.

¹⁹Includes troops stationed on Mayotte.

Internet resources for further information:

- INSEE: Réunion
<http://www.insee.fr/fr/regions/reunion>
- Institut d'Émission des Départements d'Outre-Mer
<http://www.iedom.fr>

Romania

Official name: România (Romania).
Form of government: unitary republic with two legislative houses (Senate [137]; Chamber of Deputies [334]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Bucharest.
Official language: Romanian.
Official religion: none.
Monetary unit: (new) leu² (RON; plural [new] lei); valuation (Sept. 1, 2009)
 1 U.S.\$ = RON 2.96;
 1 £ = RON 4.80.



Population

Counties	population 2009 ³ estimate	Counties	population 2009 ³ estimate	Counties	population 2009 ³ estimate
Alba	374,535	Dâmbovița	531,011	Prahova	817,092
Arad	457,306	Dolj	707,629	Sălaj	242,472
Argeș	642,359	Galați	611,040	Satu Mare	365,508
Bacău	718,165	Giurgiu	282,322	Sibiu	424,855
Bihor	593,606	Gorj	378,310	Suceava	707,588
Bistrița-Năsăud	317,346	Harghita	325,345	Teleorman	405,070
Botoșani	451,193	Hunedoara	466,586	Timiș	676,360
Brăila	361,414	Ialomița	288,472	Tulcea	248,367
Brașov	596,853	Iași	823,388	Vâlcea	408,518
Buzău	483,988	Illfov	308,726	Vaslui	452,816
Călărași	313,460	Maramureș	511,946	Vrancea	391,641
Caraș-Severin	324,236	Mehedinți	294,364		
Cluj	690,590	Mureș	581,628	Municipality	
Constanța	721,896	Neamț	564,471	Bucharest	1,944,367
Covasna	222,846	Olt	468,931	TOTAL	21,498,616

Demography

Area: 92,043 sq mi, 238,391 sq km.
Population (2009): 21,481,000.
Density (2009): persons per sq mi 233.4, persons per sq km 90.1.
Urban-rural (2009³): urban 55.1%; rural 44.9%.
Sex distribution (2009³): male 48.71%; female 51.29%.
Age breakdown (2009³): under 15, 15.2%; 15–29, 22.0%; 30–44, 23.3%; 45–59, 19.8%; 60–74, 13.5%; 75–84, 5.2%; 85 and over, 1.0%.
Population projection: (2020) 20,946,000; (2030) 20,157,000.
Ethnic composition (2002): Romanian 89.5%; Hungarian 6.6%; Rom (Gypsy) 2.5%; Ukrainian 0.3%; German 0.3%; other 0.8%.
Religious affiliation (2002): Romanian Orthodox 86.7%; Protestant 6.3%; Roman Catholic 4.7%; Greek Catholic 0.9%; Muslim 0.3%; other 1.1%.
Major cities (2009³): Bucharest 1,944,367; Timișoara 311,586; Iași 308,843; Cluj-Napoca 306,474; Constanța 302,171.

Vital statistics

Birth rate per 1,000 population (2008): 10.3 (world avg. 20.3); within marriage 72.6%; outside of marriage 27.4%.
Death rate per 1,000 population (2008): 11.8 (world avg. 8.5).
Total fertility rate (avg. births per childbearing woman; 2008): 1.35.
Marriage/divorce rates per 1,000 population (2008): 6.9/1.7.
Life expectancy at birth (2008): male 69.5 years; female 76.7 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 739.0; malignant neoplasms (cancers) 204.1; diseases of the digestive system 70.2; accidents and violence 62.5.

National economy

Budget (in ROL '000,000,000²; 2004). Revenue: 322.0 (VAT 35.0%, excise tax 24.7%, tax on profits 20.0%, nontax revenue 5.8%). Expenditures: 340.7 (economic affairs 26.7%, social assistance 14.0%, police 11.9%, defense 10.5%, interest payments 7.7%, education 5.7%, health 3.6%).
Public debt (external, outstanding; June 2009): U.S.\$13,768,100,000.
Population economically active (2008): total 9,944,700; activity rate 46.2% (participation rates: ages 15–64, 62.9%; female 44.4%; unemployed [September 2008–August 2009] 5.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71.1	82.0	91.8	100.0	106.6	111.7	120.5
Annual earnings index	52.6	66.0	80.8	100.0	116.8	141.3	173.7

Household income and expenditure (2008). Average household size (2003) 2.8; average annual income per household RON 25,580 (U.S.\$9,040); sources of income: wages and salaries 62.7%, transfers 26.0%; expenditure: food and nonalcoholic beverages 40.9%, housing and energy 15.6%, clothing and footwear 6.7%, alcohol and tobacco 6.5%.

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): corn (maize) 7,849,000, wheat 7,181,000, potatoes 3,649,000, barley 1,209,000, sunflower seed 1,170,000, grapes 1,010,000, tomatoes (2007) 555,444, apples (2007) 374,799; livestock (number of live animals) 8,882,000 sheep, 6,174,000 pigs, 2,684,000 cattle, 84,373,000 chickens; roundwood (2007) 15,341,000 cu m, of which fuelwood 25%; fisheries production (2007) 16,496 (from aquaculture 63%). Mining (2006): copper 12,200⁴; zinc 9,574⁴; lead 7,500⁴. Manufacturing (value added in U.S.\$'000,000; 2006): food products 1,333; wearing apparel 1,257; transportation equipment 978; fabricated metal products 923; cement, bricks, and ceramics 920; base metals 800; nonelectrical machinery 795; chemical products 736. Energy production (consumption):

electricity (kW-hr; 2008–09) 61,415,000,000 ([2006] 58,424,000,000); hard coal (metric tons; 2008–09) 2,356,000 ([2006] 2,796,000); lignite (metric tons; 2008–09) 32,251,000 (31,941,000); crude petroleum (barrels; 2008–09) 33,250,000 ([2006] 106,585,200); petroleum products (metric tons; 2008–09) 12,985,000 ([2006] 8,904,000); natural gas (cu m; 2008–09) 9,594,400,000 ([2008] 16,920,000,000).

Gross national income (GNI; 2008): U.S.\$170,560,000,000 (U.S.\$7,930 per capita); purchasing power parity GNI (U.S.\$13,500 per capita).

Structure of gross domestic product and labour force

	2008			
	in value RON '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	32,566.4	6.5	2,689,900	27.1
Mining and quarrying			107,200	1.1
Public utilities	115,192.2	22.9	161,400	1.6
Manufacturing			1,929,800	19.4
Construction	52,893.9	10.5	746,400	7.5
Transp. and commun.	117,224.3	23.3	508,500	5.1
Trade, hotels	63,657.0	12.6	1,332,400	13.4
Finance, real estate			408,700	4.1
Pub. admin.	68,335.1	13.5	476,100	4.8
Services	54,089.8	10.7	1,004,400	10.1
Other	503,958.7	100.0	579,900 ⁵	5.8 ⁵
TOTAL			9,944,700	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,467; remittances (2008) 9,395; foreign direct investment (FDI; 2005–07 avg.) 9,208. Disbursements for (U.S.\$'000,000): tourism (2007) 1,535; remittances (2008) 436; FDI (2005–07 avg.) 110.

Land use as % of total land area (2007): in temporary crops 30.0%, in permanent crops 2.0%, in pasture 23.0%, forest area 27.7%.

Foreign trade⁶

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–2,611	–4,537	–6,664	–9,618	–14,836	–24,312
% of total	8.6%	11.4%	12.4%	14.8%	18.7%	23.3%

Imports (2006): U.S.\$51,106,000,000 (mineral fuels 13.5%, of which crude petroleum 7.7%; nonelectrical machinery and equipment 11.1%; road vehicles 10.6%; chemicals and chemical products 10.6%; base and fabricated metals 9.7%; electrical machinery/electronics/parts 7.5%). **Major import sources:** Germany 15.2%; Italy 14.6%; Russia 7.9%; France 6.5%; Turkey 5.0%.

Exports (2006): U.S.\$32,336,000,000 (apparel/clothing accessories 13.7%; base and fabricated metals 12.6%; refined petroleum 8.9%; nonelectrical machinery and equipment 8.0%; road vehicles/parts 6.2%; insulated wire/optical fibre cables 6.0%; footwear 5.3%). **Major export destinations:** Italy 18.1%; Germany 15.7%; Turkey 7.7%; France 7.5%; Hungary 4.9%.

Transport and communications

Transport. Railroads (2008): route length 10,788 km; passenger-km 6,958,000; metric ton-km cargo 15,000,000,000. Roads (2005⁷): length 79,454 km (paved 26%). Vehicles (2008): cars 4,027,000; trucks and buses 687,000. Air transport (2008–09): passenger-km 3,835,000,000; metric ton-km cargo 5,466,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2006	5,478 ⁸	254 ⁸	PCs	2007	4,137	192
Telephones				Dailies	2007	1,413 ⁹	66 ⁹
Cellular	2008	24,467 ⁸	1,145 ⁸	Internet users	2008	6,132	287
Landline	2008	5,036	236	Broadband	2008	2,510 ⁸	118 ⁸

Education and health

Educational attainment (2002). Percentage of population age 10 and over having: no formal schooling 5.5%; primary education 20.1%; lower secondary 27.6%; upper secondary/vocational 36.7%; higher vocational 3.0%; university 7.1%. **Literacy** (2006): total population age 15 and over literate 97.6%; males 98.3%; females 96.9%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	55,821	938,095	16.8	93
Secondary/Voc. (age 11–18)	156,816	2,013,016	12.8	73
Tertiary	31,543	834,969	26.5	52 (age 19–23)

Health (2008): physicians 50,238 (1 per 428 persons); hospital beds 137,984 (1 per 156 persons); infant mortality rate per 1,000 live births 11.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 73,200 (army 58.8%, navy 8.9%, air force 13.9%, joint staff 18.4%). **Military expenditure as percentage of GDP** (2007): 1.9%; per capita expenditure U.S.\$146.

¹Includes 18 elective seats for ethnic minorities. ²The leu was redenominated on July 1, 2005. As of that date 10,000 (old) lei (ROL) = 1 (new) leu (RON). ³January 1. ⁴Metal content of mine output. ⁵Includes 4,400 not adequately defined and 575,500 unemployed. ⁶Imports f.o.b. in balance of trade and trading partners and c.i.f. in commodities. ⁷Public roads only. ⁸Subscribers. ⁹Circulation of daily newspapers.

Internet resource for further information:

• National Institute of Statistics <http://www.insse.ro/cms/rw/pages/index.en.do>

Russia

Official name: Rossiyskaya Federatsiya (Russian Federation).

Form of government: federal multiparty republic with a bicameral legislative body (Federal Assembly comprising the Federation Council [178¹] and the State Duma [450]).

Head of state: President.

Head of government: Prime Minister.

Capital: Moscow.

Official language: Russian.

Official religion: none.

Monetary unit: ruble (RUB); valuation (Sept. 1, 2009) 1 U.S.\$ = RUB 31.82; 1 £ = RUB 51.63.



Area and population (continued)		area		population
Federal districts	Capitals	sq mi	sq km	2008 ² estimate
Nizhegorod (region)	Nizhny Novgorod	28,900	74,800	3,359,816
Orenburg (region)	Orenburg	47,900	124,000	2,119,003
Penza (region)	Penza	16,700	43,200	1,388,021
Perm (territory) ¹⁰	Perm	62,000	160,600	2,718,227
Samara (region)	Samara	20,700	53,600	3,172,787
Saratov (region)	Saratov	38,700	100,200	2,583,808
Tatarstan (republic)	Kazan	26,250	68,000	3,762,809
Udmurtiya (republic)	Izhevsk	16,300	42,100	1,532,736
Ulyanovsk (Simbirsk; region)	Simbirsk	14,400	37,300	1,312,208
TOTAL		6,592,800 ¹¹	17,075,400 ¹¹	142,008,838

Demography

Population (2009): 141,852,000.

Density (2009): persons per sq mi 21.5, persons per sq km 8.3.

Urban-rural (2007²): urban 73.0%; rural 27.0%.

Sex distribution (2007): male 46.22%; female 53.78%.

Age breakdown (2007): under 15, 14.6%; 15–29, 23.9%; 30–44, 21.3%; 45–59, 22.8%; 60–74, 11.9%; 75–84, 4.7%; 85 and over, 0.8%.

Population projection: (2020) 136,737,000; (2030) 130,131,000.

Ethnic composition (2002): Russian 79.82%; Tatar 3.83%; Ukrainian 2.03%; Bashkir 1.15%; Chuvash 1.13%; Chechen 0.94%; Armenian 0.78%; Mordvin 0.58%; Belarusian 0.56%; Avar 0.52%; Kazakh 0.45%; Udmurt 0.44%; Azerbaijani 0.43%; Mari 0.42%; German 0.41%; Kabardian 0.36%; Ossetian 0.35%; Dargin 0.35%; Buryat 0.31%; Sakha 0.31%; other 4.83%.

Religious affiliation (2005): Christian 58.4%, of which Russian Orthodox 53.1%, Roman Catholic 1.0%, Ukrainian Orthodox 0.9%, Protestant 0.9%; Muslim 8.2%^{12, 13}; traditional beliefs 0.8%; Jewish 0.6%; nonreligious 25.8%; atheist 5.0%; other 1.2%.

Major cities (2002²): Moscow 10,470,318; St. Petersburg 4,568,047; Novosibirsk 1,390,513; Yekaterinburg 1,322,954; Nizhny Novgorod 1,274,708; Samara 1,135,422; Omsk 1,131,100; Kazan 1,120,238; Chelyabinsk 1,092,495; Rostov-na-Donu 1,048,714; Ufa 1,021,458; Perm 987,234.

Other principal cities (2008²)

population		population		population
Astrakhan	503,087	Lipetsk	502,476	705,462
Barnaul	597,205	Naberezhnye Chelny	506,121	496,519
Irkutsk	575,817	Novokuznetsk	562,215	500,031
Izhevsk	613,295	Orenburg	526,430	560,014
Kemerovo	520,011	Penza	507,823	578,800
Khabarovsk	577,345	Ryazan	510,816	983,893
Krasnodar	709,735	Saratov	836,098	839,921
Krasnoyarsk	936,445	Simbirsk (Ulyanovsk)	606,972	605,176

Migration (2006): immigrants 186,380; emigrants 54,061.

Refugees (2008²): 159,500, of which from Afghanistan 84,500, Georgia 45,000.

Households (2004). Total households 51,209,000; average household size 2.8; distribution by size (2002)¹⁴: 1 person 22.3%; 2 persons 27.6%; 3 persons 23.8%; 4 persons 17.0%; 5 persons 5.7%; 6 or more persons 3.6%.

Vital statistics

Birth rate per 1,000 population (2008): 12.1 (world avg. 20.3); within marriage 73.1%; outside of marriage 26.9%.

Death rate per 1,000 population (2008): 14.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): –2.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.51.

Marriage/divorce rates per 1,000 population (2008): 8.3/5.0.

Life expectancy at birth (2008): male 61.7 years; female 74.2 years.

Major causes of death per 100,000 population (2008): circulatory diseases 833; malignant neoplasms (cancers) 203; accidents, poisoning, and violence 165, of which suicide 27, transport accidents 25, alcohol poisoning 14; diseases of the digestive system 63; diseases of the respiratory system 55; infectious and parasitic diseases 24.

Adult population (ages 15–49) living with HIV (2007): 1.1% (world avg. 0.8%).

Social indicators

Educational attainment (2002). Percentage of population age 15 and over having: no formal schooling 2.1%; primary education 7.7%; some secondary 18.1%; complete secondary/basic vocational 53.0%; incomplete higher 3.1%; complete higher 16.0%, of which advanced degrees 0.3%.

Quality of working life (2006). Average workweek (2004): 40 hours. Annual rate per 100,000 workers of: injury or accident 290; industrial illness 16.0; death 11.8. Average working days lost to labour strikes per 1,000 employees 0.2.

Social participation. Eligible voters participating in last national election (2008): 69.7%. Trade union membership in total workforce (2003) c. 45%¹⁵.

Social deviance. Offense rate per 100,000 population (2007) for: murder and attempted murder 15.6; rape and attempted rape 4.9; serious injury 33.3; burglary 207.6; drug abuse 162.6; robbery 31.9; theft 1,102.7. Incidence per 100,000 population of: suicide (2007) 29.0.

National economy

Public debt (external, outstanding; March 2008): U.S.\$35,200,000,000.

Budget (2007). Revenue: RUB 7,443,900,000,000 (VAT 30.0%; taxes on natural resources 15.0%; taxes on corporate profits 8.5%; individual income tax 5.2%). Expenditures: RUB 6,531,400,000,000 (transfers 29.7%; social and cultural services 14.1%; defense 12.8%; national economy 11.2%; public security 10.3%).

Gross national income (GNI; 2008): U.S.\$1,364,500,000,000 (U.S.\$9,620 per capita); purchasing power parity GNI (U.S.\$15,630 per capita).

Area and population		area		population
Federal districts	Capitals	sq mi	sq km	2008 ² estimate
Central	Moscow (Moskva)	252,000	652,800	37,150,741
Belgorod (region)	Belgorod	10,500	27,100	1,519,137
Bryansk (region)	Bryansk	13,500	34,900	1,308,479
Ivanovo (region)	Ivanovo	9,200	23,900	1,079,605
Kaluga (region)	Kaluga	11,600	29,900	1,005,648
Kostroma (region)	Kostroma	23,200	60,100	697,043
Kursk (region)	Kursk	11,500	29,800	1,162,475
Lipetsk (region)	Lipetsk	9,300	24,100	1,168,814
Moscow (city)		400	1,100	10,470,318
Moskva (Moscow; region)	Moscow (Moskva)	17,700	45,900	6,672,773
Oryol (region)	Oryol	9,500	24,700	821,934
Ryazan (region)	Ryazan	15,300	39,600	1,164,530
Smolensk (region)	Smolensk	19,200	49,800	983,227
Tambov (region)	Tambov	13,200	34,300	1,106,035
Tula (region)	Tula	9,900	25,700	1,566,295
Tver (region)	Tver	32,500	84,100	1,379,542
Vladimir (region)	Vladimir	11,200	29,000	1,449,475
Voronezh (region)	Voronezh	20,200	52,400	2,280,406
Yaroslavl (region)	Yaroslavl	14,100	36,400	1,315,005
Far Eastern	Khabarovsk	2,386,100	6,179,900	6,486,419
Amur (region)	Blagoveshchensk	140,400	363,700	869,617
Chukot (autonomous district)	Anadyr	284,800	737,700	50,263
Kamchatka (territory) ³	Petropavlovsk-Kamchatsky	182,400	472,300	345,669
Khabarovsk (territory)	Khabarovsk	290,600	752,600	1,403,712
Magadan (region)	Magadan	178,100	461,400	165,820
Primorye (territory)	Vladivostok	64,100	165,900	1,995,828
Sakha (republic)	Yakutsk	1,198,200	3,103,200	951,436
Sakhalin (region)	Yuzhno-Sakhalinsk	33,600	87,100	518,539
Yevreyskaya (autonomous region)	Birobidzhan	13,900	36,000	185,535
Northwest	St. Petersburg	648,000	1,677,900	13,501,038 ⁴
Arkhangelsk (region) ⁵	Arkhangelsk	158,600	410,700	1,229,858
Kaliningrad (region)	Kaliningrad	5,800	15,100	937,404
Kareliya (Karelia; republic)	Petrozavodsk	66,600	172,400	690,653
Komi (republic)	Syktuykar	160,600	415,900	968,164
Leningrad (region)	St. Petersburg	32,600	84,500	1,633,350
Murmansk (region)	Murmansk	55,900	144,900	850,929
Nenets (autonomous district) ⁵	Naryn-Mar	68,200	176,700	42,079
Novgorod (region)	Novgorod	21,400	55,300	652,437
Pskov (region)	Pskov	21,400	55,300	705,289
St. Petersburg (city)		600	1,400	4,568,047
Vologda (region)	Vologda	56,300	145,700	1,222,888
Siberia	Novosibirsk	1,974,800	5,114,800	19,553,461
Altay (republic)	Gorno-Altaysk	35,700	92,600	207,122
Altay (territory)	Barnaul	65,300	169,100	2,508,478
Buryatia (republic)	Ulan-Ude	135,600	351,300	959,892
Irkutsk (region) ⁶	Irkutsk	296,500	767,900	2,507,676
Kemerovo (region)	Kemerovo	36,900	95,500	2,823,539
Khakassiya (republic)	Abakan	23,900	61,900	537,230
Krasnoyarsk (territory) ⁷	Krasnoyarsk	903,400	2,339,700	2,890,350
Novosibirsk (region)	Novosibirsk	68,800	178,200	2,635,642
Omsk (region)	Omsk	53,900	139,700	2,017,997
Tomsk (region)	Tomsk	122,400	316,900	1,034,985
Tyva (republic)	Kyzyl	65,800	170,500	311,619
Zabaykalye (territory) ⁸	Chita	166,600	431,500	1,118,931
Southern	Rostov-na-Donu	226,200	585,950	22,835,216
Adygheya (republic)	Maykop	2,900	7,600	441,176
Astrakhan (region)	Astrakhan	17,000	44,100	1,000,874
Chechnya (republic)	Grozny	4,750	12,300	1,209,040
Dagestan (republic)	Makhachkala	19,400	50,300	2,687,822
Ingushetiya (republic)	Magas	1,450	3,750	499,502
Kabardino-Balkariya (republic)	Nalchik	4,800	12,500	891,338
Kalmykiya (republic)	Elista	29,400	76,100	285,541
Karachayevo-Cherkessia (republic)	Cherkessk	5,450	14,100	427,418
Krasnodar (territory)	Krasnodar	29,350	76,000	5,121,799
Rostov (region)	Rostov-na-Donu	38,900	100,800	4,254,421
Severnaya Osetiya–Alaniya (North Osetia; republic)	Vladikavkaz	3,100	8,000	702,456
Stavropol (territory)	Stavropol	25,700	66,500	2,705,067
Volgograd (region)	Volgograd	44,000	113,900	2,608,762
Urals	Yekaterinburg	690,500	1,788,400	12,240,382
Chelyabinsk (region)	Chelyabinsk	33,900	87,900	3,510,990
Khanty-Mansi (autonomous district) ⁹	Khanty-Mansiysk	202,000	523,100	1,505,248
Kurgan (region)	Kurgan	27,400	71,000	960,410
Sverdlovsk (region)	Sverdlovsk	75,000	194,300	4,395,617
Tyumen (region) ⁹	Tyumen	62,500	161,800	1,325,385
Yamalo-Nenets (autonomous district) ⁹	Salekhard	289,700	750,300	542,732
Volga	Nizhny Novgorod	400,000	1,035,900	30,241,581
Bashkortostan (republic)	Ufa	55,400	143,600	4,052,731
Chuvashiya (republic)	Cheboksary	7,100	18,300	1,282,567
Kirov (region)	Kirov	46,600	120,800	1,413,257
Mari-El (republic)	Toshkar-Ola	8,950	23,200	703,220
Mordoviya (republic)	Saransk	10,100	26,200	840,391

Structure of gross domestic product and labour force

	2008		2006	
	in value RUB '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	1,771,800	4.3	6,861,000	9.2
Mining	3,353,600	8.1	1,196,000	1.6
Manufacturing	6,295,500	15.2	12,470,000	16.8
Public utilities	1,076,600	2.6	2,063,000	2.8
Construction	2,336,800	5.6	4,460,000	6.0
Transp. and commun.	3,398,300	8.2	6,212,000	8.4
Trade, restaurants, hotels	7,876,000	19.0	11,986,000	16.2
Finance, real estate	5,692,300	13.7	5,206,000	7.0
Services	2,729,400	6.6	13,500,000	18.2
Pub. admin., defense	1,811,200	4.4	4,875,000	6.6
Other	5,198,900 ¹⁶	12.5 ¹⁶	5,316,000 ¹⁷	7.2 ¹⁷
TOTAL	41,540,400	100.0 ¹⁸	74,146,000 ¹⁸	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 49,389,860, potatoes 36,784,200, cow's milk 31,950,000, sugar beets 29,000,000, barley 15,663,110¹⁹, sunflower seeds 5,656,500¹⁹, oats 5,407,000¹⁹, cabbages 4,054,000²⁰, corn (maize) 3,953,240, rye 3,910,290¹⁹, tomatoes 2,393,000, apples 2,211,000, carrots and turnips 1,900,000, cattle meat 1,828,000, pig meat 1,788,000, dry onions 1,770,000, currants 600,000¹⁹, raspberries (2005) 175,000¹⁹, sour cherries 153,000¹⁹; livestock (number of live animals) 21,466,000 cattle, 17,508,000 sheep, 15,793,000 pigs; roundwood 207,000,000 cu m, of which fuelwood 22%; fisheries production 3,559,717 (from aquaculture 3%); aquatic plants production 28,594 (from aquaculture 1%). Mining and quarrying (2006): nickel 320,000²¹ [world rank: 1]; platinum-group metals 138,300 [world rank: 2]; of which palladium 96,800 [world rank: 1]; mica 100,000 [world rank: 2]; gem diamonds 23,400,000 carats [world rank: 2]; vanadium 15,100²¹ [world rank: 3]; industrial diamonds 15,000,000 carats [world rank: 3]; iron ore 59,100,000²¹ [world rank: 5]; cobalt 5,100²¹ [world rank: 5]; copper ore 725,000²¹ [world rank: 6]; molybdenum 3,100²¹ [world rank: 6]; gold 159,340 kg [world rank: 7]. Manufacturing (value added in U.S.\$'000,000; 2005): refined petroleum products 28,950; food products 12,942; iron and steel 11,904; nonferrous base metals 9,981; base chemicals 8,524; cement, bricks, and ceramics 4,892; beverages 4,532; general purpose machinery 4,075; motor vehicles 3,423; fabricated metal products 2,831; special purpose machinery 2,802; rubber products 2,313; paints, soaps, and pharmaceuticals 2,155; professional and scientific equipment 2,151; paper and paper products 1,982; publishing 1,733; wood products (excluding furniture) 1,730.

Financial aggregates

	2003	2004	2005	2006	2007	2008
Exchange rate ²² , RUB per:						
U.S. dollar	29.45	27.75	28.78	26.33	24.55	29.38
£	52.56	53.60	49.56	51.69	49.18	42.83
SDR	43.77	43.09	41.14	39.61	38.79	42.25
International reserves (U.S.\$)						
Total (excl. gold; '000,000)	73,175	120,809	175,891	295,568	464,379	412,548
SDRs ('000,000)	0.7	0.9	5.6	7.1	0.8	0.8
Reserve pos. in IMF ('000,000)	2.1	2.8	195.9	283.3	373.9	1,053.4
Foreign exchange ('000,000)	73,172	120,805	175,690	295,277	464,004	411,494
Gold ('000,000 fine troy oz)	12.55	12.44	12.44	12.91	14.48	16.71
% world reserves	1.4	1.4	1.4	1.5	1.7	1.7
Balance of payments (U.S.\$'000,000)						
Balance of visible trade	+59,859	+85,825	+118,364	+139,269	+132,044	+179,742
Imports, f.o.b.	-76,070	-97,382	-125,434	-164,281	-223,421	-291,861
Exports, f.o.b.	135,929	183,207	243,798	303,550	355,465	471,603
Balance of invisibles	-24,449	-26,311	-33,921	-44,902	-53,735	-77,342
Balance of payments, current account	+35,410	+59,514	+84,443	+94,367	+78,309	+102,400

Energy production (consumption): electricity (kW-hr; 2007) 1,015,872,000,000 ([2006] 979,973,000,000); hard coal (metric tons; 2007) 242,100,000 ([2006] 145,771,000); lignite (metric tons; 2007) 72,200,000 ([2006] 73,929,000); crude petroleum (barrels; 2007) 3,568,000,000 ([2006] 1,523,000,000); petroleum products (metric tons; 2006) 197,412,000 (101,794,000); natural gas (cu m; 2007) 654,000,000,000 ([2006] 362,393,000,000).

Population economically active (2006): total 74,146,000; activity rate of total population 52.0% (participation rates: ages 15–64, 73.0%; female 49.4%; unemployed [October 2007] 6.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	70.4	80.1	88.7	100.0	109.7	119.6	136.4
Annual earnings index	58.4	73.6	82.0	100.0	121.5	150.9	184.1

Land use as % of total land area (2007): in temporary crops 7.4%, in permanent crops 0.1%, in pasture 5.6%, forest area 49.4%.

Household income and expenditure. Average household size (2004) 2.8; income per household: n.a.; sources of monetary income (2006): wages 66.4%²³, transfers 13.2%, self-employment 11.2%, property income 7.2%, other 2.0%; expenditure (2002): food 41.7%, clothing 13.3%, housing 6.2%, furniture and household appliances 5.7%, alcohol and tobacco 3.2%, transportation 2.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 9,607; remittances (2008) 6,033; foreign direct investment (FDI; 2005–07 avg.) 32,583. Disbursements for (U.S.\$'000,000): tourism (2007) 22,258; remittances (2008) 26,145; FDI (2005–07 avg.) 27,190.

Foreign trade^{24, 25}**Balance of trade (current prices)**

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+76,310	+106,031	+142,744	+163,823	+152,540	+200,943
% of total	40.0%	41.2%	42.0%	37.3%	27.6%	27.3%

Imports (2006): U.S.\$137,728,000,000 (machinery and apparatus 27.6%, of which telecommunications equipment/television receivers 6.3%, general industrial machinery 6.2%, machinery specialized for particular industries 5.4%, electrical machinery/electronics/parts 5.3%; road vehicles/parts 13.4%; chemicals and chemical products 12.2%, of which pharmaceuticals and medicine 4.6%; food 11.9%; base and fabricated metals 6.9%, of which iron and steel 3.6%). *Major import sources:* Germany 13.4%; China 9.4%; Ukraine 6.7%; Japan 5.7%; Belarus 5.0%; South Korea 4.9%; U.S. 4.7%; France 4.3%; Italy 4.2%; Finland 2.9%.

Exports (2006): U.S.\$301,551,000,000 (crude petroleum 32.1%; refined petroleum 14.7%; natural gas [in gaseous state] 14.2%; nonferrous base metals 6.2%, of which aluminum 2.5%, nickel 2.0%, copper 1.5%; iron and steel 5.7%; chemicals and chemical products 3.8%, of which fertilizers 1.4%; machinery and apparatus 2.4%; coal/coke 1.5%; food 1.2%; unspecified special transactions 8.5%). *Major export destinations:* Netherlands 11.9%; Italy 8.3%; Germany 8.1%; China 5.2%; Ukraine 5.0%; Turkey 4.7%; Belarus 4.3%; Switzerland 4.0%; Poland 3.8%; U.K. 3.4%.

Direction of trade (2006)

	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
Africa	1,143	0.8	3,155	1.0
Americas	12,974	9.4	14,143	4.7
North America	7,330	5.3	9,214	3.1
South America and Caribbean	5,644	4.1	4,929	1.6
Asia (excl. CIS and Pacific)	36,682	26.6	54,625	18.1
China	12,912	9.4	15,757	5.2
Asia (CIS only)	5,959	4.3	13,580	4.5
Europe	80,496	58.4	215,202	71.4
Germany	18,457	13.4	24,500	8.1
Italy	5,727	4.2	25,111	8.3
Europe (CIS only)	16,408	11.9	28,735	9.5
unspecified	474	0.3	846	0.3
TOTAL	137,728	100.0 ¹⁸	301,551	100.0

Transport and communications

Transport. Railroads (2007): length (2008²) 85,000 km; passenger-km 174,100,000,000; metric ton-km cargo 2,090,000,000,000. Roads (2007²): total length 854,000 km (paved 85%). Vehicles (2007): passenger cars 29,249,000; trucks and buses 5,591,000. Air transport (2006–07): passenger-km 97,510,000,000; metric ton-km cargo 2,980,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	50,599	351	PCs	2005	17,400	121
Telephones				Dailies	2007	1,150 ²⁶	9.5 ²⁶
Cellular	2008	187,500 ²⁷	1,326 ²⁷	Internet users	2008	45,400	321
Landline	2008	44,200	313	Broadband	2008	9,280 ²⁷	66 ²⁷

Education and health**Education (2005–06)**

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–10)	301,204	5,164,735	17.1	91
Secondary/Voc. (age 11–17)	1,284,226	11,548,337	9.0	...
Tertiary	655,678	9,167,277	14.0	72 (age 18–22)

Health (2008²): physicians 707,000 (1 per 201 persons); hospital beds 1,522,000 (1 per 93 persons); infant mortality rate per 1,000 live births (2008) 8.5; undernourished population (2002–04) 3,900,000 (3% of total population based on the consumption of a minimum daily requirement of 1,980 calories).

Military

Total active duty personnel (November 2008): 1,027,000 (army 38.5%, navy 13.8%, air force 15.6%, strategic deterrent forces 7.8%, command and support 24.3%); troops abroad 31,713, of which in Ukraine 13,300, in Georgia 7,600, in Tajikistan 5,500, in Armenia 3,214.²⁸ *Military expenditure as percentage of GDP* (2007): 2.5%; per capita expenditure U.S.\$256.

¹Statutory number per Inter-Parliamentary Union website. ²January 1. ³Kamchatka (region) and Koryak (autonomous district) merged on July 1, 2007, to form Kamchatka (territory). ⁴Reported total; summed total equals 13,501,098. ⁵Most administrative functions of Nenets have been assumed by Arkhangelsk. ⁶Includes Ust-Orda Buryat (autonomous district) from Jan. 1, 2008. ⁷Krasnoyarsk (territory) formally absorbed Evenk and Taymyr autonomous districts on Jan. 1, 2007. ⁸Chita (region) and Agin Buryat (autonomous district) merged on March 3, 2008, to form Zabaykalye (territory). ⁹Most administrative functions of Khanty-Mansi and Yamalo-Nenets have been assumed by Tyumen. ¹⁰On Dec. 1, 2005, Komi-Permyak (autonomous district) merged with Perm (region) to form Perm (territory). ¹¹Reported total; summed total equals 6,577,600 sq mi (17,035,650 sq km)—reason for discrepancy is unknown. ¹²Muslim population may be as high as 16%. ¹³Shi'i make up c. 8% of all Muslims. ¹⁴Excludes collective households (1.6% of all Russians live in collective households). ¹⁵Mostly based on a claimed membership of 28,000,000 in the Federation of Independent Trade Unions of Russia, the successor to the former labour movement. ¹⁶Net taxes on products less imputed bank service charges. ¹⁷Includes 5,312,000 unemployed. ¹⁸Detail does not add to total given because of rounding. ¹⁹World's leading producer. ²⁰Includes other bras-sias. ²¹Metal content. ²²End of period. ²³Includes unreported wages and salaries. ²⁴Imports c.i.f.; exports f.o.b. ²⁵Based on data published by the UN *International Trade Statistics Yearbook* (2006). ²⁶Circulation of free dailies only. ²⁷Subscribers. ²⁸An additional 449,000 personnel in paramilitary forces include railway troops, special construction troops, federal border guards, interior troops, and other federal guard units.

Internet resources for further information:

- Federal State Statistics Service <http://www.gks.ru/eng/default.asp>
- Central Bank of the Russian Federation <http://www.cbr.ru/eng>

Rwanda

Official name: Repubulika y'u Rwanda (Rwanda); République Rwandaise (French); Republic of Rwanda (English).

Form of government: multiparty republic with two legislative bodies (Senate [26]; Chamber of Deputies [80]).

Head of state and government: President assisted by Prime Minister.

Capital: Kigali.

Official languages: Rwanda; French; English.

Official religion: none.

Monetary unit: Rwandan franc (RF); valuation (Sept. 1, 2009)

1 U.S.\$ = RF 568.40; 1 £ = RF 922.29.



Area and population ¹		area		population
Provinces	Principal cities	sq mi	sq km	2002 census
Est (Eastern)	Rwamagana	3,560 ²	9,220 ²	1,640,000 ²
Kigali	Kigali	280 ²	720 ²	745,000 ²
Nord (Northern)	Ruhengeri	1,430 ²	3,700 ²	1,740,000 ²
Ouest (Western)	Gisenyi	2,197	5,689	1,940,888
Sud (Southern)	Gitarama	2,312	5,987	2,072,131
SUBTOTAL		9,774 ³	25,314 ³	—
SUBTOTAL (Rwandan part of Lake Kivu)		411	1,065	—
TOTAL		10,185	26,379	8,128,553 ³

Demography

Population (2009): 9,998,000.

Density (2009)⁴: persons per sq mi 1,023; persons per sq km 395.0.

Urban-rural (2007): urban 17.6%; rural 82.4%.

Sex distribution (2008): male 49.75%; female 50.25%.

Age breakdown (2008): under 15, 42.4%; 15–29, 29.6%; 30–44, 16.0%; 45–59, 8.2%; 60–74, 3.0%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 13,233,000; (2030) 16,104,000.

Doubling time: 25 years.

Ethnic composition (2002): Hutu 85%; Tutsi 14%; Twa 1%.

Religious affiliation (2005): Roman Catholic c. 44%; Protestant c. 25%; Muslim c. 13%; other c. 18%⁵.

Major cities (2002): Kigali (2007) 860,000⁶; Gitarama 84,669; Butare 77,449; Ruhengeri 71,511; Gisenyi 67,766.

Vital statistics

Birth rate per 1,000 population (2008): 38.9 (world avg. 20.3).

Death rate per 1,000 population (2008): 11.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 27.8 (world avg. 11.8).

Marriage/divorce rates per 1,000 population: n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2008): 5.25.

Life expectancy at birth (2008): male 54.6 years; female 57.1 years.

Adult population (ages 15–49) *living with HIV* (2007): 2.8%⁷ (world avg. 0.8%).

National economy

Budget (2008). Revenue: RF 660,800,000,000 (grants 42.3%; taxes on goods and services 24.4%; income taxes 18.6%; nontax revenue 7.9%; import and export duties 6.6%). Expenditures: RF 649,700,000,000 (current expenditures 56.7%; capital expenditure 41.2%; net lending 2.1%).

Public debt (external, outstanding; 2008): U.S.\$656,800,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): plantains 2,580,000, potatoes 1,200,000, sweet potatoes 940,000, cassava 830,000, dry beans 230,000, sorghum 187,000, taro 130,000, corn (maize) 90,000, tea 19,000, coffee 18,900, pyrethrum 15; livestock (number of live animals) 1,300,000 goats, 950,000 cattle, 470,000 sheep, 270,000 pigs; roundwood 9,998,000 cu m, of which fuelwood 95%; fisheries production 13,088 (from aquaculture 31%). Mining and quarrying (2007): cassiterite (tin content) 3,100; tungsten (wolframite content) 1,534; niobium 80,000 kg; tantalum 50,000 kg. Manufacturing (value added in RF '000,000; 2008): beverages and tobacco products 24,300; food products 16,200; furniture and unspecified products 13,200; cement, bricks, and ceramics 8,100; textiles and wearing apparel 4,300. Energy production (consumption): electricity (kW-hr; 2008) 194,000,000 ([2006] 220,000,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (190,000); natural gas (cu m; 2007) none ([2006] 615,000).

Population economically active (2006): total 4,325,000⁸; activity rate of total population 45.7%⁸ (participation rates: ages 15–64, 81.5%⁸; female 53.4%⁸; unemployed, n.a.).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	76.1	81.7	91.7	100.0	108.9	118.8	137.1

Land use as % of total land area (2007): in temporary crops 48.6%, in permanent crops 11.1%, in pasture 18.2%, forest area 21.7%.

Household income and expenditure. Average household size (2004) 3.4; average annual income per household: n.a.; sources of income: n.a.; expenditure (2003)⁹: food and nonalcoholic beverages 37.1%, housing and energy 15.8%, transportation 9.9%, household furnishings 7.6%, health 7.1%.

Gross national income (GNI; 2008): U.S.\$3,955,000,000 (U.S.\$410 per capita); purchasing power parity GNI (U.S.\$1,010 per capita).

Structure of gross domestic product and labour force				
	2008		2002	
	in value RF '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	912	37.4	2,951,492	86.2
Mining and quarrying	23	0.9	5,274	0.2
Manufacturing	110	4.5	43,053	1.3
Construction	194	8.0	42,180	1.2
Public utilities	17	0.7	2,482	0.1
Transp. and commun.	153	6.3	30,255	0.9
Trade, hotels, restaurants	254	10.4	94,175	2.8
Finance, real estate	350	14.4	10,920	0.3
Pub. admin., defense	112	4.6	25,668	0.7
Services	172	7.1	155,980	4.6
Other	140 ¹⁰	5.7 ¹⁰	56,568	1.7
TOTAL	2,437	100.0	3,418,047	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 65; remittances (2008) 51; foreign direct investment (FDI; 2005–07 avg.) 32; official development assistance (2007) 713. Disbursements for (U.S.\$'000,000): tourism (2007) 69; remittances (2008) 68; FDI (2006–07 avg.) 13.

Foreign trade¹¹

Balance of trade (current prices)					
	2004	2005	2006	2007	2008
U.S.\$'000,000	−177.9	−228.7	−299.0	−404.4	−624.2
% of total	47.6%	47.8%	50.4%	53.4%	54.9%

Imports (2007): U.S.\$696,900,000 (machinery and apparatus 17.8%, road vehicles 12.9%, food products 9.6%, refined petroleum 8.5%, medicaments 6.8%). **Major import sources** (2007): Kenya 17.8%; Uganda 14.0%; U.A.E. 7.8%; Tanzania 6.8%; Belgium 6.3%.

Exports (2008): U.S.\$261,800,000 (coffee 17.9%, cassiterite [major ore of tin] 15.7%, tea 15.3%, columbite/tantalite 14.2%, tungsten 4.9%). **Major export destinations** (2007): Kenya 18.7%; U.K. 18.7%; Belgium 14.0%; Hong Kong 12.5%; Switzerland 7.2%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 8,704 mi, 14,008 km (paved 19%). Vehicles (2008): passenger cars 21,350; trucks and buses 16,470. Air transport (2006)¹²: passengers embarked and disembarked c. 180,000; cargo loaded and unloaded (2000) 4,300 metric tons.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2004	70	7.4	PCs	2007	28
Telephones				Dailies	2007	... ¹³
Cellular	2008	1,323 ¹⁴	136 ¹⁴	Internet users	2008	300
Landline	2008	17	1.7	Broadband	2008	4.2 ¹⁴

Education and health

Educational attainment (2005)¹⁵. Percentage of population age 15–49 having: no formal education/unknown 21.4%; primary education 68.2%; secondary 9.6%; higher 0.8%. **Literacy** (2007): percentage of total population age 15 and over literate 74.7%; males literate 79.3%; females literate 70.2%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	31,037	2,150,430	69.3	94
Secondary/Voc. (age 13–18)	12,103	226,518	22.0	...
Tertiary ¹⁶	1,817	26,378	14.5	3 (age 19–23)

Health (2007): physicians 540 (1 per 17,509 persons); hospital beds 14,246 (1 per 664 persons); infant mortality rate per 1,000 live births (2008) 55.9; undernourished population (2002–04) 2,800,000 (33% of total population based on the consumption of a minimum daily requirement of 1,750 calories).

Military

Total active duty personnel (November 2008): 33,000 (army 97.0%, air force 3.0%). **Military expenditure as percentage of GDP** (2007): 2.1%; per capita expenditure U.S.\$7.

¹The new administrative structure went into effect at the beginning of 2006. ²Estimate. ³Detail does not add to total given because of some estimated data. ⁴Based on area excluding Rwandan part of Lake Kivu. ⁵Many small usually Christian-linked schismatic religious groups have proliferated since the 1994 genocide. ⁶Population of urban agglomeration. ⁷Statistically derived midpoint of range. ⁸ILO estimate. ⁹Weights of consumer price index components. ¹⁰Taxes on products less imputed bank service charges. ¹¹Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹²Kigali airport only. ¹³No data available for one English-language daily. ¹⁴Subscribers. ¹⁵Based on the 2005 Rwanda Demographic and Health Survey, of which 15,735 people in 10,272 households were age 15–49. ¹⁶2004–05.

Internet resources for further information:

- **National Institute of Statistics**
<http://www.statistics.gov.rw>
- **National Bank of Rwanda**
<http://www.bnr.rw>

Saint Kitts and Nevis

Official name: Federation of Saint Kitts and Nevis¹.

Form of government: federated constitutional monarchy with one legislative house (National Assembly [152]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Basseterre.

Official language: English.

Official religion: none.

Monetary unit: Eastern Caribbean dollar (EC\$); valuation (Sept. 1, 2009) 1 U.S.\$ = EC\$2.70; 1 £ = EC\$4.38.



Area and population		area		population
Islands	Capitals	sq mi	sq km	2001 census ³
Nevis ⁴	Charlestown	36.0	93.2	11,181
St. Kitts (St. Christopher)	Basseterre	68.0	176.2	34,703
TOTAL		104.0	269.4	45,884

Demography

Population (2009): 51,900.

Density (2009): persons per sq mi 499.0, persons per sq km 192.7.

Urban-rural (2005): urban c. 33%; rural c. 67%.

Sex distribution (2008): male 49.70%; female 50.30%.

Age breakdown (2008): under 15, 26.7%; 15–29, 25.9%; 30–44, 19.8%; 45–59, 17.3%; 60–74, 6.3%; 75–84, 2.9%; 85 and over, 1.1%.

Population projection: (2020) 56,000; (2030) 58,000.

Doubling time: 73 years.

Ethnic composition (2000): black 90.4%; mulatto 5.0%; Indo-Pakistani 3.0%; white 1.0%; other/unspecified 0.6%.

Religious affiliation (2005): Protestant c. 75%, of which Anglican c. 24%, Methodist c. 23%; Roman Catholic c. 11%; other c. 14%.

Major towns (2006): Basseterre (on St. Kitts) 12,900; Charlestown (on Nevis) 1,500; St. Paul's (on St. Kitts) 1,200.

Vital statistics

Birth rate per 1,000 population (2008): 17.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 9.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.28.

Marriage/divorce rates per 1,000 population: (2001) 7.1/(2002) 0.5.

Life expectancy at birth (2008): male 70.1 years; female 78.0 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 404.9; malignant neoplasms (cancers) 110.4; communicable diseases 104.6; accidents, violence, and poisoning 42.9.

National economy

Budget (2008). Revenue: EC\$641,200,000 (tax revenue 64.9%, of which taxes on international trade 30.3%, taxes on income and profits 20.5%, taxes on domestic goods and services 13.1%; nontax revenue 18.4%; grants 8.4%; other 8.3%). Expenditures: EC\$634,400,000 (current expenditure 87.8%, of which interest payments 20.6%; development expenditure 12.2%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane (2005) 100,000⁵, coconuts 1,000, roots and tubers 750, pulses 220, pineapples (2006) 55; livestock (number of live animals) 16,000 goats, 12,600 sheep, 4,850 cattle, 4,000 pigs, 70,000 chickens; roundwood, n.a.; fisheries production 450 (from aquaculture, negligible). Mining and quarrying: excavation of sand and crushed stone for local use. Manufacturing (2003): raw sugar 22,000⁵; carbonated beverages (2002) 32,000 hectolitres; beer (2002) 20,000 hectolitres; other manufactures include electronic components, garments, and cement. Energy production (consumption): electricity (kW-hr; 2006) 135,000,000 (135,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (77,000); natural gas, none (none).

Gross national income (GNI; 2008): U.S.\$539,000,000 (U.S.\$10,960 per capita); purchasing power parity GNI (U.S.\$15,170 per capita).

Structure of gross domestic product and labour force				
	2008		1994	
	in value EC\$'000,000	% of total value	labour force ⁶	% of labour force ⁶
Agriculture, fishing	34.6	2.2	2,439 ⁷	14.7 ⁷
Mining	2.7	0.2	29	0.2
Manufacturing	110.6	7.2	1,290 ⁸	7.8 ⁸
Construction	188.2	12.2	1,745	10.5
Public utilities	30.0	1.9	416	2.5
Transp. and commun.	216.1	14.0	534	3.2
Trade, restaurants	266.4	17.3	3,367	20.3
Finance, real estate	254.8	16.6	3,708 ⁹	22.3 ⁹
Pub. admin., defense	228.8	14.9	2,738	16.5
Services	59.7	3.9	9	9
Other	147.5 ¹⁰	9.6 ¹⁰	342	2.1
TOTAL	1,539.4	100.0	16,608	100.0¹¹

Household income and expenditure. Average household size (2001) 2.9; average annual income per wage earner (2006) EC\$24,216 (U.S.\$8,969); sources of income: n.a.; expenditure (2001)¹²: food, beverages, and tobacco 28.8%;

education 19.3%, health 14.1%, housing 13.0%, clothing and footwear 9.3%, fuel and light 4.4%, household furnishings 3.7%, transportation 2.1%, other 5.3%.

Public debt (external, outstanding; 2007): U.S.\$272,000,000.

Population economically active (1995): total 18,170; activity rate of total population 41.7% (participation rates [1991]: ages 15–64, 70.5%; female 44.4%⁶; unemployed [2006] 5.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.5	94.6	96.7	100.0	108.5	113.3	119.5

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 106; remittances (2008) 37; foreign direct investment (2005–07 avg.) 115; official development assistance (2007) 3. Disbursements for (U.S.\$'000,000): tourism (2007) 15; remittances (2008) 6.

Land use as % of total land area (2007): in temporary crops 15.4%, in permanent crops, negligible, in pasture 3.8%, forest area 20.4%.

Foreign trade¹³

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–118.6	–121.0	–106.3	–135.1	–166.8	–183.6
% of total	50.2%	52.6%	49.4%	57.4%	61.9%	61.8%

Imports (2006): U.S.\$249,500,000 (machinery and apparatus 23.1%, of which electrical machinery/parts 10.6%; food 15.5%; base and fabricated metals 9.2%; refined petroleum 6.6%; road vehicles 6.5%). **Major import sources:** United States 58.3%; Trinidad and Tobago 12.5%; United Kingdom 5.3%; Japan 4.3%; Canada 2.6%.

Exports (2006): U.S.\$39,700,000 (electrical switches 43.8%; telecommunications equipment/parts 25.4%; generators 9.8%; beverages [water and beer] 5.5%). **Major export destinations:** United States 89.3%; United Kingdom 2.3%; Trinidad and Tobago 1.5%.

Transport and communications

Transport. Railroads (2003)¹⁴: length 36 mi, 58 km. Roads (2002): total length 238 mi, 383 km (paved [2001] 44%). Vehicles (2002): passenger cars 6,900; trucks and buses 2,500. Air transport (2001)¹⁵: passenger arrivals 135,237, passenger departures 134,937; cargo handled 1,802.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2001	11	239	PCs	2004	11	226
Telephones				Dailies	2007	3 ¹⁶	103 ¹⁶
Cellular	2008	80 ¹⁷	1,567 ¹⁷	Internet users	2008	16	313
Landline	2008	20	400	Broadband	2008	11 ¹⁷	217 ¹⁷

Education and health

Educational attainment (1991). Percentage of population age 25 and over having: no formal schooling 1.6%; primary education 45.9%; secondary 38.4%; higher 8.9%; other or not stated 5.2%. **Literacy** (2004): total population age 15 and over literate 97.8%.

Education (2004–05)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–11)	360	6,350	17.6	93
Secondary/Voc. (age 12–16)	397	3,939	9.9	86
Tertiary	80 ¹⁸	600 ¹⁸	7.5 ¹⁸	... (age 17–21)

Health: physicians (2005) 62 (1 per 796 persons); hospital beds (2008) 208 (1 per 247 persons); infant mortality rate per 1,000 live births (2008) 14.3; undernourished population (2002–04) 5,000 (10% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (2006): the defense force includes coast guard and police units. **Military expenditure as percentage of GDP:** n.a.

¹The Federation of Saint Christopher and Nevis is the alternate official long-form name.

²Includes 3 appointed seats and 1 ex officio seat for the attorney general (if not elected); in addition, a speaker may be appointed from outside of the National Assembly.

³Preliminary figures. ⁴Nevis has full internal self-government. The Nevis legislature is subordinate to the National Assembly only with regard to external affairs and defense.

⁵Sugarcane production ended in July 2005. ⁶Employed persons only. ⁷Includes sugar manufacturing. ⁸Excludes sugar manufacturing. ⁹Finance, real estate includes Services.

¹⁰Taxes less subsidies and less imputed bank service charges. ¹¹Detail does not add to total given because of rounding. ¹²Weights of consumer price index components.

¹³Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹⁴The light railway formerly serving the sugar industry on Saint Kitts began serving as a scenic tour route in 2003. ¹⁵Saint Kitts airport only. ¹⁶Circulation of daily newspapers.

¹⁷Subscribers. ¹⁸Data for Medical University of the Americas at Charlestown, Nevis.

Internet resources for further information:

- Official Web site of the Government of St. Kitts & Nevis <http://www.gov.kn>
- Eastern Caribbean Central Bank <http://www.eccb-centralbank.org>

Saint Lucia

Official name: Saint Lucia.

Form of government: constitutional monarchy with a Parliament consisting of two legislative chambers (Senate [11¹]; House of Assembly [17²]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Castries.

Official language: English.

Official religion: none.

Monetary unit: Eastern Caribbean dollar (EC\$); valuation (Sept. 1, 2009) 1 U.S.\$ = EC\$2.70; 1 £ = EC\$4.38.



Area and population		area		population
Districts	Capitals	sq mi	sq km	2008 estimate
Anse-la-Raye	Anse-la-Raye	18	47	6,567
Canaries	Canaries			1,984
Castries	Castries	31	79	69,731
Choiseul	Choiseul	12	31	6,435
Dennerly	Dennerly	27	70	13,711
Gros Islet	Gros Islet	39	101	22,333
Laborie	Laborie	15	38	7,753
Micoud	Micoud	30	78	16,991
Soufrière	Soufrière	19	51	8,103
Vieux Fort	Vieux Fort	17	44	16,723
TOTAL		238 ³	617 ³	170,331

Demography

Population (2009): 178,000.

Density (2009): persons per sq mi 747.9, persons per sq km 288.5.

Urban-rural (2008): urban 27.8%; rural 72.2%.

Sex distribution (2008): male 49.01%; female 50.99%.

Age breakdown (2008): under 15, 26.4%; 15–29, 28.9%; 30–44, 21.6%; 45–59, 13.7%; 60–74, 6.6%; 75 and over, 2.8%.

Population projection: (2020) 196,000; (2030) 211,000.

Doubling time: more than 100 years.

Ethnic composition (2000): black 50%; mulatto 44%; East Indian 3%; white 1%; other 2%.

Religious affiliation (2001): Roman Catholic 67.5%; Protestant 22.0%, of which Seventh-day Adventist 8.4%, Pentecostal 5.6%; Rastafarian 2.1%; nonreligious 4.5%; other/unknown 3.9%.

Major towns (2006): Castries 65,000; Vieux Fort 4,600; Micoud 3,400; Dennerly 2,900; Soufrière 2,900.

Vital statistics

Birth rate per 1,000 population (2008): 13.7 (world avg. 20.3); within marriage 14.0%; outside of marriage 86.0%.

Death rate per 1,000 population (2008): 7.6 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 6.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.2.

Marriage/divorce rates per 1,000 population (2008): 4.2/0.9.

Life expectancy at birth (2008): male 72.0 years; female 75.8 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 228.8; malignant neoplasms (cancers) 109.8; diseases of the respiratory system 63.7; accidents and violence 51.6; infectious and parasitic diseases 47.9.

National economy

Budget (2008–09). Revenue: EC\$815,950,000 (tax revenue 90.3%, of which consumption taxes 17.5%, corporate taxes 13.9%, import duties 12.7%, income tax 9.3%; nontax revenue 6.4%; grants 3.3%). Expenditures: EC\$959,100,000 (current expenditures 67.8%, of which wages and salaries 31.8%, interest payments 9.5%; capital expenditures 32.2%).

Public debt (external, outstanding; January 2009): U.S.\$372,950,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas (2008) 38,359, coconuts 14,000, roots and tubers 4,800, plantains 750, pepper 260, ginger 70, cocoa beans 40; livestock (number of live animals) 15,000 pigs, 12,500 sheep, 12,500 cattle, 9,900 goats; roundwood, n.a.; fisheries production (2008) 1,695, of which tuna 492, dolphin 341 (from aquaculture, none). Mining and quarrying: excavation of sand for local construction and pumice. Manufacturing (value of production in EC\$'000; 2008): food, beverages (significantly alcoholic beverages), and tobacco products 73,638; electrical products 35,121; paper products and cardboard boxes 28,066; fabricated metal products 14,350; chemicals and chemical products 6,828; coconut oil 2,453. Energy production (consumption): electricity (kW-hr; 2008) 352,337,000 (352,337,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (124,000); natural gas, none (none).

Population economically active (2007): total 85,260; activity rate of total population 49.8% (participation rates: ages 15 and over [2004] 68.6%; female 46.6%; unemployed 14.6%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.9	94.8	96.2	100.0	102.3	104.9	112.5

Household income and expenditure. Average household size (2001) 3.2; income per household: n.a.; sources of income: n.a.; expenditure: n.a.

Gross national income (GNI; 2008): U.S.\$940,000,000 (U.S.\$5,530 per capita); purchasing power parity GNI (U.S.\$9,190 per capita).

Structure of gross domestic product and labour force				
	2008		2007	
	in value EC\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	103.3	4.8	8,270	9.7
Mining and quarrying	7.2	0.3	...	...
Manufacturing	126.9	5.8	4,160	4.9
Construction	142.0	6.5	8,940	10.5
Public utilities	110.1	5.1	420	0.5
Transportation and communications	448.1	20.6	4,370	5.1
Trade, restaurants	592.2	27.3	20,080	23.6
Finance, real estate	449.2	20.7	4,040	4.7
Pub. admin., defense	323.7	14.9	12,200	14.3
Services	67.3	3.1	5,530	6.5
Other	-198.6 ⁴	-9.1 ⁴	17,250 ⁵	20.2 ⁵
TOTAL	2,171.5 ⁶	100.0	85,260	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 296; remittances (2008) 31; foreign direct investment (2005–07 avg.) 191; official development assistance (2007) 24. Disbursements for (U.S.\$'000,000): tourism (2007) 41; remittances (2008) 4.

Land use as % of total land area (2007): in temporary crops 4.9%, in permanent crops 11.5%, in pasture 1.6%, forest area 27.9%.

Foreign trade⁷

Balance of trade (current prices)				
	2001	2002	2003	2004
U.S.\$'000,000	-231.0	-252.9	-345.2	-341.8
% of total	72.1%	67.1%	73.4%	68.2%

Imports (2006): U.S.\$592,300,000 (food 15.9%; machinery and apparatus 15.3%; road vehicles 10.2%; chemicals and chemical products 6.9%; base and fabricated metals 6.2%; refined petroleum 5.7%). *Major import sources* (2006): United States 39.2%; Trinidad and Tobago 16.8%; United Kingdom 6.9%; Japan 6.3%; Barbados 4.4%.

Exports (2005): U.S.\$64,200,000 (bananas 24.1%; beer 16.2%; refined petroleum 15.4%; nonelectrical machinery and equipment 6.7%; paperboard cartons 5.1%). *Major export destinations* (2005): United Kingdom 26.0%; Trinidad and Tobago 22.4%; United States 14.0%; Barbados 10.1%; Grenada 5.1%.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 750 mi, 1,210 km (paved 5%). Vehicles (2008): passenger cars 38,504; trucks and buses 11,577. Air transport (2008)⁸: passenger arrivals and departures 872,032; cargo unloaded and loaded 3,363 metric tons.

Communications					
Medium	date	number in '000s	units per 1,000 persons	Medium	date
Televisions	2001	46	291	PCs	2004
Telephones				Dailies	2008
Cellular	2008	170 ⁹	995 ⁹	Internet users	2008
Landline	2008	49	240	Broadband	2008
					14 ⁹

Education and health

Educational attainment (2007). Percentage of population age 15 and over having: no formal schooling 4.5%; incomplete primary education 5.6%; complete primary 43.1%; secondary 32.0%; higher vocational 7.1%; university 3.4%; other/unknown 4.3%. *Literacy* (2004): 94.8%.

Education (2006–07)			
	teachers	students	student/teacher ratio
Primary (age 5–11)	969	22,028	22.7
Secondary/Voc. (age 12–16)	907	15,146	16.7
Tertiary ¹⁰	206	1,628	7.9

Health (2008): physicians (2005) 83 (1 per 1,983 persons); hospital beds 470 (1 per 374 persons); infant mortality rate per 1,000 live births 25.2; undernourished population (2002–04) 8,000 (5% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (2006): ¹¹.

¹All seats are nonelected. ²Represents elected seats only; the speaker may be elected from outside the House of Assembly. ³Total includes the uninhabited 30 sq mi (78 sq km) Central Forest Reserve. ⁴Taxes on products less subsidies and less imputed bank service charges. ⁵Includes 12,480 unemployed and 4,770 inadequately defined. ⁶Detail does not add to total given because of rounding. ⁷Imports c.i.f.; exports f.o.b. in commodities and trading partners. ⁸Combined data for both Castries and Vieux Fort airports. ⁹Subscribers. ¹⁰2005–06. ¹¹The 300-member police force includes a specially trained paramilitary unit and a coast guard unit.

Internet resources for further information:

• Saint Lucian Government Statistics Department

<http://www.stats.gov.lc>

• Eastern Caribbean Central Bank

<http://www.eccb-centralbank.org>

Saint Vincent and the Grenadines

Official name: Saint Vincent and the Grenadines.

Form of government: constitutional monarchy with one legislative house (House of Assembly [22¹]).

Chief of state: British Monarch represented by Governor-General.

Head of government: Prime Minister.

Capital: Kingstown.

Official language: English.

Official religion: none.

Monetary unit: Eastern Caribbean dollar (EC\$); valuation (Sept. 1, 2009)
1 U.S.\$ = EC\$2.70; 1 £ = EC\$4.38.



Area and population

Census Divisions ³	area		population
	sq mi	sq km	2004 ² estimate
Island of Saint Vincent			
Barrouallie	14.2	36.8	5,142
Bridgetown	7.2	18.6	6,381
Calliaqua	11.8	30.6	21,376
Chateaubelair	30.9	80.0	5,725
Colonaire	13.4	34.7	7,052
Georgetown	22.2	57.5	6,576
Kingstown (city)	1.9	4.9	13,044
Kingstown (suburbs)	6.4	16.6	12,263
Layou	11.1	28.7	5,966
Marriaqua	9.4	24.3	7,770
Sandy Bay	5.3	13.7	2,640
Saint Vincent Grenadines			
Northern Grenadines	9.0	23.3	5,316
Southern Grenadines	7.5	19.4	3,380
TOTAL	150.3	389.34	102,631

Demography

Population (2009): 105,000.

Density (2009): persons per sq mi 698.6, persons per sq km 269.7.

Urban-rural (2006): urban 46.3%; rural 53.7%.

Sex distribution (2007): male 50.61%; female 49.39%.

Age breakdown (2007): under 15, 27.3%; 15–29, 26.2%; 30–44, 21.6%; 45–59, 14.6%; 60–74, 7.1%; 75–84, 2.6%; 85 and over, 0.6%.

Population projection: (2020) 101,000; (2030) 99,000.

Doubling time: 59 years.

Ethnic composition (2000): black 65.1%; mixed black-white 19.9%; Indo-Pakistani 5.5%; British 3.0%; black-Amerindian 2.0%; other 4.5%.

Religious affiliation (2000): Protestant 47.0%; unaffiliated Christian 20.3%; independent Christian 11.7%; Roman Catholic 8.8%; Hindu 3.4%; Spiritist 1.8%; Muslim 1.5%; nonreligious 2.3%; other 3.2%.

Major cities (2006): Kingstown 18,200; Georgetown 1,700; Byera 1,400; Port Elizabeth (on Bequia in the Northern Grenadines) 850.

Vital statistics

Birth rate per 1,000 population (2007): 16.0 (world avg. 20.3); (2003) within marriage 15.6%, outside of marriage 84.4%.

Death rate per 1,000 population (2007): 6.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 9.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.06.

Marriage/divorce rates per 1,000 population (2005): 5.6/0.9.

Life expectancy at birth (2007): male 71.4 years; female 75.0 years.

Major causes of death per 100,000 population (2003): diseases of the circulatory system 252.4; diabetes mellitus 115.2; malignant neoplasms (cancers) 114.2; infectious and parasitic diseases 49.0; diseases of the respiratory system 42.2.

National economy

Budget (2008). Revenue: EC\$525,000,000 (tax revenue 84.2%, of which VAT 28.7%, tax on international trade 19.0%, individual income tax 10.7%, company tax 8.9%; nontax revenue 7.9%; grants 7.6%). Expenditures: EC\$558,500,000 (current expenditure 78.2%; development expenditure 21.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): bananas 51,000, sugarcane 20,000, roots and tubers (significantly eddoes and dasheens⁵) 15,320, coconuts 4,550, plantains 3,600, citrus fruits 3,430, guavas and mangoes 1,600, apples 1,300, nutmegs 160, soursops and papayas are also grown; livestock (number of live animals) 12,000 sheep, 9,150 pigs, 7,200 goats, 5,000 cattle; roundwood, n.a.; fisheries production 5,250 (from aquaculture, none). Mining and quarrying: sand and gravel for local use. Manufacturing (value added in EC\$'000,000; 2000): beverages and tobacco products 17.4; food 15.6; paper products and publishing 3.6; textiles, clothing, and footwear 3.3. Energy production (consumption): electricity (kW-hr; 2008) 139,000,000 ([2006] 127,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (64,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 90; remittances (2007) 31; foreign direct investment (2005–07 avg.) 80; official development assistance (2007) 66. Disbursements for (U.S.\$'000,000): tourism (2007) 17; remittances (2007) 7.

Gross national income (GNI; 2008): U.S.\$561,000,000 (U.S.\$5,140 per capita); purchasing power parity GNI (U.S.\$8,770 per capita).

Structure of gross domestic product and labour force

	2008		2001	
	in value EC\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	91.3	5.8	5,303	12.1
Mining	3.1	0.2	104	0.2
Manufacturing	52.5	3.3	2,444	5.6
Construction	192.7	12.3	3,659	8.4
Public utilities	69.4	4.4	596	1.4
Transp. and commun.	232.4	14.8	2,594	5.9
Trade, restaurants	280.4	17.9	8,271	18.3
Finance, real estate	151.6	9.7	1,905	4.3
Pub. admin., defense	251.5	16.0	2,151	4.9
Services	26.9	1.7	6,045	13.8
Other	218.9 ⁶	13.9 ⁶	10,707 ⁷	24.5 ⁷
TOTAL	1,570.7	100.0	43,779	100.0

Population economically active (2006): total 58,000; activity rate of total population 48.3% (participation rates: ages 15–64, 75.3%; female 41.4%; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.4	93.6	96.4	100.0	103.1	110.2	121.3

Public debt (external, outstanding; December 2008): U.S.\$210,600,000.

Household income and expenditure. Average household size, n.a.; income per household: n.a.; sources of income: n.a.; expenditure (2001)⁸: food and beverages 53.6%, housing and energy 12.8%, clothing and footwear 8.9%, transportation and communications 6.9%.

Land use as % of total land area (2007): in temporary crops c. 18%, in permanent crops c. 13%, in pasture c. 5%, forest area c. 28%.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–163.0	–188.6	–200.5	–233.2	–279.0	–321.0
% of total	68.1%	72.0%	71.5%	75.4%	74.5%	75.5%

Imports (2008): U.S.\$373,200,000 (machinery and apparatus 23.1%; food and beverages 22.6%; refined petroleum 12.5%). **Major import sources** (2006): U.S. 32.7%; Trinidad and Tobago 25.9%; U.K. 7.1%; Japan 3.9%; Canada 3.6%.

Exports (2008): U.S.\$52,200,000 (food 61.7%, of which bananas 15.9%, wheat flour 15.1%, rice 12.1%, roots and tubers 7.1%; machinery and apparatus 23.0%, of which telecommunications equipment 10.7%). **Major export destinations** (2008): Grenada 18.2%; Trinidad and Tobago 17.4%; St. Lucia 14.8%; Barbados 10.7%; U.K. 9.0%.

Transport and communications

Transport. Railroads: none. Roads (2004): total length 515 mi, 829 km (paved c. 70%). Vehicles (2008): passenger cars 9,247; trucks and buses 13,019. Air transport (2003): passenger arrivals 133,769; passenger departures 137,899.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	50	446	PCs	2005	16	152
Telephones				Dailies	2007	... ¹⁰	... ¹⁰
Cellular	2008	130 ¹¹	1,239 ¹¹	Internet users	2008	66	629
Landline	2008	23	217	Broadband	2008	9.4 ¹¹	90 ¹¹

Education and health

Educational attainment (2001). Percentage of employed population having: no formal schooling 0.4%; primary education 55.6%; secondary 27.3%; higher vocational 15.1%; university 0.3%; other/unknown 1.3%. **Literacy** (2004): total population age 15 and over literate 88.1%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–11)	933	15,928	17.1	91
Secondary/Voc. (age 12–16)	569	9,780 ¹²	17.9 ¹²	64
Tertiary	...	...	...	... (age 17–21)

Health: physicians (2005) 72 (1 per 1,458 persons); hospital beds (2008) 280 (1 per 375 persons); infant mortality rate per 1,000 live births (2007) 16.1; undernourished population (2002–04) 10,000 (10% of total population based on the consumption of a minimum daily requirement of 1,900 calories).

Military

Total active duty personnel (November 2007): no regular military forces; the paramilitary includes coast guard and police units.

¹Includes 7 nonelective seats (including 1 seat for the attorney-general serving ex officio). ²January 1. ³For statistical purposes and the election of legislative representatives only. ⁴Detail does not add to total given because of rounding. ⁵Varieties of taro roots. ⁶Indirect taxes less subsidies and less imputed bank service charges. ⁷Includes 9,258 unemployed. ⁸Based on weights of consumer price index components. ⁹Imports c.i.f.; exports f.o.b. ¹⁰No data for one daily newspaper. ¹¹Subscribers. ¹²2004–05.

Internet resources for further information:

- Eastern Caribbean Central Bank <http://www.eccb-centralbank.org>
- Official Website of St. Vincent and the Grenadines <http://www.gov.vc>

Samoa

Official name: Malo Sa'oloto Tuto'atasi o Samoa (Samoan); Independent State of Samoa (English).

Form of government: mix of parliamentary democracy and Samoan customs with one legislative house (Legislative Assembly [49]).

Chief of state: Head of State.

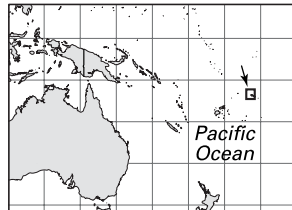
Head of government: Prime Minister.

Capital: Apia.

Official languages: Samoan; English.

Official religion: none.

Monetary unit: tala (SAT); valuation (Sept. 1, 2009) 1 U.S.\$ = SAT 2.60; 1 £ = SAT 4.22.



Area and population

		area		population
		sq mi	sq km	2006 final census
Islands				
Statistical regions	Largest towns			
Savai'i	Matavai	654	1,694	43,142
Upolu	Apia	421	1,091	137,599
Apia urban area		23	60	37,708
North West Upolu		97	251	56,122
Upolu (remainder) ¹		301	780	43,769
TOTAL		1,075	2,785	180,741

Demography

Population (2009): 183,000.

Density (2009): persons per sq mi 170.2, persons per sq km 65.7.

Urban-rural (2007): urban 23.0%; rural 77.0%.

Sex distribution (2006): male 51.83%; female 48.17%.

Age breakdown (2006): under 15, 39.3%; 15–29, 24.6%; 30–44, 18.2%; 45–59, 11.0%; 60–74, 5.2%; 75 and over, 1.7%.

Population projection: (2020) 191,000; (2030) 197,000.

Doubling time: 30 years.

Ethnic composition (2006): Samoan (Polynesian) 92.6%; Euronesian (European and Polynesian) 7.0%; European and U.S. white 0.4%.

Religious affiliation (2006): Congregational 33.8%; Roman Catholic 19.6%; Methodist 14.3%; Mormon 13.3%; Assemblies of God 6.9%; other Christian 9.8%; other/unknown 2.3%.

Major towns (2006)²: Apia 37,237 (urban agglomeration 60,702); Vaitele 6,294³; Faleasi'u 3,548; Vailele 3,174³; Le'a'uva'a 3,015.

Vital statistics

Birth rate per 1,000 population (2006): 27.3 (world avg. 20.3).

Death rate per 1,000 population (2006): 4.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 23.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 4.2.

Marriage/divorce rates per 1,000 population: (2001) 4.7/(2005) 0.2.

Life expectancy at birth (2006): male 71.5 years; female 74.2 years.

Major causes of death per 100,000 population (2005–06): diseases of the circulatory system 56.3, of which hypertensive diseases 21.1; diabetes mellitus 24.9; malignant neoplasms (cancers) 22.2; accidents/injuries 21.7.

National economy

Budget (2005–06). Revenue: SAT 387,200,000 (tax revenue 70.5%, of which VAT 28.0%, excise taxes 17.8%, income tax 12.2%; grants 18.6%; nontax revenue 10.9%). Expenditures: SAT 391,700,000 (current expenditure 72.0%, of which general services 22.9%, economic services 14.4%, education 14.1%, health 12.1%; development expenditure 22.0%; net lending 6.0%).

Public debt (external, outstanding; March 2008): U.S.\$192,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 146,000, bananas 23,000, taro 17,600, pineapples 4,600, pig meat 4,000, mangoes 4,000, avocados 1,150, cattle meat 1,000, honey 400, noni⁴, n.a.; livestock (number of live animals) 202,000 pigs, 29,000 cattle; roundwood 131,000 cu m, of which fuelwood 53%; fisheries production 4,609 (from aquaculture, negligible). Mining and quarrying: n.a. Manufacturing (value of manufactured exports in SAT '000; 2006–07): beer 3,520; noni⁴ juice 3,130; coconut cream 2,130. Energy production (consumption): electricity (kW-hr; 2006) 113,000,000 (90,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (51,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 7.2; average annual income per household (2002) SAT 23,116⁵ (U.S.\$6,849⁵); sources of income (2002): wages and salaries/self-employment 41.8%, own produce consumed 20.2%, gifts 16.2%, remittances 10.4%, other 11.4%; expenditure (2002)⁶: food 50.3%, transportation and communications 14.4%, alcohol and tobacco products 12.2%, household furnishings and operation 11.1%.

Population economically active (2003)⁷: total 64,000; activity rate of total population c. 35% (participation rates: ages 15–64, c. 63%; female c. 32%; unemployed [2006] 1.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	84.3	84.4	98.2	100.0	103.7	109.5	122.1

Gross national income (GNI; 2008): U.S.\$504,000,000 (U.S.\$2,780 per capita); purchasing power parity GNI (U.S.\$4,340 per capita).

Structure of gross domestic product and labour force

	2006			
	in value SAT '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	142	11.4	19,099	34.9
Mining	...	...	...	...
Manufacturing/handicrafts	161	12.9	10,548	19.3
Construction	112	9.0	2,476	4.5
Public utilities	59	4.7	872	1.6
Transp. and commun.	154	12.3	3,255	6.0
Trade, hotels, restaurants	303	24.2	5,965	10.9
Finance, real estate	164	13.1	1,439	2.6
Pub. admin., defense	105	8.4	2,706	5.0
Services	65	5.2	6,923	12.7
Other	–15 ⁸	–1.2 ⁸	1,356 ⁹	2.5 ⁹
TOTAL	1,250	100.0	54,639	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007–08) 110; remittances (2008) 135; foreign direct investment (FDI; 2005–07 avg.) 8; official development assistance (2007) –31. Disbursements for (U.S.\$'000,000): tourism (2007) 5; remittances (2008) 13; FDI (2005–07 avg.) 1.

Land use as % of total land area (2007): in temporary crops 8.9%, in permanent crops 20.5%, in pasture 1.1%, forest area 60.4%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
SAT '000,000	–408	–363	–409	–475	–579	–557
% of total	81.5%	80.4%	86.1%	88.0%	91.0%	88.5%

Imports (2007): SAT 593,000,000 (petroleum products 20.6%, products for government 5.1%, unspecified 74.3%). **Major import sources** (2005–06): New Zealand 29.3%; Australia 18.8%; U.S. 10.6%; Fiji 7.0%; China 5.3%.

Exports (2007): SAT 36,000,000 (fresh fish 55.3%, noni⁴ juice 10.6%, beer 8.6%, coconut cream 6.5%, noni⁴ fruit 1.9%). **Major export destinations** (2005–06): American Samoa 49.1%; U.S. 32.6%; New Zealand 9.4%; Australia 3.4%; Japan 3.1%.

Transport and communications

Transport. Railroads: none. Roads (2001): total length 1,452 mi, 2,337 km (paved 14%). Vehicles (2005): passenger cars 4,638; trucks and buses 4,894. Air transport (2004)¹⁰: passenger-km 326,090,000; metric ton-km cargo 2,709,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	27	152	PCs	2005	4.0	22
Telephones				Dailies	2005	4.5 ¹¹	25 ¹¹
Cellular	2008	124 ¹²	493 ¹²	Internet users	2008	9.0	50
Landline	2008	29	161	Broadband	2005	0.1 ¹²	0.5 ¹²

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling 1.8%; incomplete/complete primary education 32.4%; incomplete/complete secondary 55.4%; higher 10.4%. **Literacy** (2003): total population over age 15 literate 99.7%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	1,269	30,199	23.8	87
Secondary/Voc. (age 11–17)	1,141 ¹³	24,242 ¹⁴	20.8 ¹³	66 ¹⁴
Tertiary ¹⁵	140	1,179	8.4	7 (age 18–23)

Health (2005): physicians 50 (1 per 3,570 persons); hospital beds 229 (1 per 780 persons); infant mortality rate per 1,000 live births (2006) 20.4; undernourished population (2002–04) 7,000 (4% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

No military forces are maintained; informal defense ties exist with New Zealand, and Australia assists with maritime surveillance training.

¹Includes Manono and Apolima islands. ²Preliminary census. ³Within Apia urban agglomeration. ⁴Fruit known locally as *nonu*; also known as Indian mulberry. ⁵Includes estimated value of agricultural products consumed by grower. ⁶Weights of consumer price index components. ⁷Estimates of the ILO Employment Trends Unit. ⁸Less imputed bank service charges. ⁹Includes 711 unemployed (1.3% of labour force). ¹⁰Polynesian Airlines only. ¹¹Circulation for one of two daily newspapers. ¹²Subscribers. ¹³2003–04. ¹⁴2004–05. ¹⁵2000–01.

Internet resources for further information:

- Central Bank of Samoa <http://www.cbs.gov.ws>
- Samoa Statistical Services Division <http://www.spc.int/prism/Country/WS/stats>

San Marino

Official name: Repubblica di San Marino (Republic of San Marino).
Form of government: unitary multiparty republic with one legislative house (Great and General Council [60]).
Heads of state and government: Captains-Regent (2).
Capital: San Marino.
Official language: Italian.
Official religion: none.
Monetary unit: euro (€)¹; valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

Municipalities	Capitals	area		population
		sq mi	sq km	2009 estimate
Acquaviva	Acquaviva	1.88	4.86	2,024
Borgo Maggiore	Borgo Maggiore	3.48	9.01	6,304
Chiesanuova	Chiesanuova	2.11	5.46	1,050
Città (San Marino)	San Marino	2.74	7.09	4,360
Domagnano	Domagnano	2.56	6.62	3,014
Faetano	Faetano	2.99	7.75	1,169
Fiorentino	Fiorentino	2.53	6.57	2,408
Montegiardino	Montegiardino	1.28	3.31	890
Serravalle	Serravalle	4.07	10.53	10,215
TOTAL		23.63²	61.20	31,434

Demography

Population (2009): 31,500.
Density (2009): persons per sq mi 1,333, persons per sq km 514.7.
Urban-rural (2005): urban c. 96%; rural c. 4%.
Sex distribution (2008): male 49.07%; female 50.93%.
Age breakdown (2008)³: under 15, 15.0%; 15–29, 14.9%; 30–44, 26.4%; 45–59, 21.5%; 60–74, 14.1%; 75–84, 5.8%; 85 and over, 2.3%.
Population projection: (2020) 34,000; (2030) 36,000.
Ethnic composition (2006): Sammarinesi 87.0%; Italian 11.4%; other 1.6%.
Religious affiliation (2000): Roman Catholic 88.7%; other Christian 3.5%; non-religious 5.1%; other 2.7%.
Major municipalities (2008): Serravalle 10,051; Borgo Maggiore 6,198; San Marino 4,376.

Vital statistics

Birth rate per 1,000 population (2008): 11.2 (world avg. 20.3); within marriage 77.9%; outside of marriage 22.1%.
Death rate per 1,000 population (2008): 6.1 (world avg. 8.5).
Natural increase rate per 1,000 population (2008): 5.1 (world avg. 11.8).
Total fertility rate (avg. births per childbearing woman; 2008): 1.50.
Marriage/divorce rates per 1,000 population (2008): 6.5/2.3.
Life expectancy at birth (2008): male 80.1 years; female 85.7 years.
Major causes of death per 100,000 population (2007): diseases of the circulatory system 334.4; malignant neoplasms (cancers) 272.1; pneumonia 45.9; accidents, violence, and suicide 29.5.

National economy

Budget (2005). Revenue: €504,800,000 (VAT 23.6%; social contributions 21.3%; income tax 20.2%). Expenditures: €433,100,000 (wages and salaries 35.4%; social benefits 30.5%).
Public debt (2003): U.S.\$52,900,000.
Tourism: number of visitor arrivals (2008) 2,111,736; receipts from visitors, n.a.; expenditures by nationals abroad, n.a.
Remittances: n.a.
Population economically active (2008): total 22,708; activity rate of total population 73.2% (participation rates: ages 15–64 [2002] 72.1%⁴; female 42.0%; unemployed 3.1%).

Price and earnings indexes (2003 = 100)

	2003	2004	2005	2006	2007	2008
Consumer price index	100.0	101.4	103.1	105.3	107.9	112.6
Annual earnings index	100.0	100.7	103.0	106.2	108.6	...

Household income and expenditure. Average household size (2008)⁵ 2.3; income per household: n.a.; sources of income: n.a.; expenditure (2006)⁵: food and beverages 21.3%, housing 15.3%, transportation 10.6%, vacation and recreation 10.4%, restaurants 10.2%, clothing and footwear 5.6%, energy 5.4%, household furnishings 4.4%.

Production (metric tons except as noted). Agriculture, forestry, fishing: small amounts of wheat, grapes, and barley; livestock (number of live animals; 2005) 991 cattle, 91 sheep, 32 pigs. Quarrying: building stone is an important export product. Manufacturing (2005): processed meats 283,674 kg, of which beef 270,616 kg, veal 8,549 kg, pork 3,615 kg; cheese 56,610 kg; butter 8,110 kg; pasteurized milk 630,784 litres; yogurt (2004) 10,314 litres; other major products include electrical appliances, musical instruments, printing ink, paint, cosmetics, furniture, floor tiles, gold and silver jewelry, clothing, and postage stamps. Energy production (consumption): all electrical power is imported via electrical grid from Italy (kW-hr; consumption [2007] 239,983,250); coal, none (n.a.); crude petroleum, none (none); petroleum products, none (n.a.); natural gas (cu m; 2007) none (52,785,000).
Gross national income (GNI; 2008): U.S.\$1,899,900,000 (U.S.\$60,925 per capita); purchasing power parity GNI, n.a.

Structure of gross domestic product and labour force

	2007		2008	
	in value €'000,000 ⁶	% of total value	labour force	% of labour force
Agriculture	1.2	0.1	76	0.3
Manufacturing	464.0	38.0	6,398	28.2
Construction	79.4	6.5	1,716	7.6
Public utilities	...	...	...	...
Mining	...	...	...	...
Transp. and commun.	20.7	1.7	615	2.7
Trade, hotels	139.2	11.4	3,731	16.4
Finance and insurance	227.1	18.6	4,064	17.9
Services	133.1	10.9	1,365	6.0
Pub. admin., defense	156.3	12.8	4,030	17.8
Other	...	...	713 ⁷	3.1 ⁷
TOTAL	1,221.0	100.0	22,708	100.0

Land use as % of total land area (2007): in temporary crops 16.7%, in permanent crops, n.a., in pasture n.a., forest area 1.7%.

Foreign trade⁸

Balance of trade (current prices)

	2000	2001	2002	2003	2004	2005
U.S.\$'000,000	-53.3	-54.4	-91.0	-94.9	-54.6	-51.0
% of total	1.5%	1.8%	2.8%	2.3%	1.1%	1.0%

Imports (2005): U.S.\$2,582,000,000 (manufactured goods of all kinds, petroleum products, natural gas, electricity, and gold). **Major import source** (2004): significantly Italy.

Exports (2005): U.S.\$2,531,000,000 (goods include electronics, postage stamps, leather products, ceramics, wine, wood products, and building stone). **Major export destinations** (2004): Italy 90%; remainder 10%.

Transport and communications

Transport. Railroads: none (nearest rail terminal is at Rimini, Italy, 17 mi [27 km] northeast). Roads (2001): total length 156 mi, 252 km. Vehicles (2008): passenger cars 34,025; trucks and buses 6,370. Air transport: a heliport provides passenger and cargo service between San Marino and Rimini, Italy, during the summer months.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	25	893	PCs	2003	23	819
Telephones				Dailies	2007	0.8 ⁹	26 ⁹
Cellular	2008	24 ¹⁰	797 ¹⁰	Internet users	2008	21	545
Landline	2008	21	683	Broadband	2008	4.9 ¹⁰	157 ¹⁰

Education and health

Educational attainment (2007). Percentage of population age 15 and over having: basic literacy or primary education 55.3%; secondary or vocational 34.5%; higher degree 10.2%. **Literacy** (2001): total population age 15 and over literate 98.7%; males literate 98.9%; females literate 98.4%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	248	1,573	6.3	...
Secondary/Voc. (age 11–18) ¹¹	221 ¹²	1,463	6.1 ¹²	...
Tertiary ¹³	...	31	...	... (age 19–23)

Health (2002): physicians 117 (1 per 230 persons); hospital beds 134 (1 per 191 persons); infant mortality rate per 1,000 live births (2008) 2.9; undernourished population, n.a.

Military

Total active duty personnel (November 2007): ¹⁴. **Military expenditure as percentage of GDP:** n.a.

¹San Marino uses the euro as its official currency even though it is not a member of the EU. ²Detail does not add to total given because of rounding. ³Based on derived percentages from official age-breakdown pyramid. ⁴Percentage includes cross-border workers. ⁵Data is for families. ⁶Figures calculated using percentage breakdowns. ⁷Unemployed. ⁸A customs union with Italy has existed since 1862. ⁹Circulation of the daily newspaper *San Marino Oggi* only. ¹⁰Subscribers. ¹¹Excludes 760 secondary students enrolled abroad. ¹²2005–06. ¹³Excludes 898 university students enrolled abroad. ¹⁴Defense is the responsibility of Italy; a small voluntary military force performs ceremonial duties and provides limited assistance to police.

Internet resource for further information:

• Office of Economic Planning: Data Processing and Statistics
<http://www.upecceds.sm/eng>

Sao Tome and Principe

Official name: República Democrática de São Tomé e Príncipe (Democratic Republic of Sao Tome and Principe).

Form of government: multiparty republic with one legislative house (National Assembly [55]).

Chief of state: President.

Head of government: Prime Minister.

Capital: São Tomé.

Official language: Portuguese.

Official religion: none.

Monetary unit: dobra (Db); valuation (Sept. 1, 2009) 1 U.S.\$ = Db 15,600; 1 £ = Db 25,313.



Area and population		area		population
Islands	Capitals	sq mi	sq km	2006 estimate
São Tomé		332	859	145,175
Districts				
Água-Grande	São Tomé	7	17	56,492
Cantagalo	Santana	46	119	14,681
Caué	São João Angolares	103	267	6,324
Lembá	Neves	88	229	11,759
Lobata	Guadalupe	41	105	17,251
Mé-Zóchi	Trindade	47	122	38,668
Príncipe		55	142	6,737
Autonomous Region				
Príncipe	Santo António	55	142	6,737
TOTAL		386¹	1,001	151,912

Demography

Population (2009): 163,000.

Density (2009): persons per sq mi 422.3, persons per sq km 162.8.

Urban-rural (2008): urban 60.8%; rural 39.2%.

Sex distribution (2006): male 48.63%, female 51.37%.

Age breakdown (2006): under 15, 41.2%; 15–29, 30.8%; 30–44, 14.6%; 45–59, 7.8%; 60–74, 4.1%; 75 and over, 1.5%.

Population projection: (2020) 197,000; (2030) 234,000.

Doubling time: 29 years.

Ethnic composition (2000): black-white admixture 79.5%; Fang 10.0%;

Angolares (descendants of former Angolan slaves) 7.6%; Portuguese 1.9%;

other 1.0%.

Religious affiliation (2005): Roman Catholic c. 80%; Protestant c. 15%; Muslim

c. 3%; other c. 2%.

Major urban areas (2001): São Tomé 49,957; Neves 6,635; Santana 6,228; Trindade 6,049; Santo António (on Príncipe) 1,010.

Vital statistics

Birth rate per 1,000 population (2008): 31.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 24.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 5.62.

Marriage/divorce rates per 1,000 population (2003): 2.2/n.a.

Life expectancy at birth (2006): male 63.5 years; female 68.5 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 253.7, of which malaria 52.7; diseases of the circulatory system 198.6; accidents and injuries 74.3; malignant neoplasms 69.0; iron-deficiency anemia 50.2.

National economy

Budget (2007). Revenue: Db 3,144,000,000,000 (grants 75.0%; petroleum exploration bonuses 13.1%; tax revenue 10.2%; nontax revenue 1.7%). Expenditures: Db 780,000,000,000 (current expenditure 64.9%; capital expenditure 28.6%; other 6.5%).

Public debt (external, outstanding; October 2008): U.S.\$109,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): oil palm fruit 40,000, coconuts 28,000, taro 27,000, bananas 27,000, vegetables 6,500, cassava 5,800, cacao 3,500, corn (maize) 3,000, cinnamon 30, coffee 20; livestock (number of live animals) 5,000 goats, 4,600 cattle, 350,000 chickens; roundwood 9,000 cu m, of which fuelwood, n.a.; fisheries production 4,150 (from aquaculture, none). Mining and quarrying: limited quarrying of clay and volcanic rock. Manufacturing (2007): small processing plants produce beer, soft drinks, soap, and textiles. Energy production (consumption): electricity (kW-hr; 2006) 19,000,000 (19,000,000); coal, none (none); crude petroleum, none² (none); petroleum products (metric tons; 2006) none (34,000); natural gas, none (none).

Household income and expenditure. Average household size (2004) 5.5; income per household: n.a.; sources of income: n.a.; expenditure (1995)³: food, beverages, and tobacco 71.9%, housing and energy 10.2%, transportation and communications 6.4%, clothing and footwear 5.3%, household durable goods 2.8%.

Population economically active (2006): total 53,266; activity rate of total population 35.1% (participation rates: ages 15–64, 59.5%⁴; female 41.6%; unemployed, n.a.).

Price index (December 2005 = 100)						
	2003	2004	2005	2006	2007	2008
Consumer price index ⁵	74.0	85.3	100.0	124.6	158.9	198.3

Gross national income (GNI; 2008): U.S.\$164,000,000 (U.S.\$1,020 per capita); purchasing power parity GNI (U.S.\$1,780 per capita).

Structure of gross domestic product and labour force

	2006		2001	
	in value Db '000,000	% of total value	labour force ⁶	% of labour force ⁶
Agriculture, fishing	239,300	16.8	13,518	31.5
Mining	5,700	0.4	...	...
Manufacturing	102,600	7.2	2,893	6.7
Public utilities			4,403	10.2
Construction	157,900	11.1	792	1.8
Transp. and commun.	598,800	41.9	8,787	20.5
Trade			...	...
Finance	93,200	6.5	...	...
Pub. admin., defense	72,200	5.1	3,307	7.7
Services	66,500	4.7	9,237	21.5
Other	92,100 ⁷	6.4 ⁷	...	...
TOTAL	1,428,500¹	100.0¹	42,937	100.0¹

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 3.4; remittances (2008) 2; foreign direct investment (FDI; 2005–07 avg.) 30; official development assistance (2007) 36. Disbursements for (U.S.\$'000,000): tourism (2007) 0.1; remittances (2008) 1; FDI (2005–07 avg.) 7.

Land use as % of total land area (2007): in temporary crops c. 9%, in permanent crops c. 49%, in pasture c. 1%, forest area c. 29%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–34.1	–37.8	–46.3	–67.0	–75.2	–108.5
% of total	72.1%	84.3%	87.2%	89.8%	90.5%	90.6%

Imports (2008): U.S.\$114,094,000 (mineral fuels 23.3%, food products 19.7%, machinery and equipment 14.1%, transportation equipment 7.9%, construction materials 7.2%). **Major import sources:** Portugal 61.3%; Angola 22.9%; Gabon 3.0%; Nigeria 2.3%.

Exports (2008): U.S.\$5,631,000 (cocoa beans 89.4%, coconuts 0.6%, coffee 0.2%, remainder 9.8%). **Major export destinations:** Portugal 49.2%; Netherlands 28.2%; Belgium 7.9%; France 6.8%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 199 mi, 320 km (paved 68%). Vehicles (1996): passenger cars 4,040; trucks and buses 1,540. Air transport (2004): passenger-km 8,000,000; short ton-km cargo, n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	19	128	PCs	2005	6.0	38
Telephones				Dailies	2005	... ⁸	... ⁸
Cellular	2008	49 ⁹	306 ⁹	Internet users	2008	25	155
Landline	2008	7.7	48	Broadband	2007	2.5 ⁹	16 ⁹

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.3%; primary education 41.4%; lower secondary 25.0%; upper secondary/vocational 8.8%; higher 1.9%; unknown 22.6%. **Literacy** (2006): total population age 15 and over literate c. 85%; males literate c. 92%; females literate c. 78%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	1,009	32,616 ¹⁰	30.8	97 ¹⁰
Secondary/Voc. (age 13–17)	375	8,518 ¹⁰	21.7	33 ¹¹
Tertiary	...	...	...	... (age 18–22)

Health: physicians (2006) 58 (1 per 2,621 persons); hospital beds (2003) 474 (1 per 313 persons); infant mortality rate per 1,000 live births (2006) 43.9; undernourished population (2002–04) 15,000 (10% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (2005): 460 (army/coast guard 65.2%; presidential guard 34.8%). **Military expenditure as percentage of GDP** (2005): 1.2%; per capita expenditure U.S.\$4.

¹Detail does not add to total given because of rounding. ²Licenses for petroleum exploration in an offshore area shared by Sao Tome and Principe and Nigeria were awarded in March 2006; no crude petroleum was extracted from this area as of October 2009. ³Weights of consumer price index components. ⁴ILO estimate for 2006. ⁵As of December. ⁶Employed only. ⁷Taxes less subsidies. ⁸No data available for the one daily newspaper. ⁹Subscribers. ¹⁰2007–08. ¹¹2004–05.

Internet resources for further information:

- Instituto Nacional de Estatística
<http://www.ine.st>
- Banco Central de São Tomé e Príncipe
<http://www.bcestp.st>

Saudi Arabia

Official name: Al-Mamlakah al-'Arabiyyah as-Su'ūdiyyah (Kingdom of Saudi Arabia).

Form of government: monarchy¹.

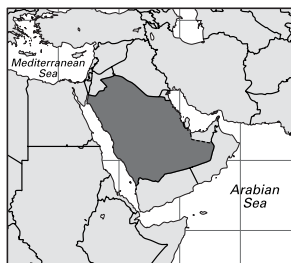
Head of state and government: King.

Capital: Riyadh.

Official language: Arabic.

Official religion: Islam.

Monetary unit: Saudi riyal (SR); valuation (Sept. 1, 2009) 1 U.S.\$ = SR 3.75; 1 £ = SR 6.09.



Area and population

Administrative Regions	Capitals	area		population
		sq mi	sq km	2008 estimate
'Asīr	Abha	29,611	76,693	1,822,388
Al-Bāḥah	Al-Bāḥah	3,830	9,921	398,920
Hā'il	Hā'il	40,111	103,887	569,230
Al-Hudūd ash-Shamālīyah (Northern Borders)	'A'rār	43,165	111,797	301,199
Al-Jawf	Sakākah	38,692	100,212	398,451
Jizān	Jizān	4,506	11,671	1,327,908
Al-Madīnah	Medina (Al-Madīnah)	58,684	151,990	1,675,731
Makkah	Mecca (Makkah)	59,123	153,128	6,229,313
Najrān	Najrān	57,727	149,511	474,109
Al-Qaṣīm	Buraydah	22,412	58,046	1,110,913
Ar-Riyāḍ	Riyadh (Ar-Riyāḍ)	156,078	404,240	6,084,967
Ash-Sharqīyah (Eastern Province)	Ad-Dammām	259,662	672,522	3,641,064
Tabūk	Tabūk	56,399	146,072	773,080
TOTAL		830,000	2,149,690	24,807,273

Demography

Population (2009): 25,316,000².

Density (2009): persons per sq mi 30.5, persons per sq km 11.8.

Urban-rural (2007): urban 82.6%; rural 17.4%.

Sex distribution (2008): male 55.20%; female 44.80%.

Age breakdown (2008): under 15, 32.3%; 15–29, 27.1%; 30–44, 25.5%; 45–59, 10.8%; 60–74, 3.3%; 75 and over, 1.0%.

Population projection: (2020) 31,114,000; (2030) 35,974,000.

Doubling time: 35 years.

Ethnic composition (2005): Saudi Arab c. 74%; expatriates c. 26%, of which Indian c. 5%, Bangladeshi c. 3.5%, Pakistani c. 3.5%, Filipino c. 3%, Egyptian c. 3%, Palestinian c. 1%, other c. 7%.

Religious affiliation (2000): Muslim c. 94%, of which Sunnī c. 84%, Shī'ī c. 10%; Christian c. 3.5%, of which Roman Catholic c. 3%; Hindu c. 1%; non-religious/other c. 1.5%.

Major cities (2007)³: Riyadh 4,465,000; Jiddah 3,012,000; Mecca 1,385,000; Medina 1,010,000; Ad-Dammām 822,000.

Vital statistics

Birth rate per 1,000 population (2008): 24.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 3.9 (world avg. 8.5).

Marriage/divorce rates per 1,000 population (2007): 4.8/1.0.

Total fertility rate (avg. births per childbearing woman; 2008): 3.10.

Life expectancy at birth (2007): male 70.9 years; female 75.3 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 144, of which ischemic heart disease 69; accidents and violence 66; malignant neoplasms (cancers) 44; diabetes mellitus 20.

National economy

Budget (2008). Revenue: SR 1,100,993,000,000 (oil revenues 89.3%). Expenditures: SR 520,069,000,000 (current expenditures 74.8%; capital expenditures 25.2%).

National debt (public only; end of 2008): c. U.S.\$62,649,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 2,700,000, alfalfa (2006) 1,644,661, dates 970,000, potatoes 570,000, tomatoes 500,000, sorghum 243,000, cucumbers 212,000, grapes 132,000, corn (maize) 91,000; livestock (number of live animals) 7,000,000 sheep, 2,200,000 goats, 372,000 cattle, 260,000 camels; roundwood, n.a.; fisheries production 88,410 (from aquaculture 21%). Mining and quarrying (2008): gypsum 2,300,000; silver 7,513 kg; gold 4,139 kg. Manufacturing (value added in U.S.\$'000,000; 2006): industrial chemicals 6,207; food products 4,447; glass products 2,078; refined petroleum (1998) 1,806; electronics 1,785; fabricated metal products 1,298; rubber products 1,150. Energy production (consumption): electricity (kW-hr; 2008) 181,097,000,000 (179,272,185,000); coal, none (none); crude petroleum (barrels; 2008–09) 3,210,100,000 ([2008] 838,400,000); petroleum products (metric tons; 2006) 114,437,000 (68,194,000); natural gas (cu m; 2008) 80,440,000,000 (80,440,000,000).

Land use as % of total land area (2007): in temporary crops 1.6%, in permanent crops 0.1%, in pasture 79.1%, forest area 1.3%.

Population economically active (2007): total 8,229,665, of which 4,029,966 Saudi workers and 4,199,699 foreign nationals; activity rate of total population 34.0% (participation rates: ages 15–64, 51.8%; female 15.4%; unemployed [2008] 5.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index ⁴	98.4	99.0	99.3	100.0	102.2	106.5	117.0

Gross national income (GNI; 2008): U.S.\$471,692,446,000 (U.S.\$18,718 per capita).

Structure of gross domestic product and labour force

	2007			
	in value SR '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	41,050	2.3	364,184	4.4
Petroleum and natural gas ⁵	1,001,745	57.0		
Other mining	3,455	0.2	102,807	1.3
Manufacturing ⁶	145,263	8.3	565,774	6.9
Construction	71,027	4.0	793,586	9.6
Public utilities	12,958	0.7	74,381	0.9
Transp. and commun.	52,594	3.0	343,552	4.2
Trade, hotels	80,649	4.6	1,498,967	18.2
Finance, real estate	118,892	6.8	334,034	4.1
Pub. admin., defense	204,923	11.7	1,400,092	17.0
Services	32,270	1.8	2,288,973	27.8
Other	-6,825 ⁷	-0.4 ⁷	463,315 ⁸	5.6 ⁸
TOTAL	1,758,001	100.0	8,229,665⁹	100.0⁹

Household income and expenditure. Average household size (2006) 6.0; income per household: n.a.; sources of income: n.a.; expenditure (1998–99): food and nonalcoholic beverages 37.3%, transportation 18.9%, housing and energy 15.7%, household furnishings 9.7%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 9,756; remittances (2008) n.a.; foreign direct investment (FDI; 2005–07 avg.) 18,236. Disbursements for (U.S.\$'000,000): tourism (2008) 5,891; remittances (2008) 16,068; FDI (2005–07 avg.) 4,816.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
SR '000,000,000	+193.3	+294.8	+454.2	+529.9	+536.3	+743.6
% of total	38.2%	45.3%	50.5%	50.3%	44.2%	46.3%

Imports (2008): SR 431,753,000,000 (machinery and apparatus 27.2%; transport equipment 18.0%; base and fabricated metals 15.3%; food and live animals 14.4%; chemicals and chemical products 12.3%). **Major import sources:** U.S. 13.7%; China 11.0%; Japan 8.2%; Germany 7.4%; South Korea 4.5%.

Exports (2008): SR 1,175,354,000,000 (crude petroleum 78.8%; refined petroleum products 10.8%; other mineral fuels [mostly natural gas] 5.3%). **Major export destinations:** U.S. 16.3%; Japan 15.2%; China 8.9%; South Korea 8.6%; India 7.3%.

Transport and communications

Transport. Railroads (2007): route length (2008) 1,423 km; passenger-km 343,000,000; metric ton-km cargo 1,257,000,000. Roads (2008): total length 183,925 km (paved 29%). Vehicles (2001): passenger cars 4,452,793; trucks and buses 4,110,271. Air transport (2008)¹¹: passenger-km 27,736,000,000; metric ton-km cargo 1,391,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	6,576	292	PCs	2005	8,184	354
Telephones				Dailies	2007	1,400 ¹²	58 ¹²
Cellular	2008	36,000 ¹³	1,429 ¹³	Internet users	2008	7,762	308
Landline	2008	4,100	163	Broadband	2008	1,048 ¹³	42 ¹³

Education and health

Educational attainment (2007). Percentage of Saudi ([2000] non-Saudi) population age 10 and over who: are illiterate 13.7% (12.1%), are literate/have primary education 34.0% (40.6%), have some/completed secondary 42.1% (36.0%), have at least begun university 10.2% (11.3%). **Literacy** (2007): percentage of total population age 15 and over literate 85.0%; males 89.1%; females 79.4%.

Education (2007)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	217,555	2,442,482	11.2	...
Secondary/Voc. (age 12–17)	195,088	2,157,622	11.0	...
Tertiary ¹⁴	28,423	659,887	23.2	30 ¹⁵ (age 18–22)

Health (2007): physicians 47,919 (1 per 506 persons); hospital beds 53,519 (1 per 453 persons); infant mortality rate per 1,000 live births 17.9; undernourished population (2002–04) 1,000,000 (4% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2008): 221,500 (army 33.9%, navy 6.1%, air force 9.0%, air defense forces 1.8%, industrial security force 4.1%, national guard 45.1%). U.S. troops (November 2008) 287. **Military expenditure as percentage of GDP** (2008): 8.6%; per capita expenditure U.S.\$1,540.

¹Additionally, the Consultative Council (consisting of 150 appointed members) acts as an advisory body. ²Expatriates constitute 27% of total population. ³Urban agglomerations. ⁴Urban areas only. ⁵Excludes refined petroleum. ⁶Includes refined petroleum. ⁷Import duties less imputed bank service charges. ⁸Unemployed. ⁹Includes 4,199,699 (51.0%) foreign workers. ¹⁰Imports c.i.f., exports f.o.b. ¹¹Scheduled flights on Saudi Arabian Airlines only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴2008. ¹⁵2006.

Internet resources for further information:

- Ministry of Economy and Planning <http://www.mep.gov.sa>
- Saudi Arabian Monetary Agency <http://www.sama-ksa.org>

Senegal

Official name: République du Sénégal (Republic of Senegal).

Form of government: multiparty republic with two legislative houses (Senate¹ [100²]; National Assembly [150]).

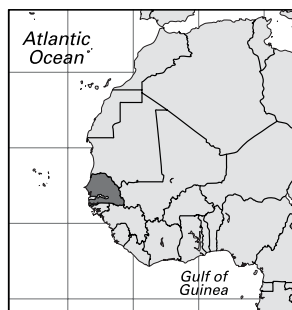
Head of state and government: President assisted by Prime Minister.

Capital: Dakar.

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFAF 458.60; 1 ₣ = CFAF 744.12.



Area and population					
Regions	area	population	Regions	area	population
	sq km	2006 ³ estimate		sq km	2006 ³ estimate
Dakar	550	2,452,600	Matam	25,083	478,600
Diourbel	4,359	1,183,100	Saint-Louis	19,044	764,300
Fatick	7,935	652,400	Sédhiou ⁴	7,293	399,400
Kaffrine ⁴	11,102	467,700	Tambacounda	42,706	557,900
Kaolack	4,908	665,000	Thiès	6,601	1,385,100
Kédougou ⁴	16,896	111,200	Ziguinchor	7,339	457,800
Kolda	13,718	513,100	TOTAL	196,722	10,817,800
Louga	29,188	729,600			

Demography

Population (2009): 12,534,000⁵.

Density (2009): persons per sq mi 165.0, persons per sq km 63.7.

Urban-rural (2008): urban 42.4%; rural 57.6%.

Sex distribution (2006): male 49.99%; female 50.01%.

Age breakdown (2006): under 15, 42.2%; 15–29, 28.4%; 30–44, 16.0%; 45–59, 8.7%; 60–74, 3.9%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 16,197,000; (2030) 19,541,000.

Doubling time: 28 years.

Ethnic composition (2000): Wolof 34.6%; Peul (Fulani) and Tukulor 27.1%; Serer 12.0%; Malinke (Mandingo) 9.7%; other 16.6%.

Religious affiliation (2005): Muslim c. 94%⁶ (including Shīʿī c. 5%); Christian (mostly Roman Catholic) c. 4%; other c. 2%.

Major cities (2008³): Dakar 2,243,400⁷; Touba 529,200; Thiès 263,500; Kaolack 186,000; Mbour 181,800; Saint-Louis 171,300; Rufisque 162,100.

Vital statistics

Birth rate per 1,000 population (2008): 34.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 8.9 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 5.13.

Life expectancy at birth (2006): male 55.0 years; female 57.7 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases c. 385, of which malaria c. 134; respiratory infections c. 165; cardiovascular diseases c. 119; perinatal conditions c. 91; accidents c. 81.

National economy

Budget (2008). Revenue: CFAF 1,350,900,000,000 (tax revenue 86.0%; grants 10.5%; nontax revenue 3.5%). Expenditures: CFAF 1,678,561,000,000 (current expenditures 67.1%; development expenditure 32.9%).

Public debt (external, outstanding; 2007): U.S.\$2,029,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 836,000, peanuts (groundnuts) 427,093, millet 362,825, paddy rice 215,212, corn (maize) 185,188, cassava 178,172, sorghum 120,334, watermelons 117,579, oil palm fruit 71,000, seed cotton 49,972; livestock (number of live animals) 5,131,300 sheep, 4,382,900 goats, 3,180,900 cattle, 521,160 horses; roundwood 6,129,600 cu m, of which fuelwood 87%; fisheries production 421,517 (from aquaculture, negligible). Mining and quarrying (2007): calcium phosphate (crude rock) 691,000. Manufacturing (value added in U.S.\$'000,000; 2002): food and food products 108; industrial chemicals 70; cement, bricks, and ceramics 31; paints, soaps, and pharmaceuticals 21; beverages 11. Energy production (consumption): electricity (kW-hr; 2006) 2,433,000,000 (2,433,000,000); coal (metric tons; 2006) none (167,000); crude petroleum (barrels; 2006) none (2,419,000); petroleum products (metric tons; 2006) 336,000 (775,000); natural gas (cu m; 2006) 12,380,000 (12,380,000).

Population economically active (2003; ILO estimate): total 4,383,000; activity rate of total population 39.4% (participation rates: ages 15–64, 71.5%; female 42.0%; unemployed [2005] c. 40%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.9	97.8	98.3	100.0	102.1	108.1	114.3

Household income and expenditure. Average household size (2005) 8.7; sources of income (1997–2000)⁸: agricultural 45%, other 55%; expenditure (2005): food and nonalcoholic beverages 54.8%, household furnishings 6.9%, housing and energy 6.3%, communications 6.0%, transportation 4.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 250; remittances (2008) 1,288; foreign direct investment (2005–07 avg.) 114; official development assistance (2007) 843. Disbursements for (U.S.\$'000,000): tourism (2006) 54; remittances (2008) 143.

Gross national income (GNI; 2008): U.S.\$11,825,000,000 (U.S.\$970 per capita); purchasing power parity GNI (U.S.\$1,760 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value CFAF '000,000	% of total value	labour force	% of labour force
Agriculture, fishing	801,583	13.3	1,063,400	30.4
Mining	45,934	0.8	14,100	0.4
Manufacturing	767,334	12.7	245,400	7.0
Public utilities	157,539	2.6	21,800	0.6
Construction	325,270	5.4	186,600	5.3
Transp. and commun.	848,887	14.1	141,700	4.1
Trade, hotels	975,198	16.1	814,500	23.2
Finance, real estate	678,551	11.2	16,700	0.5
Services	408,830	6.8	157,700	4.5
Pub. admin., defense	342,922	5.7		
Other	688,153 ⁹	11.3 ⁹	842,400 ¹⁰	24.0 ¹⁰
TOTAL	6,040,201	100.0	3,504,300	100.0

Land use as % of total land area (2007): in temporary crops 15.5%, in permanent crops 0.3%, in pasture 29.1%, forest area 44.6%.

Foreign trade¹¹

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	−1,336	−1,244	−1,523	−2,027	−2,179	−3,325
% of total	49.0%	35.0%	36.7%	40.8%	42.2%	51.8%

Imports (2006): U.S.\$3,671,000,000 (mineral fuels 25.9%, of which refined petroleum 18.4%; food 19.0%, of which cereals 8.8%; chemicals and chemical products 9.4%; nonelectrical machinery 9.0%). **Major import sources:** France 24.4%; U.K. 6.0%; China 4.3%; Thailand 4.0%; Spain 3.8%.

Exports (2006): U.S.\$1,492,000,000 (food 27.8%, of which fish 10.7%, crustaceans and mollusks 6.9%; refined petroleum 24.3%; portland cement 5.3%; phosphoric acid [and related products] 5.2%). **Major export destinations:** Mali 20.2%; bunker and ships' stores 16.2%; France 7.6%; The Gambia 5.6%; India 5.3%.

Transport and communications

Transport. Railroads (2005): route length 906 km; (2004) passenger-km 122,000,000; (2004) metric ton-km cargo 358,000,000. Roads (2006): total length 14,805 km (paved 29%). Vehicles (2007): passenger cars 187,998; trucks and buses 64,537. Air transport (2006)¹²: passenger-km 937,000,000; metric ton-km cargo, none.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	869	77	PCs	2005	250	21
Telephones				Dailies	2007	123 ¹³	17 ¹³
Cellular	2008	5,389 ¹⁴	441 ¹⁴	Internet users	2008	1,020	84
Landline	2008	238	19	Broadband	2008	47 ¹⁴	3.9 ¹⁴

Education and health

Educational attainment (2005)¹⁵. Percentage of population age 25 and over having: no formal schooling 68.2%; incomplete primary education 13.0%; complete primary 3.7%; incomplete secondary 9.5%; complete secondary 1.4%; higher 2.4%; unknown 1.8%. **Literacy** (2007): percentage of total population age 15 and over literate 44.0%; males literate 53.4%; females literate 34.9%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	45,957	1,572,178	34.2	72
Secondary/Voc. (age 13–19)	15,394 ¹⁶	447,425 ¹⁷	26.4 ¹⁶	20 ¹⁷
Tertiary	...	59,127 ¹⁶	...	6 ¹⁶ (age 20–24)

Health: physicians (2005) 693 (1 per 17,115 persons); hospital beds (1998) 3,582 (1 per 2,500 persons); infant mortality rate per 1,000 live births (2006) 61.4; undernourished population (2003–05) 3,000,000 (26% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 13,620 (army 87.4%, navy 7.0%, air force 5.6%); French troops (November 2008) 841. **Military expenditure as percentage of GDP** (2007): 1.6%; per capita expenditure U.S.\$16.

¹Originally created in 1999, abolished in 2001, and reinstated in August 2007. ²Includes 65 appointees of president. ³January 1. ⁴Officially created in 2008. ⁵Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁶Most citizens practice a syncretic form of Islam. ⁷Includes communes of Pikine (2004; pop. 815,378) and Guédiawaye (2004; pop. 274,014), adjacent to Dakar commune (2004; pop. 1,009,256). ⁸Approximate figures for span of years. ⁹Taxes on products less imputed bank service charges. ¹⁰Includes 484,000 not adequately defined and 351,400 unemployed. ¹¹Imports c.i.f.; exports f.o.b. ¹²Air Sénégal International only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Based on the 2005 Senegal Demographic and Health Survey, of which 22,795 people were age 25 and over. ¹⁶2004–05. ¹⁷2005–06.

Internet resources for further information:

- **Agence Nationale de la Statistique et de la Démographie**
<http://www.ansd.sn>
- **La Banque de France: La Zone Franc**
<http://www.banque-france.fr/fr/eurosys/zonefr/zonefr.htm>

Serbia

Official name: Republika Srbija (Republic of Serbia).

Form of government: republic with National Assembly (250).

Chief of state: President.

Head of government: Prime Minister.

Capital: Belgrade.

Official language: Serbian.

Official religion: none.

Monetary unit: Serbian dinar (CSD); valuation (Sept. 1, 2009) 1 U.S.\$ = CSD 65.10; 1 £ = CSD 105.63.



Area and population

	area	population		area	population
Administrative divisions ¹	sq km	2007 estimate	Administrative divisions ¹	sq km	2007 estimate
Central Serbia	55,962	5,390,072	Raška	3,918	297,713
Districts			Šumadija	2,387	292,340
Bor	3,507	136,437	Toplica	2,231	97,036
Braničevo	3,865	193,944	Zaječar	3,623	128,056
Grad Beograd			Zlatibor	6,140	302,228
(City of Belgrade) ²	3,224	1,611,333	Vojvodina	21,536	1,991,507
Jablanica	2,769	231,793	Districts		
Kolubara	2,474	184,014	Central Banat	3,256	197,585
Mačva	3,268	316,999	North Bačka	1,784	194,573
Moravica	3,016	218,612	North Banat	2,329	157,155
Nišava	2,729	376,946	South Bačka	4,016	603,244
Pčinja	3,520	229,200	South Banat	4,245	306,133
Pirot	2,761	98,681	Srem	3,486	331,866
Podunavlje	1,248	205,911	West Bačka	2,420	200,951
Pomoravlje	2,614	219,934	TOTAL	77,498	7,381,579
Rasina	2,668	248,895			

Demography

Population (2009): 7,320,000¹.

Density (2009)³: persons per sq mi 244.6, persons per sq km 94.5.

Urban-rural (2002)¹: urban 56.4%; rural 43.6%.

Sex distribution (2007)¹: male 48.62%; female 51.38%.

Age breakdown (2007)¹: under 15, 15.8%; 15–29, 19.7%; 30–44, 20.4%; 45–59, 22.4%; 60–74, 14.9%; 75–84, 5.9%; 85 and over, 0.9%.

Population projection¹: (2020) 6,958,000; (2030) 6,621,000.

Ethnic composition (2002)¹: Serb 82.9%; Hungarian 3.9%; Bosniac 1.8%; Rom (Gypsy) 1.4%; Yugoslav 1.1%; Croat 0.9%; Montenegrin 0.9%; other 7.1%.

Religious affiliation (2002)¹: Orthodox 85.0%; Roman Catholic 5.5%; Muslim 3.2%; Protestant 1.1%; other/unknown 5.2%.

Major cities (2002): Belgrade (municipality) 1,120,092; Novi Sad 191,405; Niš 173,724; Kragujevac 146,373; Subotica 99,981; Zrenjanin 79,773.

Vital statistics¹

Birth rate per 1,000 population (2008): 9.4 (world avg. 20.3); (2007) within marriage 77.7%, outside of marriage 22.3%.

Death rate per 1,000 population (2008): 14.0 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 1.40.

Marriage/divorce rates per 1,000 population (2008): 5.2/1.2.

Life expectancy at birth (2008): male 71.1 years; female 76.3 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 780.2; malignant neoplasms (cancers) 284.9; diseases of the respiratory system 53.6; accidents 26.0; suicide 17.6.

National economy

Budget (2007)¹. Revenue: CSD 913,488,000,000 (tax revenue 58.8%, social contributions 34.3%, nontax revenue 6.9%). Expenditures: CSD 935,573,000,000 (social protection 38.2%, health 15.5%, economic affairs 11.3%, general public services 9.7%, education 8.1%, public order 6.1%, defense 6.1%).

Public debt (external, outstanding; August 2009)¹: U.S.\$9,803,000,000.

Population economically active (2008)¹: total 3,267,100; activity rate of total population 43.4% (participation rates: ages 15–64, 62.7%; female 44.0%; unemployed [September 2008–August 2009] 29.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71	78	86	100	112	119	134

Production (metric tons except as noted). Agriculture, forestry, fishing (2007)⁴: corn (maize) 3,904,825; sugar beets 3,206,380; wheat 1,863,811; cow's milk 1,700,000; potatoes 743,282; plums 680,566; pig meat 560,000; grapes 353,343; sunflower seeds 294,502; livestock (number of live animals) 3,998,927 pigs, 1,106,000 cattle; roundwood⁴ 2,981,000 cu m, of which fuelwood 52%; fisheries production⁴ 9,159 (from aquaculture 71%). Mining and quarrying (2007)¹: copper 32,000⁵; silver 4,150⁵; selenium 7,500 kg. Manufacturing (value added in CSD '000,000; 2006)¹: food products and beverages 52,302; chemicals and chemical products 23,813; cement, bricks, and ceramics 11,532; fabricated metal products 11,056; base metals 9,407. Energy production (consumption): electricity (kW-hr; 2008) 37,392,000,000¹ ([2006] 35,671,000,000⁷); hard coal (metric tons; 2008) 72,000¹ ([2006] 160,000⁷); lignite (metric tons; 2008) 38,520,000¹ ([2006] 37,367,000⁷); crude petroleum (barrels; 2008) 4,660,000¹ ([2006] 23,000,000⁷); petroleum products (metric tons; 2006) 2,488,000⁷ (3,588,000⁷); natural gas (cu m; 2007) 271,000,000¹ ([2006] 2,374,000,000⁷).

Gross national income (GNI; 2008)¹: U.S.\$41,929,000,000 (U.S.\$5,710 per capita); purchasing power parity GNI (U.S.\$11,150 per capita).

Structure of gross domestic product and labour force¹

	2007			
	in value	% of total	labour	% of labour
	CSD '000,000,000	value	force	force
Agriculture, forestry, fishing	206.6	8.7	552,600	17.0
Mining and quarrying	29.5	1.3	41,300	1.3
Manufacturing	368.4	15.6	521,700	16.1
Construction	103.9	4.4	161,300	5.0
Public utilities	80.3	3.4	58,000	1.8
Transp. and commun.	166.1	7.0	169,800	5.2
Trade, hotels	299.2	12.7	470,800	14.5
Finance, real estate	386.8	16.4	131,900	4.1
Pub. admin., defense	91.9	3.9	141,900	4.4
Services	286.9	12.1	405,000	12.5
Other	343.2 ⁸	14.5 ⁸	586,900 ⁹	18.1 ⁹
TOTAL	2,362.8	100.0	3,241,200	100.0

Household income and expenditure (2007)¹. Average household size 3.0; average annual income per household CSD 441,226 (U.S.\$7,549); sources of income: wages and salaries 46.1%, transfers 29.2%, other 24.7%; expenditure (2008)¹: food and nonalcoholic beverages 26.0%, housing 13.0%, transportation 12.3%, energy 9.4%, household furnishings 5.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 866¹; remittances (2008) 5,538¹; foreign direct investment (FDI; 2005–07 avg.) 3,073⁷; official development assistance (2007) 834⁷. Disbursements for (U.S.\$'000,000): tourism (2007) 1,042¹; remittances (2008) 254¹; FDI (2005–07 avg.) 361⁷.

Land use as % of total land area (2007)⁴: in temporary crops 35.1%, in permanent crops 3.4%, in pasture 16.5%, forest area 23.6%.

Foreign trade^{1, 10}

Balance of trade (current prices)

	2004	2005	2006	2007	2008
U.S.\$'000,000	–7,230	–5,980	–6,744	–9,729	–12,027
% of total	50.6%	40.0%	34.4%	35.5%	35.4%

Imports (2007): U.S.\$18,554,000,000 (machinery and apparatus 20.3%; mineral fuels 17.2%; chemicals and chemical products 14.0%; base metals 9.0%; road vehicles 8.2%). **Major import sources**: Russia 14.2%; Germany 11.8%; Italy 9.7%; China 7.4%; Hungary 3.9%.

Exports (2007): U.S.\$8,825,000,000 (food 15.4%, of which fruits and vegetables 5.3%; iron and steel 12.4%; machinery and apparatus 11.3%; nonferrous metals 7.9%). **Major export destinations**: Italy 12.4%; Bosnia and Herzegovina 11.8%; Montenegro 10.8%; Germany 10.6%; Russia 5.1%.

Transport and communications¹

Transport. Railroads (2006): route length (2005¹¹) 3,809 km; passenger-km 684,000,000; metric ton-km cargo 4,232,000,000. Roads (2007): total length 24,348 mi, 39,184 km (paved [2006] 62%). Vehicles (2007): passenger cars 1,491,216; trucks and buses 164,566. Air transport (2008)¹²: passenger-km 1,434,000,000; metric ton-km cargo 3,492,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2007	...	...	PCs	2007	1,801	244
Telephones				Dailies	2007	1,200 ¹³	163 ¹³
Cellular	2008	9,619 ¹⁴	1,309 ¹⁴	Internet users	2008	2,361	321
Landline	2008	3,085	420	Broadband	2008	451 ¹⁴	61 ¹⁴

Education and health

Educational attainment (2002)¹. Percentage of population age 15 and over having: no formal education/unknown 7.8%; incomplete primary education 16.2%; complete primary 23.9%; secondary 41.1%; higher 11.0%.

Education (2006–07)^{1, 15}

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–10)	22,455	297,429	13.2	95
Secondary/Voc. (age 11–18)	51,914	615,522	11.9	99
Tertiary	...	...	...	... (age 19–23)

Health (2007): physicians 20,066^{1, 16} (1 per 368 persons); hospital beds 41,100^{1, 16} (1 per 180 persons); infant mortality rate (2008) 6.7¹; undernourished population (2002–04) 900,000^{4, 15} (9% of total population based on the consumption of a minimum daily requirement of 2,000 calories).

Military¹

Total active duty personnel (November 2008): 24,257 (army 46.1%, air force/air defense 17.1%, training/ministry of defense 36.8%). **Military expenditure as percentage of GDP** (2008) 2.1%; per capita expenditure U.S.\$128.

¹Excludes Kosovo (2000 pop. estimate, 1,805,000), a disputed transitional republic that declared its independence from Serbia on Feb. 17, 2008. ²Comprises 17 municipalities. ³Excludes the area of Kosovo, which is 10,887 sq km (4,203 sq mi). ⁴Includes Kosovo. ⁵Metal content. ⁶In constant prices of 2002. ⁷Inclusion/exclusion of Kosovo unknown. ⁸Taxes less subsidies and less imputed bank service charges. ⁹Includes 585,500 unemployed. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹January 1. ¹²Jat Airways only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Includes Montenegro. ¹⁶Public health only.

Internet resources for further information:

- National Bank of Serbia <http://www.nbs.yu/internet/english>
- Statistical Office of the Republic of Serbia <http://webzrzs.statserb.sr.gov.yu/axd/en/index.php>

Seychelles

Official name: Repiblik Sesel (Creole); République des Seychelles (French); Republic of Seychelles (English).

Form of government: multiparty republic with one legislative house (National Assembly [34]).

Head of state and government: President.

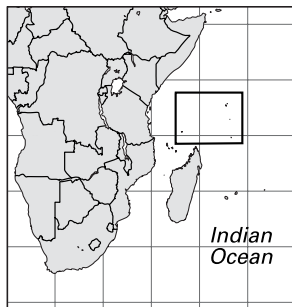
Capital: Victoria.

Official languages: none¹.

Official religion: none.

Monetary unit: Seychelles rupee (roupi; SR); valuation (Sept. 1, 2009)

1 U.S.\$ = SR 12.77; 1 £ = SR 20.72.



Area and population

Island Groups/ Islands ²	area		population	
	sq km		2002 census	
Inner (granitic) Islands	243.4		81,007	
La Digue	9.8		2,104	
Fregate	2.0		208	
Mahe	154.2		69,065	
Les Mamelles	4.2		2,391	
Praslin	37.9		7,103	
Silhouette	19.9		136	
remainder	15.4		—	
Inner (coralline) Islands	2.1		115	
Outer (coralline) Islands	206.2		633	
Aldabra Group	152.6		—	
Amirantes Group	6.6		115	
Coetivy	8.9		252	
Farquhar Group	11.3		169	
remainder	26.8		97	
TOTAL	451.7		81,755	

Demography

Population (2009): 87,800.

Density (2009): persons per sq mi 503.4, persons per sq km 194.4.

Urban-rural (2008): urban 53.8%; rural 46.2%.

Sex distribution (2008): male 51.75%; female 48.25%.

Age breakdown (2008): under 15, 22.7%; 15–29, 26.0%; 30–44, 24.5%; 45–59, 16.2%; 60–74, 7.3%; 75 and over, 3.3%.

Population projection: (2020) 97,000; (2030) 102,000.

Doubling time: 69 years.

Ethnic composition (2000): Seychellois Creole (mixture of Asian, African, and European) 93.2%; British 3.0%; French 1.8%; Chinese 0.5%; Indian 0.3%; other unspecified 1.2%.

Religious affiliation (2002): Roman Catholic 82.3%; Anglican 6.4%; other Christian 4.5%; Hindu 2.1%; Muslim 1.1%; other 2.1%; unknown 1.5%.

Major towns: Victoria (2006) 22,600; Anse Royale (2004) 3,800.

Vital statistics

Birth rate per 1,000 population (2007): 17.6 (world avg. 20.3); within marriage 20.8%; outside of marriage 79.2%.

Death rate per 1,000 population (2007): 7.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 10.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.24.

Marriage/divorce rates per 1,000 population (2007): 4.8³/1.6.

Life expectancy at birth (2007): male 68.9 years; female 77.7 years.

Major causes of death per 100,000 population (2006): diseases of the circulatory system 279.0; malignant neoplasms (cancers) 121.7; diseases of the respiratory system 88.7; diseases of the digestive system 37.8.

National economy

Budget (2007). Revenue: SR 2,487,300,000 (tax revenue 64.7%, of which taxes on goods and services 37.2%, taxes on international trade 13.0%; social contributions 18.1%; grants 0.7%; other 16.5%). Expenditures: SR 2,854,900,000 (social protection 21.5%; public debt interest charges 14.5%; education 9.9%; health 7.0%; public order 4.8%; defense 3.9%).

Public debt (2008): U.S.\$254,000,000.

Gross national income (GNI; 2008): U.S.\$889,000,000 (U.S.\$10,290 per capita); purchasing power parity GNI (U.S.\$19,770 per capita).

Structure of gross domestic product and labour force

	2007		2006	
	in value SR '000,000	% of total value	labour force ⁴	% of labour force ⁴
Agriculture, fishing	138	2.3	1,189	3.0
Mining, quarrying	—	—	15	—
Manufacturing	609	10.0	4,465	11.3
Construction	424	6.9	3,702	9.4
Public utilities	126	2.1	1,089	2.7
Trade, hotels	1,180	19.3	7,978	20.2
Transportation and communications	1,174	19.2	3,366	8.5
Pub. admin., defense	940	15.4	6,710	17.0
Finance, real estate	1,325	21.7	2,370	6.0
Services	76	1.2	8,677	21.9
Other	120 ⁵	2.0 ⁵	—	—
TOTAL	6,113 ⁶	100.0 ⁶	39,561	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 3,200, eggs 2,200, bananas 2,000, assorted vegetables 1,750, cinnamon 315, tea 190; livestock (number of live animals) 18,700 pigs, 5,200 goats, 575,000 chickens; roundwood negligible; fisheries production 66,239 (from aquaculture 6%). Mining and quarrying (2007): granite 149,000. Manufacturing (2006): canned tuna 40,222; fish meal 14,821; copra 253; soft drinks 92,250 hectolitres; beer and stout 67,300 hectolitres; mineral water

60,270 hectolitres; fruit juices 30,950 hectolitres; cigarettes 19,000,000 units. Energy production (consumption): electricity (kW-hr; 2006) 251,000,000 (227,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (243,000); natural gas, none (none).

Population economically active (2002): total 43,859; activity rate of total population 53.6% (participation rates: ages 15–64, 80.1%; female [1997] 47.6%; unemployed [2006] 2.6%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.4	95.4	99.1	100.0	99.6	104.9	143.8
Monthly earnings index	90.8	94.4	97.1	100.0	101.1	...	...

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 278; remittances (2008) 12; foreign direct investment (FDI; 2005–07 avg.) 160; official development assistance (2007) 3. Disbursements for (U.S.\$'000,000): tourism (2007) 40; remittances (2008) 21; FDI (2005–07 avg.) 8.

Household income and expenditure (2006–07). Average household size 3.7; average annual income per household SR 77,064 (U.S.\$11,174); sources of income: wages and salaries 76%, pension and social security 14%, self-employment 7%, remittances 1%; expenditure⁷: housing and energy 30.8%, food and nonalcoholic beverages 21.2%, transportation and communications 13.1%, alcoholic beverages 10.3%, household furnishings 4.5%, recreation 3.4%.

Land use as % of total land area (2007): in temporary crops 2.2%, in permanent crops 10.9%, in pasture, n.a., forest area 86.9%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
SR '000,000	−747	−1,132	−1,844	−2,050	−3,293	−5,114
% of total	20.1%	26.1%	33.0%	32.8%	40.3%	37.4%

Imports (2007): SR 5,728,000,000 (mineral fuels 25.1%; machinery and apparatus 22.4%; food 19.5%, of which marine products 11.9%; transportation equipment 4.1%; iron and steel 3.4%). **Major import sources:** Saudi Arabia 24.8%; Germany 9.5%; Singapore 8.5%; France 7.8%; Spain 6.6%.

Exports (2007): SR 2,435,000,000 (domestic exports 55.3%, of which canned tuna 50.6%, fish meal 1.2%, medicine and medical appliances 1.2%; reexports 44.7%, of which petroleum products to ships and aircraft 43.1%). **Major export destinations⁹:** United Kingdom 40.1%; France 34.7%; Italy 10.0%; Germany 3.2%; unspecified 9.0%.

Transport and communications

Transport. Railroads: none. Roads (2006): total length 312 mi, 502 km (paved 96%). Vehicles (2006): passenger cars 7,070; trucks and buses 2,796. Air transport (2006–07)¹⁰: passenger-km 1,593,000,000; metric ton-km cargo 31,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	22	266	PCs	2005	16	193
Telephones				Dailies	2007	31 ¹	49 ¹¹
Cellular	2008	94 ¹²	1,115 ¹²	Internet users	2008	68	382
Landline	2008	22	266	Broadband	2008	3.4 ¹²	41 ¹²

Education and health

Educational attainment (2003). Percentage of population age 12 and over having: less than primary or primary education 23.2%; secondary 73.4%; higher 3.4%. **Literacy** (2006): total population age 15 and over literate 91.8%; males literate 91.4%; females literate 92.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	711	8,864	12.5	99 ¹³
Secondary/Voc. (age 12–16)	588	7,816	13.3	94
Tertiary	—	—	—	... (age 17–21)

Health (2007): physicians 91 (1 per 934 persons); hospital beds 401 (1 per 212 persons); infant mortality rate per 1,000 live births 10.7; undernourished population (2002–04) 7,000 (9% of total population based on the consumption of a minimum daily requirement of 1,810 calories).

Military

Total active duty personnel (November 2008): 200 (army 100%)¹⁴. **Military expenditure as percentage of GDP** (2007): 1.9%; per capita expenditure U.S.\$129.

¹Creole, English, and French are all national languages per constitution. ²The Seychelles are administratively divided into 26 districts and geographically split among 47 Inner (granitic) Islands, 2 Inner (coralline) Islands, and 70 Outer (coralline) Islands. ³Residents only; marriage rate including visitors is 12.7. ⁴Formally employed only. ⁵Import duties less imputed bank service charges. ⁶Detail does not add to total given because of rounding. ⁷Weights of consumer price index components. ⁸Imports c.i.f.; exports f.o.b. ⁹Domestic exports only. ¹⁰Air Seychelles only. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2003–04. ¹⁴Excludes the 450-member paramilitary, which includes both the coast guard and national guard.

Internet resources for further information:

- **Seychelles in Figures** <http://www.nsb.gov.sc>
- **Central Bank of Seychelles** <http://www.cbs.sc>

Sierra Leone

Official name: Republic of Sierra Leone.

Form of government: republic with one legislative body (Parliament [124¹]).

Head of state and government: President.

Capital: Freetown.

Official language: English.

Official religion: none.

Monetary unit: leone (Le); valuation (Sept. 1, 2009) 1 U.S.\$ = Le 3,553; 1 £ = Le 5,765.



Area and population

		area	population			area	population
		sq km	2004 census			sq km	2004 census
Provinces/Area				Provinces/Area			
Local Councils				Local Councils			
Eastern Province		15,553	1,191,539	Tonkolili (district)		7,003	347,197
Kailahun (district)		3,859	358,190	Southern Province		19,694	1,092,657
Kenema (district)		6,053	369,546	Bo (district)		5,219	313,711
Kenema (town)			128,402	Bo (town)			149,957
Koidu (town)		5,641	80,025	Bonthe (district)		3,458	129,947
Kono (district)			255,376	Bonthe (town)		10	9,740
Northern Province		35,936	1,745,553	Moyamba (district)		6,902	260,910
Bombali (district)		7,985	325,550	Pujehun (district)		4,105	228,392
Kambia (district)		3,108	270,462	Western Area		557	947,122
Koinadugu (district)		12,121	265,758	Freetown (rural area)		544	174,249
Makeni (town)			82,840	Freetown (city)		13	772,873
Port Loko (district)		5,719	453,746	TOTAL		71,740	4,976,871

Demography

Population (2009): 5,696,000.

Density (2009): persons per sq mi 205.6, persons per sq km 79.4.

Urban-rural (2008): urban 37.7%; rural 62.3%.

Sex distribution (2005): male 49.23%; female 50.77%.

Age breakdown (2005): under 15, 42.8%; 15–29, 26.1%; 30–44, 16.0%; 45–59, 9.6%; 60–74, 4.7%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 7,318,000; (2030) 8,943,000.

Doubling time: 29 years.

Ethnic composition (2000): Mende 26.0%; Temne 24.6%; Limba 7.1%; Kuranko 5.5%; Kono 4.2%; Fulani 3.8%; Bullom-Sherbro 3.5%; other 25.3%.

Religious affiliation (2005): Muslim c. 65%²; Christian c. 25%²; traditional beliefs/other c. 10%.

Major city/towns (2006): Freetown 818,700; Bo 181,800; Kenema 148,800; Makeni 90,400; Koidu 87,300.

Vital statistics

Birth rate per 1,000 population (2008): 45.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 21.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 24.0 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2005): n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2005): 6.49.

Life expectancy at birth (2005): male 40.1 years; female 43.5 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases 1,343.0, of which diarrheal diseases 270.8, malaria 198.7, HIV/AIDS 116.5; accidents, injuries, and violence 215.2; diseases of the circulatory system 180.5; malignant neoplasms (cancers) 75.6.

National economy

Budget (2007). Revenue: Le 1,179,000,000,000 (grants 42.7%; import duties 21.8%; corporate income taxes 7.7%; personal income taxes 7.1%; excise duties on petroleum products 6.6%). Expenditures: Le 1,222,000,000,000 (current expenditures 63.4%; capital expenditures 36.6%).

Gross national income (GNI; 2008): U.S.\$1,785,000,000 (U.S.\$320 per capita); purchasing power parity GNI (U.S.\$750 per capita).

Structure of gross domestic product and labour force				
	2008		2004	
	in value Le '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	3,734,856	53.9	1,040,000 ³	58.2 ³
Mining	289,016	4.2	246,700 ⁴	13.8 ⁴
Manufacturing, handicrafts	127,825	1.8		
Construction	105,528	1.5		
Public utilities	25,091	0.4		
Transp. and commun.	395,828	5.7		
Trade, hotels	607,925	8.8		
Finance, real estate	897,558	13.0		
Pub. admin., defense	256,127	3.7		
Services	35,338	0.5	499,000	28.0
Other	454,208 ⁵	6.6 ⁵		
TOTAL	6,929,301 ⁶	100.0 ⁶			1,785,700	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 650,000, cassava 370,000, vegetables 220,000, oil palm fruit 195,000, peanuts (groundnuts) 90,000, citrus fruit 85,000, coffee 18,000, cacao beans 12,000, chicken meat 11,250; livestock (number of live animals) 300,000 cattle, 7,500,000 chickens; roundwood 5,600,600 cu m, of which fuelwood 98%; fisheries production 144,535 (from aquaculture, negligible). Mining and quarrying (2008): bauxite 954,370; rutile 78,910; ilmenite 17,260; diamonds 371,290 carats; gold (2007) 212 kg. Manufacturing (2006): soap 467,360; cement 234,440; paint 142,730 gallons; soft drinks 2,088,750 crates; beer and stout

832,100 cartons. Energy production (consumption): electricity (kW-hr; 2006) 99,000,000 (99,000,000); coal, none (none); crude petroleum (barrels; 2006) none (1,980,000); petroleum products (metric tons; 2006) 166,000 (200,000); natural gas, none (none).

Household income and expenditure (2003–04). Average household size (2004) 6.0; average annual income per household Le 4,369,000⁷ (U.S.\$1,731); sources of income, n.a.; expenditure: food and nonalcoholic beverages 40.6%, housing and energy 14.5%, health 13.6%, clothing and footwear 7.7%, transportation 4.8%, household furnishings 4.3%.

Public debt (external, outstanding; 2007): U.S.\$308,000,000.

Population economically active (2003–04): total 2,005,900; activity rate of total population 40.0% (participation rates: ages 15–64, 68.2%; female 53.6%; unemployed [2007] unofficially 65%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	72.6	78.1	89.3	100.0	109.6	122.4	143.6

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 22; remittances (2008) 150; foreign direct investment (2005–07 avg.) 74; official development assistance (2007) 535. Disbursements for (U.S.\$'000,000): tourism (2007) 14; remittances (2008) 136.

Land use as % of total land area (2007): in temporary crops 12.6%, in permanent crops 1.1%, in pasture 30.7%, forest area 37.9%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
Le '000,000	–490,166	–400,959	–538,275	–513,189	–599,782	–948,541
% of total	53.0%	34.9%	37.0%	28.6%	29.0%	42.5%

Imports (2007): Le 1,333,189,000,000 (mineral fuels 37.7%; machinery and transport equipment 16.8%; food products 15.2%, of which rice 5.4%; manufactured goods 11.6%). **Major import sources** (2005): Germany c. 19%; Côte d'Ivoire c. 11%; U.K. c. 8%; U.S. c. 7%; China c. 6%; Netherlands c. 5%.

Exports (2007): Le 733,407,000,000 (diamonds 57.8%; rutile 15.5%; bauxite 13.3%; cacao 4.6%; gold 1.2%). **Major export destinations** (2007): Belgium 49.5%; U.S. 20.6%; Netherlands 4.6%; Canada 4.0%.

Transport and communications

Transport. Railroads (2002)⁹: length 52 mi, 84 km. Roads (2002): total length 7,020 mi, 11,300 km (paved 8%). Vehicles (2007): passenger cars 16,396; trucks and buses 14,444. Air transport (2004): passenger-km 85,000,000; metric ton-km cargo 8,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	63	13	PCs	1999	0.1	...
Telephones				Dailies	2007	22 ¹⁰	6.5 ¹⁰
Cellular	2008	1,009 ¹¹	181 ¹¹	Internet users	2008	14	2.5
Landline	2008	32	5.7	Broadband	2008	...	...

Education and health

Educational attainment (2004): percentage of total population having: no formal schooling 62.2%; incomplete/complete primary 24.6%; lower secondary 6.4%; upper secondary 4.2%; vocational 2.0%; incomplete/complete higher 0.6%. **Literacy** (2007): total population age 15 and over literate 38.1%; males 50.0%; females 26.8%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	30,239	1,322,205	43.7	...
Secondary/Voc. (age 12–17)	10,024	239,579	23.9	23
Tertiary ¹²	1,198	9,041	7.5	2 (age 18–22)

Health: physicians (2004) 168 (1 per 32,083 persons); hospital beds (2001) 2,770 (1 per 1,698 persons); infant mortality rate per 1,000 live births (2005) 163.0; undernourished population (2003–05) 2,500,000 (47% of total population based on the consumption of a minimum daily requirement of 1,750 calories).

Military

Total active duty personnel (November 2008): c. 10,500 (army c. 98%, navy c. 2%, air force, none). **Military expenditure as percentage of GDP** (2007): 1.7%; per capita expenditure U.S.\$5.

¹Includes 12 paramount chiefs elected to represent each of the provincial districts. ²Often mixed with traditional beliefs. ³Represents crop farming. ⁴Represents trade and repairs. ⁵Indirect taxes less imputed bank service charges. ⁶Detail does not add to total given because of rounding. ⁷Includes estimated value for income in kind. ⁸Imports c.i.f., exports f.o.b. ⁹Marampa Mineral Railway; there are no passenger railways. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2001–02.

Internet resources for further information:

- **Statistics Sierra Leone**
<http://www.statistics.sl>
- **Bank of Sierra Leone**
<http://www.bankofsierraleone-centralbank.org>

Singapore

Official name: Xinjiapo Gongheguo (Mandarin Chinese); Republik Singapura (Malay); Cingkapur Kudiyarasu (Tamil); Republic of Singapore (English).

Form of government: unitary multiparty republic with one legislative house (Parliament [941]).

Chief of state: President^{2, 3}.

Head of state government: Prime Minister.

Capital: Singapore.

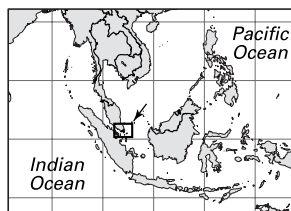
Official languages: Mandarin Chinese; Malay; Tamil; English.

Official religion: none.

Monetary unit: Singapore dollar (S\$);

valuation (Sept. 1, 2009)

1 U.S.\$ = S\$1.44; 1 £ = S\$2.34.



Population (2009 estimate)^{4, 5}

De facto population	4,987,600 ⁶
De jure population	3,733,900 ⁷

Demography

Area: 274.2 sq mi, 710.2 sq km.

Population (2009): 4,954,000.

Density (2009): persons per sq mi 18,067, persons per sq km 6,975.

Urban-rural: urban 100%.

Sex distribution (2009)⁸: male 49.41%; female 50.59%.

Age breakdown (2009)⁸: under 15, 17.9%; 15–29, 20.9%; 30–44, 24.8%; 45–59, 23.0%; 60–74, 10.0%; 75–84, 2.6%; 85 and over, 0.8%.

Population projection: (2020) 5,473,000; (2030) 5,726,000.

Ethnic composition (2009)⁸: Chinese 74.2%; Malay 13.4%; Indian 9.2%; other 3.2%.

Religious affiliation (2000)⁸: Buddhist/Taoist/Chinese folk-religionist 51.0%; Muslim 14.9%; Christian 14.6%; Hindu 4.0%; traditional beliefs 0.6%; non-religious 14.9%.

Vital statistics

Birth rate per 1,000 population (2008)⁸: 10.2 (world avg. 20.3).

Death rate per 1,000 population (2008)⁸: 4.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2008)⁸: 5.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008)⁸: 1.28.

Marriage/divorce rates per 1,000 population (2008)⁸: 6.5/2.0.

Life expectancy at birth (2008)⁸: male 78.4 years; female 83.2 years.

Major causes of death per 100,000 population (2008)⁸: diseases of the circulatory system 120.7, of which ischemic heart diseases 86.8; malignant neoplasms (cancers) 104.1; diseases of the respiratory system 61.8, of which pneumonia 49.3.

National economy

Budget (2008). Revenue: S\$41,376,700,000 (income tax 44.9%; goods and services tax 16.0%; fees and charges 9.0%; assets taxes 7.0%; customs and excise duties 5.0%). Expenditures: S\$37,470,200,000 (security and external relations 36.3%; education 19.5%; health 6.1%; community development 3.1%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): hen eggs 21,300, vegetables (2008) 18,967, orchids (15% of the world market) and other ornamental plants are cultivated for export; livestock (number of live animals) 260,000 pigs, 2,700,000 chickens; roundwood, negligible; fisheries production⁹ 8,025 (from aquaculture 56%). Quarrying: limestone, n.a. Manufacturing (value added in S\$'000,000; 2008): pharmaceuticals 9,443; professional and scientific equipment 7,898; semiconductors 7,894; ships, oil platforms, and related products 4,457; computer-related electronics 3,973; aircraft and spacecraft 2,776; refined petroleum and petrochemicals 2,639; chemicals and chemical products 2,243; printing 1,399; food and food products, beverages, and tobacco products 1,361. Energy production (consumption): electricity (kW-hr; 2008–09) 40,964,000,000 ([2008] 37,940,300,000); crude petroleum (barrels; 2008) 3,121,845 (327,040,000); petroleum products (metric tons; 2006) 36,501,000 (7,781,000); natural gas (cu m; 2008) none (8,270,000,000).

Gross national income (GNI; 2008): U.S.\$168,227,000,000 (U.S.\$34,760 per capita); purchasing power parity GNI (U.S.\$47,940 per capita).

Structure of gross domestic product and labour force

	2008			
	in value S\$'000,000	% of total value	labour force ⁸	% of labour force ⁸
Agriculture, quarrying	177.9	0.1	22,800 ¹⁰	1.2 ¹⁰
Manufacturing	50,275.2	19.5	311,900	16.2
Construction	13,255.8	5.2	105,500	5.5
Public utilities	3,729.2	1.5	...	...
Transp. and commun. ¹¹	32,930.2	12.8	269,400	14.0
Trade, hotels	49,781.2	19.3	389,500	20.2
Finance, real estate	83,458.3 ¹²	32.4 ¹²	361,100	18.7
Pub. admin., defense, services	25,278.4	9.8	391,900	20.3
Other	-1,467.7 ¹³	-0.6 ¹³	76,200 ¹⁴	3.9 ¹⁴
TOTAL	257,418.5	100.0	1,928,300	100.0

Household income and expenditure (2008). Average household size 3.5; average annual income per household S\$85,080 (U.S.\$62,455); sources of income (2003): wages and salaries 82.5%, self-employment 12.3%, other 5.2%;

expenditure (2004)¹⁵: food, beverages, and tobacco 25.6%, transportation and communications 21.8%, housing and energy 18.1%, education 8.2%, health 5.3%, clothing and footwear 3.6%.

Population economically active (2008): total 1,928,300⁸; activity rate of total population 52.9%⁸ (participation rates: ages 15–64, 71.7%⁸; female 43.3%⁸; unemployed [October 2008–September 2009] 3.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.5	97.9	99.6	100.0	101.0	103.1	109.9
Monthly earnings index	91.7	93.3	96.7	100.0	103.2	109.5	115.5

Public debt (2006): U.S.\$122,000,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 8,680; remittances, n.a.; foreign direct investment (FDI; 2005–07 avg.) 20,937. Disbursements for (U.S.\$'000,000): tourism (2007) 11,844; remittances, n.a.; FDI (2005–07 avg.) 10,495.

Land use as % of total land area (2007): in temporary crops 0.9%, in permanent crops 0.3%, in pasture, n.a., forest area 3.3%.

Foreign trade¹⁶

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
S\$'000,000	+41,262	+42,277	+49,341	+52,635	+54,648	+25,870
% of total	8.0%	6.7%	6.9%	6.5%	6.5%	2.8%

Imports (2008): S\$450,892,600,000 (crude and refined petroleum 27.4%; non-electrical machinery and equipment 16.1%; integrated circuits 13.4%; other electronics 10.2%; chemicals and chemical products 5.3%; base metals 4.2%). **Major import sources:** Malaysia 11.9%; U.S. 11.7%; China 10.6%; Japan 8.1%; South Korea 5.6%; Indonesia 5.5%.

Exports (2008): S\$476,762,100,000 (crude and refined petroleum 24.1%; integrated circuits 16.8%; nonelectrical machinery and equipment 14.3%; other electronics 13.2%; chemicals and chemical products 10.2%). **Major export destinations:** Malaysia 12.1%; Indonesia 10.6%; Hong Kong 10.4%; China 9.2%; U.S. 7.0%; Japan 4.9%.

Transport and communications

Transport. Railroads (2006): length 39 km¹⁷. Roads (2009¹⁸)¹⁹: total length 3,325 km (paved 100%). Vehicles (2009⁴): passenger cars 566,520; trucks and buses 173,178. Air transport (2008–09): passenger-km 92,249,000,000; metric ton-km cargo 6,845,262,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2008	583 ²⁰	120 ²⁰	PCs	2007	3,409	743
Telephones				Dailies	2008	1,754 ²¹	362 ²¹
Cellular	2008	6,376 ²⁰	1,382 ²⁰	Internet users	2008	3,370	730
Landline	2008	1,857	402	Broadband	2008	1,003 ²⁰	217 ²⁰

Education and health

Educational attainment (2005)⁸. Percentage of population age 15 and over²² having: no schooling 16.4%; primary education 22.0%; lower secondary 21.3%; upper secondary 15.1%; technical 8.2%; university 17.0%. **Literacy** (2008)⁸: 96.0%.

Education (2008)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	12,723	272,097	21.4	...
Secondary/Voc. (age 12–15)	21,266	357,958	16.8	...
Tertiary	4,494	74,062	16.5	... (age 16–20)

Health (2008): physicians 7,841 (1 per 617 persons); hospital beds 11,457 (1 per 422 persons); infant mortality rate per 1,000 live births⁸ 2.1; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 72,500 (army 69.0%, navy 12.4%, air force 18.6%); reserve 312,500. **Military expenditure as percentage of GDP** (2008): 4.1%; per capita expenditure U.S.\$1,517.

¹Includes 10 nonelective seats. ²Title per constitution is Head of State. ³Has executive authority per chapter 2, article 23, of constitution. ⁴July 1. ⁵Singapore does not have a local government structure. Five community development councils established in 2001 manage a variety of social services. ⁶The de facto population figure (as of the 2009 estimate) includes citizens (3,200,700), noncitizens with permanent residency status (533,200), and temporary residents (1,253,700). ⁷The de jure population figure excludes temporary residents. ⁸Based on de jure population. ⁹Aquarium fish farming is also an important economic pursuit; Singapore produces roughly 30% of the world's ornamental fish. ¹⁰Includes not adequately defined. ¹¹Includes information services. ¹²Includes ownership of dwellings. ¹³Taxes less imputed bank service charges. ¹⁴Unemployed. ¹⁵Weights of consumer price index components. ¹⁶Imports c.i.f., exports f.o.b. ¹⁷Length of Singapore portion of Singapore-to-Kuala Lumpur, Malaysia, railway. ¹⁸January 1. ¹⁹Public roads only. ²⁰Subscribers. ²¹Circulation of daily newspapers. ²²Nonstudent population only.

Internet resources for further information:

- **Statistics Singapore** <http://www.singstat.gov.sg>
- **Ministry of Trade and Industry** <http://app.mti.gov.sg>

Slovakia

Official name: Slovenská Republika (Slovak Republic).

Form of government: unitary multiparty republic with one legislative house (National Council [150]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Bratislava.

Official language: Slovak.

Official religion: none.

Monetary unit: euro (€)¹; valuation (Sept. 1, 2009) 1 U.S.\$ = €0.70; 1 £ = €1.13.



Area and population

Regions	Capitals	area		population
		sq mi	sq km	2008 ² estimate
Banská Bystrica	Banská Bystrica	3,651	9,455	654,668
Bratislava	Bratislava	793	2,053	610,850
Košice	Košice	2,607	6,752	774,103
Nitra	Nitra	2,449	6,343	706,758
Prešov	Prešov	3,464	8,973	801,939
Trenčín	Trenčín	1,738	4,502	599,831
Trnava	Trnava	1,601	4,147	557,151
Žilina	Žilina	2,629	6,809	695,698
TOTAL		18,932	49,034	5,400,998

Demography

Population (2009): 5,418,000.

Density (2009): persons per sq mi 286.2, persons per sq km 110.5.

Urban-rural (2006): urban 55.4%; rural 44.6%.

Sex distribution (2008): male 48.52%; female 51.48%.

Age breakdown (2008): under 15, 16.3%; 15–29, 24.0%; 30–44, 22.2%; 45–59, 21.1%; 60–74, 11.4%; 75–84, 4.0%; 85 and over, 1.0%.

Population projection: (2020) 5,453,000; (2030) 5,360,000.

Ethnic composition (2001): Slovak 85.8%; Hungarian 9.7%; Rom (Gypsy) 1.7%; Czech 0.8%; Ruthenian and Ukrainian 0.7%; other 1.3%.

Religious affiliation (2001): Roman Catholic 68.9%; Protestant 9.2%, of which Lutheran 6.9%, Reformed Christian 2.0%; Greek Catholic 4.1%; Eastern Orthodox 0.9%; nonreligious 13.0%; other/unknown 3.9%.

Major cities (2008): Bratislava 426,927; Košice 234,237; Prešov 91,498; Žilina 85,370; Nitra 84,444; Banská Bystrica 80,466.

Vital statistics

Birth rate per 1,000 population (2008): 10.6 (world avg. 20.3); within marriage 69.9%; outside of marriage 30.1%.

Death rate per 1,000 population (2008): 9.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 0.8 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.33.

Marriage/divorce rates per 1,000 population (2008): 5.2/2.3.

Life expectancy at birth (2008): male 70.9 years; female 78.7 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 540.7; malignant neoplasms (cancers) 220.4; accidents and violence 58.1; diseases of the respiratory system 57.8.

National economy

Budget (2007)³. Revenue: Sk 546,660,000,000 (tax revenue 47.9%, of which taxes on goods and services 35.6%; social security contributions 39.8%; nontax revenue 10.9%; grants 1.4%). Expenditures: Sk 580,610,000,000 (social protection 33.0%; health 20.0%; general administration 18.9%; economic affairs 11.8%; police 5.9%; defense 4.5%; education 3.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 1,440,637, cow's milk 1,000,000, sugar beets 855,343, barley 695,042, corn (maize) 675,226, potatoes 381,650, rapeseed 336,368, sunflower seeds 135,376, pig meat 130,000, grapes 50,700; livestock (number of live animals) 1,104,830 pigs, 507,820 cattle; roundwood 8,875,000 cu m, of which fuelwood 5%; fisheries production 4,071 (from aquaculture 29%). Mining and quarrying (2007): magnesite 457,763; kaolin 30,000; barite 13,000. Manufacturing (value added in U.S.\$'000,000; 2006): fabricated metal products 1,200; nonelectrical machinery and apparatus 1,165; motor vehicles/parts 1,000; electrical/electronic machinery and apparatus 850; food and beverages 805; base metals (mostly iron and steel and to a lesser extent aluminum) 795. Energy production (consumption): electricity (kW-hr; 2008) 28,908,000,000 ([2006] 29,087,000,000); hard coal (metric tons; 2006) none (5,148,000); lignite (metric tons; 2008) 2,412,000 ([2006] 3,168,000); crude petroleum (barrels; 2007) 170,000 ([2006] 41,400,000); petroleum products (metric tons; 2006) 5,330,000 (2,953,000); natural gas (cu m; 2007) 142,000,000 ([2006] 6,411,000,000).

Population economically active (2008): total 2,691,200; activity rate of total population 49.8% (participation rates: ages 15–64, 68.9%; female 44.7%; unemployed [July 2008–June 2009] 9.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	83.5	90.5	97.3	100.0	104.5	107.4	112.3
Annual earnings index	78.2	83.2	91.6	100.0	108.6	116.6	126.1

Household income and expenditure. Average household size (2003) 2.9; average annual gross income per household (2003) Sk 288,388 (U.S.\$7,842); sources of income (2003): wages and salaries 73.9%, transfers 19.6%, self-employment 4.7%; expenditure (2006): housing and energy 26.3%, food and

nonalcoholic beverages 17.9%, transportation 8.7%, recreation and culture 8.6%, hotels and restaurants 7.8%.

Public debt (external, outstanding; December 2008): U.S.\$10,313,000,000.

Gross national income (GNI; 2008): U.S.\$78,607,000,000 (U.S.\$14,540 per capita); purchasing power parity GNI (U.S.\$21,300 per capita).

Structure of gross domestic product and labour force

	2007		2006	
	in value Sk '000,000	% of total value	labour force ⁴	% of labour force ⁴
Agriculture	62,859	3.1	100,800	3.8
Mining	11,305	0.5		
Manufacturing	405,749	20.0	666,400	25.1
Public utilities	100,618	5.0		
Construction	159,792	7.9	226,100	8.5
Transp. and commun.	143,971	7.1	156,200	5.9
Trade, restaurants	336,988	16.6	392,400	14.8
Finance, real estate	325,925	16.1	183,400	6.9
Pub. admin., defense			161,800	6.1
Services	291,805	14.4	406,600	15.3
Other	189,403 ⁵	9.3 ⁵	361,100 ⁶	13.6 ⁶
TOTAL	2,028,415	100.0	2,654,800	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,026; remittances (2008) 1,500; foreign direct investment (FDI; 2005–07 avg.) 3,179. Disbursements for (U.S.\$'000,000): tourism (2007) 1,533; remittances (2008) 73; FDI (2005–07 avg.) 303.

Land use as % of total land area (2007): in temporary crops 28.6%, in permanent crops 0.5%, in pasture 11.0%, forest area 40.2%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–684	–1,593	–2,374	–2,664	+48	+515
% of total	1.5%	2.8%	3.6%	3.1%	0.0%	0.4%

Imports (2007): U.S.\$57,754,000,000 (machinery and apparatus 29.6%, of which telecommunications equipment/parts 9.6%; road vehicles/parts 13.8%; mineral fuels 11.0%; base and fabricated metals 10.3%; chemicals and chemical products 8.7%). **Major import sources:** Germany 19.9%; Czech Republic 11.5%; Russia 9.4%; Hungary 5.4%; China 5.2%.

Exports (2008): U.S.\$57,802,000,000 (machinery and apparatus 28.7%, of which colour television receivers 10.3%; road vehicles/parts 24.3%, of which passenger cars 17.9%; base and fabricated metals 12.9%, of which iron and steel 7.5%; refined petroleum 4.5%). **Major export destinations:** Germany 21.5%; Czech Republic 12.4%; France 6.8%; Italy 6.4%; Poland 6.2%.

Transport and communications

Transport. Railroads (2006): length 3,658 km; passenger-km 2,213,000,000; metric ton-km cargo 9,988,000,000. Roads (2006): total length 27,197 mi, 43,770 km (paved 87%). Vehicles (2007): passenger cars 1,468,616; trucks and buses 255,089. Air transport (2008)⁷: passenger-km 3,733,000,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2,285	425	PCs	2007	2,774	514
Telephones				Dailies	2007	505 ⁸	94 ⁸
Cellular	2008	5,520 ⁹	1,021 ⁹	Internet users	2008	2,771	513
Landline	2008	1,098	203	Broadband	2008	619 ⁹	114 ⁹

Education and health

Educational attainment (2007). Percentage of population age 25–64 having: primary education 1%; lower secondary 12%; upper secondary 73%; higher vocational 1%; university 13%. **Literacy** (2007): total population age 15 and over literate nearly 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	13,684	235,378	17.2	92 ¹⁰
Secondary/Voc. (age 10–18)	49,896	650,438	13.0	...
Tertiary	13,101	197,943	15.1	45 (age 19–23)

Health: physicians (2006) 17,031 (1 per 317 persons); hospital beds (2007) 36,426 (1 per 148 persons); infant mortality rate per 1,000 live births (2008) 5.9; undernourished population (2002–04) 400,000 (7% of total population based on the consumption of a minimum daily requirement of 2,030 calories).

Military

Total active duty personnel (November 2008): 17,445 (army 41.8%, air force 24.0%, headquarters staff 13.3%, support/training 20.9%). **Military expenditure as percentage of GDP** (2008): 1.5%; per capita expenditure U.S.\$255.

¹The euro (€) replaced the Slovak koruna (Sk) on Jan. 1, 2009, at an exchange rate of €1 = Sk 30.13. ²January 1. ³Central government only. ⁴Excludes persons on child-care leave and conscripts. ⁵Taxes less subsidies. ⁶Including 353,400 unemployed. ⁷SkyEurope airlines only, including charter services. ⁸Circulation of daily newspapers. ⁹Subscribers. ¹⁰2004–05.

Internet resources for further information:

- National Bank of Slovakia <http://www.nbs.sk>
- Statistical Office of the Slovak Republic <http://portal.statistics.sk>

Slovenia

Official name: Republika Slovenija (Republic of Slovenia).

Form of government: unitary multiparty republic with two legislative houses (National Council [40]; National Assembly [90]).

Head of state: President.

Head of government: Prime Minister.

Capital: Ljubljana.

Official language: Slovene.

Official religion: none.

Monetary unit: euro (€); valuation

(Sept. 1, 2009) 1 U.S.\$ = €0.70;

1 £ = €1.131.



Area and population

		area		population
		sq mi	sq km	2009 ² estimate
Statistical regions³	Principal cities			
Gorenjska	Kranj	825	2,137	201,779
Goriška	Nova Gorica	898	2,325	118,533
Jugovzhodna Slovenija	Novo mesto	653	1,690	141,166
Koroška	Ravne na Koroškem	401	1,041	72,481
Notranjsko-kraška	Postojna	562	1,456	51,728
Obalno Kraško	Koper	403	1,044	108,778
Osrednjeslovenska	Ljubljana	1,367	3,540	521,965
Podravska	Maribor	838	2,170	322,900
Pomurska	Murska Sobota	516	1,337	119,537
Savinjska	Celje	920	2,384	258,845
Spodnjeposavska	Krško	342	885	69,900
Zasavska	Trbovlje	102	264	44,750
TOTAL		7,827	20,273	2,032,362

Demography

Population (2009): 2,037,000.

Density (2009): persons per sq mi 260.3, persons per sq km 100.5.

Urban-rural (2005): urban 51.0%; rural 49.0%.

Sex distribution (2008⁴): male 49.64%; female 50.36%.

Age breakdown (2008²): under 15, 13.9%; 15–29, 20.0%; 30–44, 22.6%; 45–59, 22.4%; 60–74, 14.1%; 75–84, 5.7%; 85 and over, 1.3%.

Population projection: (2020) 2,071,000; (2030) 2,055,000.

Ethnic composition (2002)⁵: Slovene 91.2%; Serb 2.2%; Croat 2.0%; Bosniac (ethnic Muslim) 1.8%; other 2.8%.

Religious affiliation (2002): Roman Catholic 57.8%, Muslim 2.4%, Orthodox 2.3%, Protestant 0.8%, nonreligious/atheist 10.2%, other/unknown 26.5%.

Major cities (2009²): Ljubljana 268,423; Maribor 96,408; Celje 38,047; Kranj 36,357; Velenje 25,935.

Vital statistics

Birth rate per 1,000 population (2008): 10.8 (world avg. 20.3); within marriage 47.1%; outside of marriage 52.9%.

Death rate per 1,000 population (2008): 9.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 1.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.53.

Marriage/divorce rates per 1,000 population (2008): 3.3/1.1.

Life expectancy at birth (2007): male 75.0 years; female 82.3 years.

Major causes of death per 100,000 population (2008): diseases of the circulatory system 357.8; malignant neoplasms (cancers) 284.8; accidents and violence 74.9; diseases of the digestive system 58.8.

National economy

Budget (2007). Revenue: €13,658,091,000 (tax revenue 59.7%, of which taxes on goods and services 32.9%, personal income tax 13.2%; social security contributions 33.7%; nontax revenue 5.2%; other [including grants] 1.4%). Expenditures: €13,092,376,000 (current expenditures 88.8%, of which social protection 46.9%, wages and salaries 21.5%; capital expenditures 11.2%).

Public debt (2007): U.S.\$10,875,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): corn (maize) 308,259, sugar beets 260,000, wheat 133,339, potatoes 131,050, grapes 122,543, apples 114,490, hops 2,157; livestock (number of live animals) 575,120 pigs, 451,293 cattle, 212,000 beehives; roundwood 2,881,650 cu m, of which fuelwood 27%; fisheries production 2,463 (from aquaculture 55%). Mining and quarrying (2007): sand and gravel 11,008,600; salt (2005) 125,000. Manufacturing (value added in €'000,000; 2007): chemicals and chemical products 971; fabricated metal products 961; nonelectrical machinery 776; food products and beverages 514; electrical machinery 453; rubber products and plastic products 440; transportation equipment 438. Energy production (consumption): electricity (kW-hr; 2008) 15,357,000,000 (12,945,000,000); hard coal (metric tons; 2006) none (46,000); lignite (metric tons; 2008) 4,032,000 (4,161,000); crude petroleum (barrels; 2007) 2,199 (negligible); petroleum products (metric tons; 2007) none (2,296,000); natural gas (cu m; 2007) 3,400,000 (1,124,000,000).

Land use as % of total land area (2007): in temporary crops 7.6%, in permanent crops 1.3%, in pasture 14.7%, forest area 63.3%.

Household income and expenditure (2006). Average household size 2.6; average annual income per household SIT 4,104,896 (U.S.\$21,542); sources of income: wages and salaries 57.6%, transfers 28.9%, self-employment 5.5%; expenditure (2007): housing and energy 18.0%, transportation 16.2%, food and nonalcoholic beverages 14.2%, recreation and culture 10.2%.

Gross national income (GNI; 2008): U.S.\$48,973,000,000 (U.S.\$24,010 per capita); purchasing power parity GNI (U.S.\$26,910 per capita).

Structure of gross domestic product and labour force

	2008		2007	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry	766	2.1	101,000	9.7
Mining	137	0.4	4,000	0.4
Manufacturing	7,213	19.4	266,000	25.5
Construction	2,720	7.3	61,000	5.9
Public utilities	977	2.6	9,000	0.9
Transp. and commun.	2,489	6.7	60,000	5.8
Trade, restaurants	4,883	13.1	155,000	14.9
Finance, real estate	7,251	19.5	89,000	8.5
Pub. admin., defense	1,856	5.0	59,000	5.7
Services	4,319	11.6	180,000	17.3
Other	4,523 ⁶	12.2 ⁶	58,000 ⁷	5.6 ⁷
TOTAL	37,135⁸	100.0⁸	1,041,600⁸	100.0⁸

Population economically active (2007): total 1,041,600; activity rate 51.8% (participation rates: ages 15–64, 71.7%; female 46.0%; unemployed [2008] 7.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	89.2	94.2	97.6	100.0	102.5	106.2	112.2
Annual earnings index	84.9	91.3	96.5	100.0	104.8	111.0	120.2

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 2,218; remittances (2008) 331; foreign direct investment (FDI; 2005–07 avg.) 883. Disbursements for (U.S.\$'000,000): tourism (2007) 1,103; remittances (2008) 371; FDI (2005–07 avg.) 1,038.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
€'000,000	–954	–1,360	–1,408	–1,584	–2,102	–3,238
% of total	4.1%	5.1%	4.7%	4.5%	5.2%	7.6%

Imports (2007): €21,487,000,000 (base and fabricated metals 14.1%, road vehicles 13.2%, chemicals and chemical products 12.1%, nonelectrical machinery and equipment 10.6%, mineral fuels 9.4%, food 5.6%). **Major import sources:** Germany 19.4%; Italy 18.3%; Austria 12.5%; France 5.4%; Croatia 4.0%.

Exports (2007): €19,385,000,000 (road vehicles/parts 15.9%, base and fabricated metals 13.6%, nonelectrical machinery and equipment 12.5%, electrical machinery/electronics/parts 9.6%, medicine and pharmaceuticals 7.2%, furniture 4.3%). **Major export destinations:** Germany 18.9%; Italy 13.2%; Croatia 8.1%; Austria 7.8%; France 6.5%.

Transport and communications

Transport. Railroads (2008): length 763 mi, 1,228 km; passenger-km 834,000,000; metric ton-km cargo 3,520,000,000. Roads (2006): total length 23,961 mi, 38,562 km (paved 100%). Vehicles (2008): passenger cars 1,045,183; trucks and buses 83,909. Air transport (2008): passenger-km 1,008,000,000; metric ton-km cargo 1,944,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2005	559	279	PCs	2007	850	425
Telephones				Dailies	2007	356 ¹⁰	206 ¹⁰
Cellular	2008	2,055 ¹¹	1,020 ¹¹	Internet users	2008	1,126	559
Landline	2008	1,010	501	Broadband	2008	427 ¹¹	212 ¹¹

Education and health

Educational attainment (2006). Percentage of population age 15 and over having: no formal schooling through complete primary education 27.7%; secondary 6.0%; vocational 55.1%; some higher 2.9%; undergraduate 7.1%; advanced degree 1.2%. **Literacy** (2007): virtually 100%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	6,141	93,274	15.2	95
Secondary/Voc. (age 11–18)	16,405	174,330	10.6	90
Tertiary	5,246	114,794	21.9	83 (age 19–23)

Health (2007): physicians 4,441 (1 per 453 persons); hospital beds 9,414 (1 per 214 persons); infant mortality rate per 1,000 live births (2008) 2.4; undernourished population (2002–04) 60,000 (3% of total population based on the consumption of a minimum daily requirement of 1,990 calories).

Military

Total active duty personnel (November 2008): 7,200 (army 100%). **Military expenditure as percentage of GNP** (2007): 1.7%; per capita expenditure U.S.\$373.

¹The Slovenian tolar (SIT) was the former monetary unit; on Jan. 1, 2007, SIT 239.64 = €1. ²January 1. ³Actual first-order administration is based on 210 municipalities. ⁴July 1. ⁵Prorating 8.9% of population not responding to census questionnaire. ⁶Net taxes on products. ⁷Includes 48,000 unemployed and 10,000 not distributed. ⁸Detail does not add to total given because of rounding. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation of daily newspapers. ¹¹Subscribers.

Internet resources for further information:

- **Statistical Office of the Republic of Slovenia** <http://www.stat.si/eng/index.asp>
- **Bank of Slovenia** <http://www.bsi.si/en>

Solomon Islands

Official name: Solomon Islands.

Form of government: constitutional monarchy with one legislative house (National Parliament [50]).

Chief of state: British Monarch

represented by Governor-General.

Head of government: Prime Minister.

Capital: Honiara.

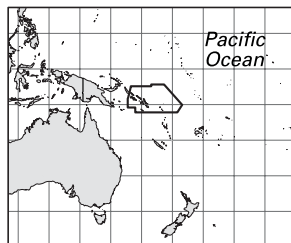
Official language: English.

Official religion: none.

Monetary unit: Solomon Islands

dollar (SIS); valuation (Sept. 1, 2009)

1 U.S.\$ = S\$17.87; 1 £ = S\$12.80.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2007 estimates
Central Islands	Tulagi	237	615	26,100
Choiseul	Taro	1,482	3,837	24,100
Guadalcanal	Honiara	2,060	5,336	73,000
Isabel	Buala	1,597	4,136	24,500
Makira-Ulawa	Kirakira	1,231	3,188	37,700
Malaita	Auki	1,631	4,225	149,200
Rennell and Bellona	Tigoga	259	671	2,800
Temotu	Santa Cruz	334	865	22,800
Western	Gizo	2,114	5,475	75,800
Capital Territory				
Honiara	—	9	22	59,100
TOTAL		10,954	28,370	495,000¹

Demography

Population (2009): 523,000.

Density (2009): persons per sq mi 47.7, persons per sq km 18.4.

Urban-rural (2005–06)²: urban 16.0%; rural 84.0%.

Sex distribution (2008): male 50.63%; female 49.37%.

Age breakdown (2008): under 15, 40.1%; 15–29, 29.4%; 30–44, 17.4%; 45–59, 8.0%; 60–74, 4.0%; 75–84, 1.0%; 85 and over, 0.1%.

Population projection (2020) 662,000; (2030) 788,000.

Doubling time: 29 years.

Ethnic composition (2002): Melanesian 93.0%; Polynesian 4.0%; Micronesian 1.5%; other 1.5%.

Religious affiliation (2005): Protestant c. 70%, of which Anglican c. 32%, Adventist c. 10%; Roman Catholic c. 18%; traditional beliefs c. 5%; other c. 7%.

Major towns (2006): Honiara (on Guadalcanal) 57,400; Gizo (in the New Georgia Islands) 6,300; Auki (on Malaita) 4,400; Buala (on Santa Isabel) 2,700.

Vital statistics

Birth rate per 1,000 population (2008): 28.5 (world avg. 20.3).

Death rate per 1,000 population (2008): 3.8 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 24.7 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.65.

Marriage/divorce rates per 1,000 population (2006): n.a./n.a.

Life expectancy at birth (2008): male 70.9 years; female 76.1 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 157, of which cerebrovascular diseases 47, ischemic heart disease 46; respiratory diseases 45; malignant neoplasms (cancers) 43; about 20% of the population has malaria, one of the world's highest rates.

National economy

Budget (2006). Revenue: S\$946,200,000 (tax revenue 73.0%, of which VAT 17.9%, logging duties 13.6%, import duties 9.3%, corporate tax 8.2%; non-tax revenue 13.9%; grants 13.1%). Expenditures: S\$911,100,000 (current expenditure 90.5%, of which wages 27.3%, debt service 13.9%; capital expenditure 9.5%).

Public debt (external, outstanding; 2007): U.S.\$147,300,000.

Gross national income (GNI; 2008): U.S.\$598,000,000 (U.S.\$1,180 per capita); purchasing power parity GNI (U.S.\$2,580 per capita).

Structure of gross domestic product and labour force

	2006		2004	
	in value S\$'000,000	% of total value	labour force ³	% of labour force ³
Agriculture, forestry, fishing	1,217.4	35.0	14,938	28.7
Mining	1.7	—	—	—
Manufacturing	165.5	4.8	1,476	2.8
Construction	18.8	0.5	1,397	2.7
Public utilities	44.6	1.3	469	0.9
Transportation and communications	322.2	9.3	1,246	2.4
Trade, hotels	477.9	13.8	3,274	6.3
Finance, real estate	492.6	14.2	806	1.5
Pub. admin., defense	238.1	6.9	6,758	13.0
Services	435.8	12.5	21,757	41.7
Other	60.5 ⁴	1.7 ⁴	...	...
TOTAL	3,475.3¹	100.0	52,121	100.0

Household income and expenditure (2005–06)². Average household size 6.2; average annual income per household U.S.\$3,129; sources of income: home production⁵ 36.9%, wages and salaries 26.6%, transfers 8.8%, self-employment 7.8%; expenditure: food 53.5%, housing 15.8%, transportation 6.8%, education 3.8%.

Population economically active (2006): total 201,000; activity rate of total population 41.0% (participation rates: ages 15 and over 68.8%; female 38.3%; unemployed [2003] 15.2%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	80.4	87.1	93.2	100.0	111.2	119.7	140.5

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 276,000, oil palm fruit 155,000, sweet potatoes 86,000, taro 40,000, yams 30,000, cacao beans 5,300; livestock (number of live animals) 54,000 pigs, 13,600 cattle, 235,000 chickens; roundwood 1,254,400 cu m, of which fuelwood 10%; fisheries production 31,272 (from aquaculture, negligible); aquatic plants production 120 (from aquaculture 100%). Mining and quarrying (2005): gold 10 kg⁶. Manufacturing (2006): coconut oil 59,000, vegetable oils and fats (2002) 50,000, copra 21,214, palm oil 5,427, cocoa 3,828. Energy production (consumption): electricity (kW-hr; 2008) 78,000,000 (57,000,000); coal, none (none); petroleum products (metric tons; 2006) none (58,000); natural gas, none (none).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4; remittances (2008) 20; foreign direct investment (2005–07 avg.) 26; official development assistance (2007) 248. Disbursements for (U.S.\$'000,000): tourism (2007) 8; remittances (2008) 3.

Land use as % of total land area (2007): in temporary crops 0.6%, in permanent crops 2.1%, in pasture 0.3%, forest area 74.8%.

Foreign trade⁷

Balance of trade (current prices)

	2001	2002	2003	2004	2005	2006
U.S.\$'000,000	–38.2	–11.3	–19.6	–24.7	–82.6	–130.2
% of total	28.9%	8.9%	11.7%	11.3%	28.7%	35.1%

Imports (2006): U.S.\$250,613,000 (machinery and transport equipment 24.7%; petroleum [all forms] 21.7%; food 14.1%; construction materials 10.0%; chemicals 5.2%). **Major import sources:** Australia 25.3%; Singapore 23.4%; Japan 7.8%; New Zealand 5.0%; Fiji 4.2%.

Exports (2007): U.S.\$156,008,000 (logs 63.7%; palm oil 8.6%; frozen fish 7.2%; cacao beans 5.8%; copra 3.7%; sawn wood 3.2%; gold⁶ 0.8%). **Major export destinations** (2006): China 45.7%; South Korea 14.0%; Japan 8.5%; Thailand 4.4%; The Philippines 4.0%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 1,500 km (paved 2.7%).

Vehicles (1993): passenger cars 2,052; trucks and buses 2,574. Air transport (2006)⁸: passenger-km 74,870,000; metric ton-km cargo 648,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	5.3	11	PCs	2005	22	47
Telephones				Dailies	2007	5 ⁹	15 ⁹
Cellular	2008	14 ¹⁰	27 ¹⁰	Internet users	2008	10	20
Landline	2008	8.0	16	Broadband	2008	1.5 ¹⁰	2.9 ¹⁰

Education and health

Educational attainment (2005–06)². Percentage of population age 15 and over having: no schooling/unknown 15.6%; primary education 46.7%; secondary 32.8%; vocational 4.0%; higher 0.9%. **Literacy** (2004): total population age 15 and over literate 76.6%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	75,082	...	62
Secondary/Voc. (age 12–18)	...	22,487	...	27 ¹¹
Tertiary (age 19–23)

Health (2005): physicians 89 (1 per 5,293 persons); hospital beds 691 (1 per 682 persons); infant mortality rate per 1,000 live births (2008) 19.7; undernourished population (2002–04) 90,000 (21% of total population based on the consumption of a minimum daily requirement of 1,780 calories).

Military

Total active duty personnel (2008): none; c. 200–300 military troops and police in an Australian-led multinational regional intervention force (from mid-2003) maintain civil and political order.

¹Detail does not add to total given because of rounding. ²Based on the Household Income and Expenditure Survey 2005–06 comprising 3,822 households. ³Persons employed in the monetary sector only. ⁴Taxes on products less subsidies and less imputed bank charges. ⁵Mostly food preparations and handicrafts. ⁶Although small-scale artisanal production continued, production at the country's only gold mine was suspended from 2000 because of lawlessness, but it resumed in 2007. ⁷Imports c.i.f.; exports f.o.b. ⁸Solomon Airlines only. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹2002–03.

Internet resources for further information:

- Central Bank of Solomon Islands
<http://www.cbsi.com.sb>
- Solomon Islands National Statistics Office
<http://www.spc.int/prism/country/sb/stats>

Somalia¹

Official name: Soomaaliya (Somali) (Somalia).

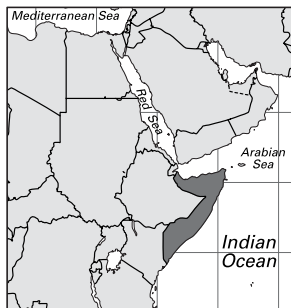
Form of government: transitional regime² with one legislative body (Transitional Federal Assembly [TFA; 550³]).

Head of state and government: President assisted by Prime Minister².
Capital: Mogadishu.

Official languages: Somali; Arabic.

Official religion: Islam.

Monetary unit: Somali shilling (Shilin Soomaali; So.Sh.); valuation^{4, 5}.



Gross national income (2008): U.S.\$2,570,000,000 (U.S.\$288 per capita).

Structure of gross domestic product and labour force

	2008		2001–02	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, livestock	1,657	62.3	2,617,000	67.0
Mining	18	0.7		
Public utilities	68	2.5		
Manufacturing	116	4.4	469,000	12.0
Construction	266	10.0		
Transp. and commun.	293	11.0		
Trade, restaurants	339	12.7	820,000	21.0
Finance				
Pub. admin., defense				
Services	–97	–3.6	...	...
Other	2,660	100.0	3,906,000	100.0
TOTAL				

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism, n.a.; remittances (2008) c. 1,000; foreign direct investment (2005–07 avg.) 87; official development assistance (2007) 384. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 1.6%, in permanent crops 0.04%, in pasture 68.5%, forest area 11.1%.

Foreign trade

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–245	–324	–388	–422	–494	–494
% of total	48.5%	60.0%	49.5%	45.9%	45.3%	45.3%

Imports (2007): U.S.\$793,000,000 (agricultural products 48.1%, of which sugar [all forms] 12.3%, cereals 12.0%, vegetable/animal oils 6.6%; unspecified 51.9%). **Major import sources** (2008): Djibouti c. 29%; India c. 12%; Kenya c. 8%; U.S. c. 6%; Oman c. 6%.

Exports (2007): U.S.\$299,000,000 (goats 12.0%; sheep 6.4%; cattle 5.5%; other agricultural products 1.4%; unspecified 74.7%). **Major export destinations** (2008): U.A.E. c. 56%; Yemen c. 21%; Saudi Arabia c. 4%.

Transport and communications

Transport. Railroads: none. Roads (2003): total length 13,650 mi, 22,000 km (paved 12%). Vehicles: passenger cars, n.a.; trucks and buses, n.a. Air transport (2003)¹⁴: passenger arrivals 50,096, passenger departures 41,979; cargo unloaded 3,817 metric tons, cargo loaded 152 metric tons.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	108	14	PCs	2007	79	9.0
Telephones				Dailies	2007	21 ¹⁵	2.4 ¹⁵
Cellular	2008	627 ¹⁶	70 ¹⁶	Internet users	2008	102	11
Landline	2008	100	11	Broadband	2008	—	—

Education and health

Educational attainment: n.a. **Literacy** (2002): percentage of total population age 15 and over literate 19.2%; males literate 25.1%; females literate 13.1%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary	9,088	285,574	31.4	...
Secondary/Voc.	...	...	...	...
Tertiary	...	...	...	...

Health: physicians, n.a.¹⁷; hospital beds, n.a.; infant mortality rate per 1,000 live births (2005) 110.1; undernourished population, n.a.

Military

Total active duty personnel: no national army from 1991^{18, 19}. **Military expenditure as percentage of GDP:** n.a.

Demography

Population (2009): 9,133,000¹¹.

Density (2009): persons per sq mi 37.1, persons per sq km 14.3.

Urban-rural (2006): urban 36.5%; rural 63.5%.

Sex distribution (2008): male 49.57%; female 50.43%.

Age breakdown (2005): under 15, 44.6%; 15–29, 26.3%; 30–44, 16.1%; 45–59, 8.6%; 60–74, 3.6%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 12,246,000; (2030) 15,744,000.

Doubling time: 24 years.

Ethnic composition (2000): Somali 92.4%; Arab 2.2%; Afar 1.3%; other 4.1%.

Religious affiliation (2005): Muslim (nearly all Sunni) c. 99%; other c. 1%.

Major cities (2008): Mogadishu (2007) 1,100,000; Hargeysa (in Somaliland) 436,232¹²; Burao (in Somaliland) 151,451¹²; Belet Weyne 108,125¹²; Boosaaso (in Puntland) 108,016¹².

Vital statistics

Birth rate per 1,000 population (2005): 45.0 (world avg. 20.3).

Death rate per 1,000 population (2005): 16.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2005): 29.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2005): 6.45.

Life expectancy at birth (2005): male 48.0 years; female 51.0 years.

Major causes of death as percentage of all deaths (2001–02): sickness 61.1%; old age 19.0%; accidents 11.0%, of which land mines 3.6%; war-related 4.3%; pregnancy/childbirth-related 4.0%.

National economy

Budget: n.a. UN assistance (2007): U.S.\$175,000,000, of which food aid U.S.\$50,000,000.

Public debt (external, outstanding; 2007): U.S.\$1,979,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): milk 2,166,000 (of which from: camels 870,000, sheep 468,000, cows 435,000), sugarcane 215,000, meat 203,725 (of which from sheep/goats 90,000), corn (maize) 99,000, cassava 82,000, sorghum 80,000, bananas 38,000, sesame seed 30,000, citrus fruits 23,200, dry beans 18,000, dates 12,000; other tree/bush products include khat, frankincense, and myrrh; livestock (number of live animals) 13,100,000 sheep, 12,700,000 goats, 7,000,000 camels, 5,350,000 cattle; roundwood 11,571,000 cu m, of which fuelwood 99%; fisheries production 30,000 (from aquaculture, none). Mining and quarrying (2007): small quantities of gemstones (including garnet and opal) and salt. Manufacturing: small manufacturers produce textiles, handicrafts, and processed meat. Energy production (consumption): electricity (kW-hr; 2006) 295,000,000 (295,000,000); coal, none (none); crude petroleum (barrels; 2006) none (425,000); petroleum products (metric tons; 2006) 176,000 (174,000); natural gas, none (none).

Population economically active (2006)¹³: total 3,343,000; activity rate of total population 39.6% (participation rates: ages 15 and over, 72.1%; female 38.8%; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	100.0	...	...	...

Household income and expenditure (2001–02). Average household size 5.8; income per household U.S.\$226; sources of income: self-employment 50%, remittances 22.5%, wages 14%, rent/aid 13.5%; expenditure, n.a.

¹Proclamation of the “Republic of Somaliland” in May 1991 on territory corresponding to the former British Somaliland (which unified with the former Italian Trust Territory of Somalia to form Somalia in 1960) had not received international recognition as of November 2009. This entity represented about a quarter of Somalia’s territory. ²“Transitional government” from October 2004 controlled very little of Somalia in November 2009. ³Planned number; TFA met in Baidoa from February 2006 to January 2009—some government officials met in Djibouti thereafter. ⁴The So.Sh. had limited availability and circulation in 2009; 1 U.S.\$ = c. 34,000 So.Sh. (1 £ = c. 66,000 So.Sh.) at the “black market” rate of May 2008. ⁵Somaliland’s sole legal tender from 1995 is the Somaliland shilling; in January 2009 1 U.S.\$ = 7,500 Somaliland shillings. ⁶Part of “Republic of Somaliland” from 1991. ⁷Part of “autonomous region” of Puntland from 1998. ⁸Administered (in part) as part of Puntland. ⁹Administration disputed (at least in part) between Puntland and Somaliland. ¹⁰Detail does not add to total given because of rounding. ¹¹Estimate of United Nations *World Population Prospects: The 2008 Revision* including Somaliland. ¹²Estimate of www.world-gazetteer.com. ¹³ILO estimate; 15 and over only. ¹⁴Four Somaliland airports only. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷In 2008 18 doctors graduated from a Somali medical institution for the first time since 1990. ¹⁸Ethiopian forces backing the transitional government fought Islamist forces from December 2006 to December 2008 and from June 2009 onward. ¹⁹AU peacekeeping troops (September 2009) 4,300.

Internet resource for further information:

- UNDP in Somalia
<http://www.so.undp.org>

South Africa

Official name: Republic of South Africa (English).

Form of government: multiparty republic with two legislative houses (National Council of Provinces [90]; National Assembly [400]).

Head of state and government: President.

Capitals (de facto): Pretoria¹ (executive); Bloemfontein² (judicial); Cape Town (legislative).

Official languages: 3.

Official religion: none.

Monetary unit: rand (R); valuation (Sept. 1, 2009) 1 U.S.\$ = R 7.79; 1 £ = R 12.64.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2009 estimate
Eastern Cape	Bisho	65,238	168,966	6,648,600
Free State	Bloemfontein	50,126	129,825	2,902,400
Gauteng	Johannesburg	6,389	16,548	10,531,300
KwaZulu-Natal	Pietermaritzburg	36,433	94,361	10,449,300
Limpopo	Polokwane	48,554	125,755	5,227,200
Mpumalanga	Nelspruit	29,535	76,495	3,606,800
North West	Mafikeng	41,125	106,512	3,450,400
Northern Cape	Kimberley	143,973	372,889	1,147,600
Western Cape	Cape Town	49,986	129,462	5,356,900
TOTAL		471,359	1,220,813	49,320,500 ⁴

Demography

Population (2009): 49,321,000.

Density (2009): persons per sq mi 104.6, persons per sq km 40.4.

Urban-rural (2005): urban 59.28%; rural 40.72%.

Sex distribution (2009): male 48.40%; female 51.60%.

Age breakdown (2009): under 15, 31.4%; 15–29, 29.5%; 30–44, 19.5%; 45–59, 12.0%; 60–74, 6.0%; 75 and over, 1.6%.

Population projection: (2020) 52,104,000; (2030) 54,137,000.

Ethnic composition (2009): black 79.3%, of which Zulu c. 24%, Xhosa c. 18%, Pedi c. 9%, Tswana c. 8%, Sotho c. 8%, Tsonga c. 4%, Swazi c. 3%, other black c. 5%; white 9.1%; mixed white/black 9.0%; Asian/other 2.6%.

Religious affiliation (2005): independent Christian 37.1%, of which Zion Christian 9.5%; Protestant 26.1%; traditional beliefs 8.9%; Roman Catholic 6.7%; Muslim 2.5%; Hindu 2.4%; nonreligious 3.0%; other/unknown 13.3%.

Major urban agglomerations (2007): Johannesburg 3,435,000; Cape Town 3,215,000; Ekurhuleni (East Rand) 2,986,000; eThekweni (Durban) 2,729,000; Tshwane (Pretoria) 1,338,000.

Vital statistics

Birth rate per 1,000 population (2005): 23.2 (world avg. 20.3).

Death rate per 1,000 population (2005): 14.2 (world avg. 8.5).

Marriage/divorce rates per 1,000 population (2005): 3.9/0.7.

Total fertility rate (avg. births per childbearing woman; 2009): 2.38.

Life expectancy at birth (2009): male 53.5 years; female 57.2 years.

Adult population (ages 15–49) living with HIV (2007): 18.1% (world avg. 0.8%).

Major causes of death per 100,000 population (2004): infectious and parasitic diseases c. 286; circulatory diseases c. 170; respiratory diseases c. 165; accidents and injuries c. 112; malignant neoplasms (cancers) c. 73.

National economy

Budget (2005–06). Revenue: R 411,085,100,000 (personal income taxes 30.6%, VAT 28.0%, company income taxes 23.5%). Expenditures: R 417,819,200,000 (transfer to provinces 36.0%, debt payments 12.7%, police and prisons 9.0%, defense 5.4%, education 3.0%, health 2.4%).

Production (in metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 20,500,000, corn (maize) 7,338,738, potatoes 1,900,000, wheat 1,756,900, grapes 1,600,000, oranges 1,400,000; livestock (number of live animals) 25,000,000 sheep, 13,500,000 cattle; roundwood 30,063,000 cu m, of which fuelwood 40%; fisheries production 673,360 (from aquaculture, negligible); aquatic plants production 9,600 (from aquaculture 31%). Mining and quarrying (value of sales in R '000,000,000; 2007): platinum-group metals 79.9; coal 43.1; gold 39.0; iron ore 13.4; rough diamond production 15,249,000 carats. Manufacturing (value of sales in R '000,000,000; 2005): food products and beverages 153,496; transport equipment 137,870; chemicals 81,240; base metals 57,886; refined petroleum 57,697; fabricated metals 41,442. Energy production (consumption)⁶: electricity (kW-hr; 2006) 256,882,000,000 (257,454,000,000); coal (metric tons; 2006) 246,236,000 (178,336,000); crude petroleum (barrels; 2006) 10,198,000 (180,640,000); petroleum products (metric tons; 2006) 27,024,000 (21,042,000); natural gas (cu m; 2006) 1,936,000,000 (4,551,000,000).

Land use as % of total land area (2007): in temporary crops 11.9%, in permanent crops 0.8%, in pasture 69.1%, forest area 7.6%.

Population economically active (2007): total 17,232,000; activity rate of total population 36.0% (participation rates: ages 15–64, 56.7%; female 46.1%; unemployed 21.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	93.6	98.8	97.9	100.0	103.0	109.5	120.2

Household income and expenditure. Average household size (2004) 4.0; expenditure (2005): food, beverages, and tobacco 25.8%, transportation and communications 16.9%, household furnishings 9.7%, housing 9.6%.

Gross national income (GNI; 2008): U.S.\$283,310,000,000 (U.S.\$5,820 per capita); purchasing power parity GNI (U.S.\$9,780 per capita).

Structure of gross domestic product and labour force

	2007		2005	
	in value R '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	56,685	2.8	925,000	5.5
Mining	135,459	6.8	411,000	2.4
Manufacturing	321,790	16.1	1,706,000	10.2
Construction	51,810	2.6	935,000	5.6
Public utilities	43,673	2.2	100,000	0.6
Transp. and commun.	159,537	8.0	616,000	3.7
Trade, hotels	245,179	12.3	3,024,000	18.0
Finance, real estate	392,180	19.7	1,296,000	7.7
Pub. admin., defense	257,156	12.9		
Services	104,752	5.3	3,259,000	19.4
Other	225,674 ⁷	11.3 ⁷	4,516,000 ⁸	26.9 ⁸
TOTAL	1,993,894 ⁹	100.0	16,788,000	100.0

Public debt (external, outstanding; 2007): U.S.\$13,868,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 8,443; remittances (2008) 823; foreign direct investment (FDI; 2005–07 avg.) 3,936; official development assistance (2006) 718. Disbursements for (U.S.\$'000,000): tourism (2007) 3,927; remittances (2008) 1,133; FDI (2005–07 avg.) 3,794.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	-2,907	-7,340	-8,042	-16,015	-15,846	-13,707
% of total	4.4%	8.4%	7.9%	13.1%	11.0%	8.5%

Imports (2006): U.S.\$69,185,000,000 (machinery and apparatus 26.5%, crude petroleum 13.9%, road vehicles 9.6%, chemicals and chemical products 8.9%). **Major import sources:** Germany 12.5%; China 10.0%; U.S. 7.6%; Japan 6.5%; Saudi Arabia 5.3%.

Exports (2006): U.S.\$53,170,000,000¹⁰ (platinum-group metals 15.3%, iron and steel 10.8%, road vehicles 9.0%, metal ores 7.4%, coal 6.0%, pumps/compressors 4.7%, diamonds 4.6%). **Major export destinations:** Japan 11.9%; U.S. 11.5%; U.K. 8.8%; Germany 7.5%; Netherlands 5.2%.

Transport and communications

Transport. Railroads: route length (2005) 20,872 km; (2001) passenger-km 3,930,000,000; (2001) metric ton-km cargo 106,786,000,000. Roads (2002): length 362,099 km (paved 20%). Vehicles (2005): passenger cars 4,574,972; trucks and buses 2,112,601. Air transport (2007): passenger-km 27,576,000,000; metric ton-km cargo 935,600,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	9,134	199	PCs	2005	3,966	85
Telephones				Dailies	2007	1,780 ¹¹	55 ¹¹
Cellular	2008	45,000 ¹²	906 ¹²	Internet users	2008	4,187	84
Landline	2008	4,425	89	Broadband	2007	378 ¹²	7.8 ¹²

Education and health

Educational attainment (2006). Percentage of population age 20 and over having: no formal schooling 10.4%; some primary education 21.1%; complete primary/some secondary 34.0%; complete secondary 24.9%; higher 9.1%. **Literacy** (2007): total population age 15 and over literate 87.8%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–13)	246,978	7,314,449	29.6	86
Secondary/Voc. (age 14–18)	141,562	4,657,674	32.9	72
Tertiary ¹³	44,175	741,380	16.8	15 (age 19–23)

Health: physicians (2006) 33,220 (1 per 1,427 persons); hospital beds (2004) 153,465 (1 per 303 persons); infant mortality rate (2009) 45.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 62,082 (army 59.8%, navy 10.1%, air force 17.2%, military health service 12.9%). **Military expenditure as percentage of GDP** (2007): 1.4%; per capita expenditure U.S.\$78.

¹Name of larger municipality including Pretoria is Tshwane. ²Name of larger municipality including Bloemfontein is Mangaung. ³Afrikaans; English; Ndebele; Pedi (North Sotho); Sotho (South Sotho); Swazi; Tsonga; Tswana (West Sotho); Venda; Xhosa; Zulu. ⁴Official South African mid-year estimate. ⁵Within eThekweni municipality. ⁶Data include Botswana, Lesotho, Namibia, and Swaziland. ⁷Taxes on products less subsidies on products. ⁸Includes 4,487,000 unemployed. ⁹Detail does not add to total given because of rounding. ¹⁰Excluding gold export earnings estimated at U.S.\$5,400,000,000 in 2006. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2005–06.

Internet resources for further information:

- South African Reserve Bank <http://www.reservebank.co.za>
- Statistics South Africa <http://www.statssa.gov.za>

1 £ = €1.13.



	area	population		area	population
Autonomous communities	sq km	2009 ³ estimate	Autonomous communities	sq km	2009 ³ estimate
Andalusia	87,597	8,177,351	Galicia	29,574	2,737,034
Aragon	47,721	1,318,923	La Rioja	5,045	316,341
Asturias	10,604	1,057,145	Madrid	8,028	6,300,460
Balearic Islands	4,992	1,074,949	Murcia	11,313	1,452,150
Basque Country	7,235	2,134,703	Navarra	10,390	616,898
Canary Islands	7,447	2,085,980	Valencia	23,255	5,019,138
Cantabria	5,321	577,885			
Castile-La Mancha	79,462	2,037,756	Autonomous cities		
Castile-León	94,226	2,510,631	Ceuta	19	72,600
Catalonia	32,113	7,288,071	Melilla	13	70,447
Extremadura	41,634	1,081,012	TOTAL	505,991 ⁴	45,929,476 ⁴

Major cities (2008): Madrid 3,213,271 (urban agglomeration [2007] 5,764,000); Barcelona 1,615,908 (urban agglomeration [2007] 5,057,000); Valencia 807,200; Sevilla 699,759; Zaragoza 666,129; Málaga 566,447.

Adult population (ages 15–49) living with HIV (2007): 0.5%⁶ (world avg. 0.8%).

Gross national income (GNI; 2008): U.S.\$1,456,488,000,000 (U.S.\$31,960 per capita); purchasing power parity GNI (U.S.\$31,130 per capita).

Structure of gross domestic product and labour force				
	2008		2007	
	in value €'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	25,654	2.4	925,500	4.2
Mining and quarrying			60,100	0.3
Manufacturing	142,859	13.1	3,089,800	13.9
Public utilities	26,449	2.4	111,900	0.5
Construction	113,638	10.4	2,697,300	12.2
Transp. and commun.	...	...	1,177,100	5.3
Trade, hotels	...	...	4,579,100	20.6
Finance, real estate	537,419	49.4	2,517,100	11.3
Services			3,957,700	17.8
Pub. admin., defense	150,135	13.8	1,238,400	5.6
Other	92,348	8.5 ⁷	1,836,000 ⁸	8.3 ⁸
TOTAL	1,088,502	100.0	22,189,900 ⁹	100.0

Population economically active (2007): total 22,189,900; activity rate of total population 49.7% (participation rates: ages 16–64, 72.6%; female 42.3%; unemployed [October 2007–September 2008] 10.0%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.1	93.9	96.7	100.0	103.5	106.4	110.7
Earnings index	89.0	93.1	96.6	100.0	104.3	108.7	113.5

Land use as % of total land area (2007): in temporary crops 25.5%, in permanent crops 9.7%, in pasture 22.2%, forest area 37.1%.

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
€'000,000	-46,279	-60,670	-77,813	-92,396	-98,952	-94,068
% of total	14.4%	17.2%	20.2%	21.3%	21.4%	20.0%

Exports (2006): €170,628,000,000 (road vehicles/parts 20.7%; machinery and apparatus 15.2%; food 10.9%, of which fruits and vegetables 5.8%; base and fabricated metals 8.9%). *Major export destinations* (2007): France 18.6%; Germany 10.8%; Portugal 8.6%; Italy 8.5%; U.K. 7.5%.

Transport. Railroads (2007–08): route length (2006) 15,212 km; passenger-km 22,794,600,000; metric ton-km cargo 10,839,100,000. Roads (2006): length 681,224 km (paved 100%). Vehicles (2008³): cars 21,440,700; trucks, vans, and buses 5,273,000. Air transport (2007–08): passenger-km 81,252,000,000; metric ton-km cargo 1,169,204,000.

Communications				units			
Medium	date	number in '000s	per 1,000 persons	Medium	date	number in '000s	per 1,000 persons
Televisions	2003	24,228	564	PCs	2007	17,646	393
Telephones				Dailies	2007	6,183 ¹⁰	136 ¹⁰
Cellular	2008	49,678 ¹¹	1,117 ¹¹	Internet users	2008	25,240	567
Landline	2008	20,200	454	Broadband	2008	8,995 ¹¹	202 ¹¹

Educational attainment (2007). Percentage of population age 16 and over having: no formal schooling through incomplete primary education 11.6%; complete primary 20.9%; secondary 44.4%; undergraduate degree 14.2%; graduate degree 8.9%. *Literacy* (2003): total population age 15 and over literate 97.9%; males 98.7%; females 97.2%.

Education (2005–06)	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	181,147	2,501,205	13.8	100
Secondary/Voc. (age 12–17)	282,222	3,091,036	11.0	94
Tertiary	146,229	1,789,254	12.2	67 (age 18–22)

Health (2009¹²): physicians 213,977 (1 per 214 persons); hospital beds (2008¹²) 160,292 (1 per 283 persons); infant mortality rate (2008) 3.5; undernourished population (2002–04) less than 2.5% of total population.

Total active duty personnel (November 2008): 221,750 (army 43.1%, navy 10.5%, air force 9.4%, joint 4.3%, civil guard 32.7%). *Military expenditure as percentage of GDP* (2008): 0.7%; *per capita expenditure* U.S.\$241.

¹Includes 56 indirectly elected seats. ²The constitution states that "Castilian is the Spanish official language of the State," but that "all other Spanish languages (including Euskera [Basque], Catalan, and Galician) will also be official in the corresponding Autonomous Communities," July 1. ³Detail does not add to total given because of rounding. ⁴Foreign residents (2007): 4.5 million, of which Moroccan 13%, Romanian 12%, Ecuadorian 9%. ⁵Statistically derived midpoint within range. ⁶Taxes less subsidies. ⁷Includes 1,833,900 unemployed. ⁸Imports c.i.f.; exports f.o.b. ⁹Circulation of daily newspapers. ¹⁰Subscribers. ¹¹January 1.

Internet resources for further information:

- Banco de España <http://www.bde.es>
- National Institute of Statistics http://www.ine.es/en/welcome_en.htm

Sri Lanka

Official name: Sri Lanka Prajatantrika Samajavadi Janarajaya (Sinhala); Ilangai Jananayaka Socialisa Kudiarasu (Tamil) (Democratic Socialist Republic of Sri Lanka).

Form of government: unitary multiparty republic with one legislative house (Parliament [225]).

Head of state and government:

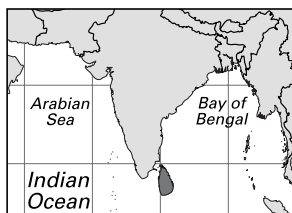
President assisted by Prime Minister.

Capitals: Colombo (executive and judicial); Sri Jayewardenepura Kotte (Colombo suburb; legislative).

Official languages: Sinhala; Tamil¹.

Official religion: none².

Monetary unit: Sri Lankan rupee (LKR); valuation (Sept. 1, 2009) 1 U.S.\$ = LKR 114.75; 1 £ = LKR 186.19.



Gross national income (GNI; 2008): U.S.\$35,854,000,000 (U.S.\$1,790 per capita); purchasing power parity GNI (U.S.\$4,480 per capita).

Structure of gross domestic product and labour force

	2008			
	in value LKR '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	589,998	13.4	2,344,400	31.0
Mining and quarrying	71,768	1.6	533,100	7.1
Public utilities	104,666	2.4		
Manufacturing	791,898	18.0	1,354,900	17.9
Construction	327,138	7.4		
Transp. and commun.	530,980	12.0	426,000	5.6
Trade, hotels, restaurants	969,983	22.0	1,028,300	13.6
Finance, real estate	555,116	12.6	236,000	3.1
Pub. admin., defense	380,765	8.6	462,600	6.1
Services	88,255	2.0	622,600	8.2
Other			560,700 ⁵	7.4 ⁵
TOTAL	4,410,567	100.0	7,568,700⁶	100.0

Public debt (external, outstanding; June 2009): U.S.\$12,737,600,000.

Population economically active (2008): total 7,568,700; activity rate 37.7% (participation rates: ages 15–59 [2000] 60.6%; female 36.1%; unemployed [May 2008–April 2009] 5.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	78.3	83.3	89.6	100.0	110.0	127.4	156.2
Minimum wage index	83.1	90.5	91.5	100.0	102.6	119.3	...

Land use as % of total land area (2007): in temporary crops 15.0%, in permanent crops 14.7%, in pasture 6.8%, forest area 29.0%.

Foreign trade⁷

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
LKR '000,000	–134,706	–148,324	–227,171	–253,083	–350,110	–394,327
% of total	13.0%	13.0%	16.3%	16.5%	19.6%	18.7%

Imports (2007): LKR 1,251,135,000,000 (cotton yarn and textiles 14.4%, machinery and apparatus 13.9%, refined petroleum 13.0%, crude petroleum 9.1%, food and beverages 7.3%, base metals 7.3%). **Major import sources:** India 22.3%; Singapore 9.6%; China 7.9%; Iran 7.2%; Hong Kong 6.2%.

Exports (2007): LKR 856,808,000,000 (garments 40.6%; tea 13.3%, of which black 11.5%; gemstones 5.7%, of which diamonds 4.5%; rubber tires 4.5%; coconut products 1.8%; fish 1.6%; rubber 1.4%; cinnamon 1.0%). **Major export destinations:** U.S. 24.5%; U.K. 12.7%; India 6.4%; Germany 5.5%; Belgium 5.0%.

Transport and communications

Transport. Railroads (2008–09): route length (2007) 1,449 km; passenger-km 4,515,916,000; metric ton-km cargo 115,313,000. Roads (2003): total length 97,286 km (paved 81%). Vehicles (2009⁸): passenger cars 381,448; trucks and buses 552,474⁹. Air transport (2008–09): passenger-km 8,248,000,000; metric ton-km cargo 300,611,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,400	117	PCs	2005	734	35
Telephones				Dailies	2007	600 ¹⁰	30 ¹⁰
Cellular	2008	11,083 ¹¹	552 ¹¹	Internet users	2008	1,164	58
Landline	2008	3,446	172	Broadband	2008	102 ¹¹	5.1 ¹¹

Education and health

Educational attainment: n.a. **Literacy (2007):** percentage of population age 5 and over literate 91.5%; males literate 93.2%; females literate 89.9%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–9)	68,657 ¹²	1,611,763 ¹²	23.5 ¹²	97
Secondary/Voc. (age 10–17)	119,491	2,332,326	19.5	...
Tertiary ¹³	4,452	66,236	14.9	... (age 18–22)

Health (2007): physicians 11,023 (1 per 1,804 persons); hospital beds 68,694 (1 per 289 persons); infant mortality rate (2006) 11.0; undernourished population (2002–04) 4,200,000 (22% of total population based on the consumption of a minimum daily requirement of 1,860 calories).

Military

Total active duty personnel (November 2008): 150,900 (army 78.1%, navy 9.9%, air force 12.0%). **Military expenditure as percentage of GDP (2008):** 3.6%; per capita expenditure U.S.\$77.

Area and population

Districts	area	population	Districts	area	population
	sq km	2008 estimate		sq km	2008 estimate
Ampara	4,415	624,000	Kurunegala	4,816	1,535,000
Anuradhapura	7,179	809,000	Mannar	1,996	102,000
Badulla	2,861	861,000	Matale	1,993	483,000
Batticaloa	2,854	530,000	Matara	1,283	822,000
Colombo	699	2,488,000	Monaragala	5,639	430,000
Galle	1,652	1,063,000	Mullaitivu	2,617	150,000
Gampaha	1,387	2,152,000	Nuwara Eliya	1,741	749,000
Hambantota	2,609	558,000	Polonnaruwa	3,293	400,000
Jaffna	1,025	603,000	Puttalam	3,072	760,000
Kalutara	1,598	1,118,000	Ratnapura	3,275	1,099,000
Kandy	1,940	1,396,000	Trincomalee	2,727	361,000
Kegalle	1,693	807,000	Vavuniya	1,967	167,000
Kilinochchi	1,279	150,000	TOTAL	65,610	20,217,000

Demography

Population (2009): 20,238,000.

Density (2009): persons per sq mi 798.9, persons per sq km 308.5.

Urban-rural (2008): urban 15.1%; rural 84.9%.

Sex distribution (2008): male 49.36%; female 50.64%.

Age breakdown (2008): under 15, 26.3%; 15–29, 27.0%; 30–44, 22.0%; 45–59, 15.4%; 60–74, 7.1%; 75 and over, 2.2%.

Population projection (2020) 21,713,000; (2030) 22,194,000.

Ethnic composition (2001): Sinhalese 81.9%; Tamil 9.4%; Sri Lankan Moor 8.0%; other 0.7%.

Religious affiliation (2005): Buddhist c. 70%; Hindu c. 15%; Christian (mostly Roman Catholic) c. 8%; Muslim (nearly all Sunni) c. 7%.

Major cities (2007): Colombo 672,743 (greater Colombo [2004] 2,490,300); Dehiwala–Mount Lavinia 219,827³; Moratuwa 185,668³; Jaffna 151,612; Negombo 150,364; Sri Jayewardenepura Kotte 121,370³; Kandy 121,286.

Vital statistics

Birth rate per 1,000 population (2008): 18.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.9 (world avg. 8.5).

Marriage/divorce rates per 1,000 population (2008): 9.8/n.a.

Total fertility rate (avg. births per childbearing woman; 2008): 1.88.

Life expectancy at birth (2008): male 68.8 years; female 76.3 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 252; malignant neoplasms (cancers) 101; diseases of the respiratory system 82; injuries, accidents, and violence 81.

National economy

Budget (2008). Revenue: LKR 775,477,000,000 (tax revenue 84.2%, of which VAT 32.5%, excises 15.8%; nontax revenue 12.1%; foreign grants 3.7%). Expenditures: LKR 1,516,330,000,000 (debt service 38.5%; transfers 15.9%; wages and salaries 11.1%).

Household income and expenditure (2006–07)⁴. Average household size 4.1; average annual income per household LKR 315,432 (U.S.\$2,941); sources of income: wage 35.8%, nonmonetary income 14.0%, agriculture 12.1%; expenditure: food and nonalcoholic beverages 37.6%, housing 11.5%, transportation and communication 10.5%, energy 4.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 320; remittances (2008) 2,947; foreign direct investment (FDI; 2005–07 avg.) 427; official development assistance (2007) 589. Disbursements for (U.S.\$'000,000): tourism (2007) 393; remittances (2008) 385; FDI (2005–07 avg.) 54.

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): rice 3,875,000, coconuts (2007) 954,000, sugarcane 799,447, plantains (2007) 518,720, tea 318,470, cassava 240,730, natural rubber 129,240, peppercorns 22,870, cinnamon 13,430, ginger 10,053; livestock (number of live animals) 1,196,000 cattle, 319,000 buffalo; roundwood (2007) 6,125,000 cu m, of which fuelwood 89%; fisheries production (2007) 317,988 (from aquaculture 3%). Mining and quarrying (2008): kaolin 11,000; graphite 10,000; sapphires 770,000 carats; rubies 23,000 carats; diamonds, n.a. Manufacturing (value added in LKR '000,000; 2008): food, beverages, and tobacco 348,358; textiles and apparel 147,822; rubber and plastic products 60,680; coal and refined petroleum products 42,666. Energy production (consumption): electricity (kW-hr; 2008–09) 9,727,000,000 ([2006] 9,389,000,000); coal (metric tons; 2006) none (95,000); crude petroleum (barrels; 2006) none (15,766,800); petroleum products (metric tons; 2006) 1,875,000 (3,409,000).

¹English has official status as “the link language” between Sinhala and Tamil. ²Buddhism has special recognition. ³Within greater Colombo. ⁴Excludes 7 districts in northern and eastern Sri Lanka. ⁵Includes 166,700 unclassified and 394,000 unemployed. ⁶Detail does not add to total given because of rounding. ⁷Imports c.i.f.; exports f.o.b. ⁸January 1. ⁹Includes dual-purpose vehicles. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2005–06. ¹³2007–08.

Internet resources for further information:

- Central Bank of Sri Lanka <http://www.cbsl.gov.lk>
- Department of Census and Statistics <http://www.statistics.gov.lk>

Sudan¹

Official name: Jumhūriyāt as-Sūdān (Republic of the Sudan).

Form of government: military-backed interim regime with Council of States (50); National Assembly (450)².

Head of state and government:

President assisted by Vice Presidents³.

Capital: Khartoum⁴.

Official languages: Arabic⁵; English⁵.

Official religion: 6.

Monetary unit: Sudanese pound (SDG); valuation (Sept. 1, 2009) 1 U.S.\$ = SDG 2.43; 1 £ = SDG 3.94.⁷



Area and population

	area	population		area	population
	sq km	2008 census ⁸		sq km	2008 census ⁸
Northern Sudan			Territory of Southern Sudan		
States	1,840,687	30,894,000	States	619,745	8,260,490
Blue Nile	45,844	832,112	Bahr el-Ghazal, Northern ⁹	33,558	720,898
Darfur, Northern	296,420	2,113,626	Bahr el-Ghazal, Western	93,900	333,431
Darfur, Southern	127,300	4,093,594	Equatoria, Central	22,956	1,103,592
Darfur, Western	79,460	1,308,225	Equatoria, Eastern	82,542	906,126
al-Jazirah	23,373	3,575,280	Equatoria, Western	79,319	619,029
Kassala	36,710	1,789,806	Junqali	122,479	1,358,602
Khartoum	22,142	5,274,321	Lakes	40,235	695,730
Kordofan, Northern	220,000 ¹⁰	2,920,992	Unity	35,956	585,801
Kordofan, Southern ¹¹	156,145 ¹⁰	1,406,404	Upper Nile	77,773	964,353
Nile	122,123	1,120,441	Warab	31,027	972,928
Northern	348,765	699,065			
al-Qadāfir	75,263	1,348,378			
Red Sea	218,887	1,396,110			
Sinnār	37,844	1,285,058			
White Nile	30,411	1,730,588	TOTAL	2,505,810¹²	39,154,490¹³

Demography

Population (2009): 42,272,000¹⁴.

Density (2009): persons per sq mi 43.7, persons per sq km 16.9.

Urban-rural (2006): urban 37.6%; rural 62.4%.

Sex distribution (2008): male 51.27%; female 48.73%.

Age breakdown (2008): under 15, 42.6%; 15–29, 27.7%; 30–44, 16.8%; 45–59, 7.7%; 60–74, 3.8%; 75–84, 1.0%; 85 and over, 0.4%.

Population projection: (2020) 52,309,000; (2030) 60,995,000.

Ethnic composition (2003): black c. 52%; Arab c. 39%; Beja c. 6%; foreigners c. 2%; other c. 1%.

Religious affiliation (2005): Sunnī Muslim 68.4%; traditional beliefs 10.8%; Roman Catholic 9.5%; Protestant 8.8%, of which Anglican 5.4%; other 2.5%.

Major cities (1993): Omdurman 1,271,403; Khartoum 947,483¹⁵; Khartoum North 700,887; Port Sudan 308,195; Kassala 234,622; Juba (in Southern Sudan) 114,980.

Vital statistics

Birth rate per 1,000 population (2006): 35.3 (world avg. 20.3).

Death rate per 1,000 population (2006): 15.2 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 4.79.

Life expectancy at birth (2006): male 47.1 years; female 48.8 years.

Major causes of death per 100,000 population (2002): ischemic heart disease 81; malaria 63; HIV/AIDS 58; diarrheal diseases 55; measles 49.

Adult population (ages 15–49) *living with HIV* (2007): 1.4% (world avg. 0.8%).

National economy

Budget (2008). Revenue: SDG 26,424,000,000 (nontax revenue 68.8%, of which export receipts for crude petroleum 52.3%; tax revenue 29.0%, of which taxes on goods and services 18.0%; grants 2.2%). Expenditures: SDG 24,331,000,000 (federal government 52.5%; transfers to: Southern Sudan 25.3%; northern states 22.2%).

Public debt (external, outstanding; 2007): U.S.\$12,337,000,000.

Gross national income (GNI; 2008): U.S.\$46,520,000,000 (U.S.\$1,130 per capita); purchasing power parity GNI (U.S.\$1,930 per capita).

Structure of gross domestic product and labour force

	2007		2004	
	in value SDG '000,000,000	% of total value	labour force ¹⁶	% of labour force ¹⁶
Agriculture	3,299	28.9	7,925,000	57.4
Petroleum	1,761	15.4		
other Mining	21	0.2		
Manufacturing	878	7.7		
Construction	465	4.1		
Public utilities	198	1.7		
Transp. and commun.	1,378	12.1		
Trade, hotels	1,673	14.7		
Finance, real estate	709	6.2		
Pub. admin., defense	594	5.2		
Services	226	2.0	5,881,000	42.6
Other	200 ¹⁷	1.8 ¹⁷		
TOTAL	11,402	100.0	13,806,000	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 7,500,000, cow's milk 5,300,000, sorghum 5,048,000, goat's milk 1,450,000, millet 792,000, wheat 642,000, tomatoes 580,000, peanuts (groundnuts) 460,000, cattle meat 340,000, dates 330,000, sesame seeds 260,000, seed cotton 240,000, gum arabic (2006–07) 11,242; livestock (number of live animals) 49,000,000 sheep, 42,000,000 goats, 39,500,000 cattle, 3,700,000 camels;

roundwood 20,283,000 cu m, of which fuelwood 89%; fisheries production 67,459 (from aquaculture 3%). Mining and quarrying (2007): marble 26,000 cu m; gold 2,787 kg. Manufacturing (2006): diesel 1,817,000; flour 1,200,000; benzene 1,139,000; sugar 730,000; cement 227,000; soap 75,000; animal hides and skins 9,400,000 units. Energy production (consumption): electricity (kW-hr; 2007) 5,021,000,000 (3,836,000,000); crude petroleum (barrels; 2008) 174,400,000 ([2006] 35,500,000); petroleum products (metric tons; 2006) 4,943,000 (3,714,000); natural gas, none (none).

Population economically active (2006)¹⁸: total 11,504,000; activity rate of total population 30.5% (participation rates: ages 15–64, 52.0%; female 30.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	78.9	85.0	92.2	100.0	107.2	115.7	132.3

Household income and expenditure. Average household size (2004) 6.2.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 262; remittances (2008) 1,850; foreign direct investment (2005–07 avg.) 2,761; official development assistance (2007) 2,104. Disbursements for (U.S.\$'000,000): tourism (2007) 1,477; remittances (2008) 2.

Land use as % of total land area (2007): in temporary crops 6.9%, in permanent crops 0.1%, in pasture 49.3%, forest area 27.9%.

Foreign trade¹⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−340	−297	−1,940	−2,417	+104	+2,319
% of total	6.3%	3.8%	16.7%	17.6%	0.6%	11.0%

Imports (2008): U.S.\$9,351,000,000 (machinery and equipment 32.7%; manufactured goods 20.7%; transport equipment 11.9%; wheat and wheat flour 7.6%; petroleum products 7.6%). **Major import sources:** China 23.1%; India 9.5%; Saudi Arabia 8.0%; U.A.E. 6.7%; Italy 3.3%.

Exports (2008): U.S.\$11,670,000,000 (crude petroleum 92.9%; refined petroleum 2.1%; sesame seeds 1.2%; gold 1.0%; cotton 0.5%; gum arabic 0.5%; livestock [mainly sheep and camels] 0.4%). **Major export destinations:** China 75.0%; Japan 9.7%; U.A.E. 4.1%; Saudi Arabia 0.9%.

Transport and communications

Transport. Railroads (2006): route length 4,578 km; passenger-km 49,000,000; metric ton-km cargo 893,000,000. Roads (2000): total length 11,900 km (paved 36%). Vehicles (2002): passenger cars 47,300; trucks and buses 62,500. Air transport (2004): passenger-km 758,000,000; metric ton-km cargo 100,000,000²⁰.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	12,886	352	PCs	2007	4,528	112
Telephones				Dailies	2007	92 ²¹	2.3 ²¹
Cellular	2008	11,186 ²²	271 ²²	Internet users	2008	3,800	92
Landline	2008	356	8.6	Broadband	2007	43 ²²	1.1 ²²

Education and health

Educational attainment: n.a. **Literacy** (2003): total population age 15 and over literate 60.9%; males 71.6%; females 50.4%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	107,933	3,959,310	36.7	41
Secondary/Voc. (age 12–16)	79,122	1,462,798	18.5	...
Tertiary	4,486 ²³	446,998 ²⁴	45.5 ²³	62 ²³ (age 17–21)

Health (2007): physicians 9,573 (1 per 4,224 persons); hospital beds 27,438 (1 per 1,474 persons); infant mortality rate (2006) 96.8; undernourished population (2002–04) 8,700,000 (26% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 109,300 (army 96.1%, navy 1.2%, air force 2.7%)²⁵. **Military expenditure as percentage of GDP** (2005): 1.8%; per capita expenditure U.S.\$13.

¹Alternately known as The Sudan. ²All appointed. ³Comprehensive peace agreement ending 21-year-long war in southern Sudan signed Jan. 9, 2005; interim constitution from July 9, 2005, to be effective for 6 years. ⁴Council of States meets in Khartoum; National Assembly meets in Omdurman; Juba is an alternating seat of “the interim power-sharing government.” ⁵Official working language per 2005 interim constitution. ⁶Islamic law and custom are applicable to Muslims only. ⁷The Sudanese pound (SDG) replaced the Sudanese dinar (SDD) on Jan. 10, 2007; 1 SDG = 100 SDD. ⁸Preliminary. ⁹Excludes disputed Abyei area. ¹⁰Areas of Northern and Southern Kordofan are estimated. ¹¹Includes disputed Abyei area. ¹²Reported (not summed) total includes a water area of 129,810 sq km. ¹³4.9 million Sudanese internally displaced in mid-2009 and about 250,000 were refugees in eastern Chad. ¹⁴Estimate of United Nations *World Population Prospects: The 2008 Revision*. ¹⁵Population of 2008 urban agglomeration (including Omdurman and Khartoum North) is 8.0 million including 1.2 to 1.5 million internally displaced persons. ¹⁶FAO estimate. ¹⁷Import duties. ¹⁸Estimates of ILO. ¹⁹Imports c.i.f.; exports f.o.b. ²⁰Includes weight of passengers and mail. ²¹Circulation of daily newspapers. ²²Subscribers. ²³1999–2000. ²⁴2004–05. ²⁵Foreign troops (t), police (p; September 2009): Southern Sudan—UN peacekeeping force (t) 8,800, (p) 700; Darfur—African Union/UN hybrid peacekeeping force (t) 14,600, (p) 3,900.

Internet resources for further information:

- Bank of Sudan <http://www.cbos.gov.sd>
- Central Bureau of Statistics <http://cbs.gov.sd>

Suriname

Official name: Republiek Suriname (Republic of Suriname).

Form of government: multiparty republic with one legislative house (National Assembly [51]).

Head of state and government: President.

Capital: Paramaribo.

Official language: Dutch.

Official religion: none.

Monetary unit: Suriname dollar

(SRD)¹; valuation (Sept. 1, 2009)

1 U.S.\$ = SRD 2.75; 1 £ = SRD 4.45.



Area and population

Districts	Capitals	area		population
		sq mi	sq km	2004 census
Brokopondo	Brokopondo	2,843	7,364	14,215
Commewijne	Nieuw Amsterdam	908	2,353	24,649
Coronie	Totness	1,507	3,902	2,887
Marowijne	Albina	1,786	4,627	16,642
Nickerie	Nieuw Nickerie	2,067	5,353	36,639
Para	Onverwacht	2,082	5,393	18,749
Saramacca	Groningen	1,404	3,636	15,980
Sipaliwini	²	50,412	130,567	34,136
Wanica	Lelydorp	171	443	85,986
Town district				
Paramaribo	Paramaribo	70	182	242,946
TOTAL		63,251 ^{3, 4}	163,820 ³	492,829

Demography

Population (2009): 520,000.

Density (2009): persons per sq mi 8.2, persons per sq km 3.2.

Urban-rural (2005): urban 73.9%; rural 26.1%.

Sex distribution (2006): male 49.71%; female 50.29%.

Age breakdown (2006): under 15, 28.5%; 15–29, 26.8%; 30–44, 24.3%; 45–59, 12.0%; 60–74, 6.2%; 75 and over, 2.2%.

Population projection: (2020) 568,000; (2030) 602,000.

Doubling time: 58 years.

Ethnic composition (2004): Indo-Pakistani (“Hindustani”) 27.4%; Suriname Creole (“Afro-Surinamese”) 17.7%; Maroon (descendants of runaway slaves living in the interior) 14.7%; Javanese (“Indonesian”) 14.6%; mixed race 12.5%; Amerindian c. 1.5%; other/unknown c. 11.6%.

Religious affiliation (2004): Christian (mostly Roman Catholic and Moravian) 40.7%; Hindu 19.9%; Muslim 13.5%; nonreligious 4.4%; traditional beliefs 3.3%; other 2.5%; unknown 15.7%.

Major city/towns (2004): Paramaribo 242,946; Nieuw Nickerie 13,842; Nieuw Amsterdam 5,489.

Vital statistics

Birth rate per 1,000 population (2006): 17.6 (world avg. 20.3).

Death rate per 1,000 population (2006): 5.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2006): 12.1 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2006): 2.05.

Marriage/divorce rates per 1,000 population (2007): 4.2/1.3.

Life expectancy at birth (2006): male 70.3 years; female 75.8 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 265; communicable diseases 172; malignant neoplasms (cancers) 87; injuries 76; diabetes mellitus 32.

Adult population (ages 15–49) *living with HIV* (2007): 2.4%⁵ (world avg. 0.8%).

National economy

Budget (2007). Revenue: SRD 2,002,000,000 (tax revenue 79.1%, of which corporate taxes 22.0%, taxes on international trade 21.5%, income tax 15.4%; nontax revenue 16.0%; grants 4.9%). Expenditures: SRD 1,806,500,000 (current expenditures 87.5%, of which wages and salaries 37.6%, transfers 12.0%, interest 5.2%; capital expenditures 12.5%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 195,000, sugarcane 120,000, bananas 44,000, oranges 13,050, plantains 12,000, coconuts 9,000, cassava 4,350; livestock (number of live animals) 137,000 cattle, 24,500 pigs, 3,800,000 chickens; roundwood 213,900 cu m, of which fuelwood 21%; fisheries production 29,679 (from aquaculture 1%). Mining and quarrying (2007): bauxite 5,331,000; alumina 2,152,000; gold 9,362 kg⁶. Manufacturing (value of production at factor cost in SRG; 1993): food products 992,000,000; beverages 558,000,000; tobacco 369,000,000; chemical products 291,000,000; pottery and earthenware 258,000,000; wood products 180,000,000. Energy production (consumption): electricity (kw-hr; 2006) 1,618,000,000 (1,618,000,000); coal, none (none); crude petroleum (barrels; 2006) 4,800,000 (3,478,000); petroleum products (metric tons; 2006) 401,000 (624,000); natural gas, none (none).

Population economically active (2004): total 173,130; activity rate of total population 35.1% (participation rates: ages 15–64, 56.0%; female 36.7%; unemployed 9.5%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	67.2	82.7	91.0	100.0	111.3	118.8	134.5

Gross national income (GNI; 2008): U.S.\$2,570,000,000 (U.S.\$4,990 per capita); purchasing power parity GNI (U.S.\$7,130 per capita).

Structure of gross domestic product and labour force

	2006		2004	
	in value SRD '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	272,799	4.7	12,593	7.3
Mining and quarrying	687,804	11.9	9,308	5.4
Manufacturing	749,826	12.9	10,971	6.3
Construction	176,858	3.1	14,031	8.1
Public utilities	274,092	4.7	1,659	1.0
Transp. and commun.	459,316	7.9	8,711	5.0
Trade, hotels	633,094	10.9	29,845	17.2
Finance, real estate	600,206	10.3	9,073	5.2
Pub. admin., defense	553,809	9.5	27,995	16.2
Services	66,952	1.2	25,063	14.5
Informal sector ⁷	808,561	13.9	...	...
Other	519,148 ⁸	9.0 ⁸	23,881 ⁹	13.8 ⁹
TOTAL	5,802,465	100.0	173,130	100.0

Public debt (external, outstanding; 2007): U.S.\$161,100,000.

Household income and expenditure (2004). Average household size 4.0; average disposable income per household SRD 32,150 (U.S.\$11,760); sources of income: n.a.; expenditure (2000)¹⁰: food and beverages 40.0%, housing, energy, and household furnishings 23.6%, clothing and footwear 11.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 67; remittances (2008) 140; foreign direct investment (FDI; 2005–07 avg.) 346; official development assistance (2007) 151. Disbursements for (U.S.\$'000,000): tourism (2007) 22; remittances (2008) 65.

Land use as % of total land area (2007): in temporary crops 0.4%, in permanent crops 0.04%, in pasture 0.1%, forest area 94.7%.

Foreign trade¹¹

Balance of trade (current prices)

	2002	2003	2004	2005	2006
U.S.\$'000,000	+52.5	–30.2	+170.4	–115.8	+93.7
% of total	5.2%	2.3%	10.8%	5.9%	3.5%

Imports (2005): U.S.\$1,099,900,000 (machinery and transport equipment 26.8%, mineral fuels 15.6%, food products 9.1%, chemicals and chemical products 6.9%). **Major import sources** (2007): U.S. 31.7%; Netherlands 20.4%; Trinidad and Tobago 17.9%; China 5.5%; Japan 3.6%.

Exports (2005): U.S.\$929,100,000 (alumina 48.1%; gold 36.4%; shrimp and fish 6.1%; crude petroleum 5.8%; rice 1.5%). **Major export destinations** (2007): Canada 23.0%; Norway 14.4%; U.S. 12.1%; Trinidad and Tobago 7.2%; France 5.4%.

Transport and communications

Transport. Railroads (2003)¹²: length 98 mi, 157 km; passengers, n.a.; cargo, n.a. Roads (2003): total length 2,674 mi, 4,304 km (paved 26%). Vehicles (2006): passenger cars 81,778; trucks and buses 28,774. Air transport (2008)¹³: passenger-km 958,323,000; metric ton-km cargo 25,794,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	118	243	PCs	2001	20	45
Telephones				Dailies	2007	55 ¹⁴	162 ¹⁴
Cellular	2008	416 ¹⁵	808 ¹⁵	Internet users	2008	50	97
Landline	2008	82	158	Broadband	2008	5.8 ¹⁵	11 ¹⁵

Education and health

Educational attainment: n.a. **Literacy** (2004): total population age 15 and over literate 89.6%; males literate 92.0%; females literate 87.2%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	4,913	65,020	13.2	94
Secondary/Voc. (age 12–18)	3,373	47,235	14.0	68 ¹⁶
Tertiary ¹⁷	550	5,186	9.4	12 (age 19–23)

Health: physicians (2001) 236 (1 per 2,000 persons); hospital beds (2005) 1,797 (1 per 278 persons); infant mortality rate per 1,000 live births (2006) 20.8; undernourished population (2002–04) 40,000 (8% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2008): 1,840¹⁸ (army 76.1%, navy 13.0%, air force 10.9%). **Military expenditure as percentage of GDP** (2007): 1.0%; per capita expenditure U.S.\$43.

¹The Suriname dollar (SRD) replaced the Suriname guilder (SRG) on Jan. 1, 2004, at a rate of 1 SRD = SRG 1,000. ²No capital; administered from Paramaribo. ³Area excludes 6,809 sq mi (17,635 sq km) of territory disputed with Guyana. ⁴Detail does not add to total given because of rounding. ⁵Statistically derived midpoint within range. ⁶Recorded production; unrecorded production may be as high as 30,000 kg. ⁷Smuggling or unregulated activities in such areas as gold mining and tree removal. ⁸Indirect taxes less subsidies and less imputed bank service charges. ⁹Includes 16,425 unemployed. ¹⁰Weights of consumer price index components. ¹¹Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹²There are no public railways operating in Suriname; 52 mi (83 km) of the private railroad were operational in 2003. ¹³Surinam Airways only. ¹⁴Circulation of daily newspapers. ¹⁵Subscribers. ¹⁶2004–05. ¹⁷2001–02. ¹⁸All services are part of the army.

Internet resource for further information:
• General Bureau of Statistics <http://www.statistics-suriname.org>

Swaziland

Official name: Umbuso weSwatini (Swati); Kingdom of Swaziland (English).

Form of government: monarchy¹ with two legislative houses (Senate [30²]; House of Assembly [66³]).

Head of state and government: King, assisted by Prime Minister.

Capitals: Mbabane (administrative and judicial); Lobamba (legislative)⁴.

Official languages: Swati (Swazi); English.

Official religion: none.

Monetary unit: lilangeni (plural emalangeni [E]); valuation (Sept. 1, 2009) 1 U.S.\$ = E 7.79; 1 £ = E 12.64.



Area and population		area		population
Districts	Capitals	sq mi	sq km	2007 census
Hhohho	Mbabane	1,378	3,569	263,761
Lubombo	Siteki	2,296	5,947	193,817
Manzini	Manzini	1,571	4,068	293,260
Shiselweni	Nhlanguano	1,459	3,780	202,686
TOTAL		6,704	17,364	953,524 ⁵

Demography

Population (2009): 1,337,000⁶.

Density (2009): persons per sq mi 199.4, persons per sq km 77.0.

Urban-rural (2007): urban 22.1%; rural 77.9%.

Sex distribution (2008)⁶: male 49.60%; female 50.40%.

Age breakdown (2008)⁶: under 15, 38.9%; 15–29, 31.5%; 30–44, 15.8%; 45–59, 8.6%; 60–74, 4.2%; 75–84, 0.9%; 85 and over, 0.1%.

Population projection⁶: (2020) 1,513,000; (2030) 1,651,000.

Ethnic composition (2000): Swazi 82.3%; Zulu 9.6%; Tsonga 2.3%; Afrikaner 1.4%; mixed (black-white) 1.0%; other 3.4%.

Religious affiliation (2006): Protestant c. 35%; syncretistic Christianity/traditional beliefs c. 30%; Roman Catholic c. 25%; Muslim c. 1%; other (including Bahā'ī and Mormon) c. 9%.

Major towns (2006): Manzini (urban agglomeration) 115,200; Mbabane 78,700; Lobamba 11,000; Big Bend 10,400; Malkerns 10,000.

Vital statistics

Birth rate per 1,000 population (2008)⁶: 29.1 (world avg. 20.3).

Death rate per 1,000 population (2008)⁶: 14.9 (world avg. 8.5).

Natural increase rate per 1,000 population (2008)⁶: 14.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008)⁶: 3.45.

Life expectancy at birth (2008)⁶: male 47.8 years; female 48.2 years.

Adult population (ages 15–49) *living with HIV* (2007): 26.1%⁷ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): infectious and parasitic diseases c. 1,846, of which HIV/AIDS-related c. 1,560, tuberculosis c. 94; cardiovascular diseases c. 138; respiratory infections c. 126; malignant neoplasms (cancers) c. 71.

National economy

Budget (2008–09). Revenue: E 9,208,400,000 (receipts from Customs Union of Southern Africa 65.3%, individual income taxes 10.9%, sales taxes 8.2%, taxes on companies 5.8%). Expenditures: E 9,538,000,000 (general administration 31.5%, education 19.9%, transportation and communications 11.8%, police/defense 11.0%, agriculture 9.2%, health 8.8%).

Public debt (external; March 2009): U.S.\$379,700,000¹².

Gross national income (GNI; 2008): U.S.\$2,945,000,000 (U.S.\$2,520 per capita); purchasing power parity GNI (U.S.\$5,010 per capita).

Structure of gross domestic product and labour force				
	2007		2005	
	in value E '000,000	% of total value	labour force ⁸	% of labour force ⁸
Agriculture	1,277.3	6.3	42,455 ⁹	12.8 ⁹
Mining	60.4	0.3	1,283	0.4
Manufacturing	7,717.1	37.8	20,272	6.1
Construction	666.3	3.3	5,115	1.5
Public utilities	148.8	0.7	859	0.3
Transp. and commun.	1,243.6	6.1	3,007	0.9
Trade, hotels	1,483.7	7.3	11,454	3.5
Finance, real estate	1,248.1	6.1	6,430	1.9
Pub. admin., defense	3,395.0	16.6	27,228	8.2
Services	525.1	2.6		
Other	2,621.0 ¹⁰	12.9 ¹⁰	213,697 ¹¹	64.4 ¹¹
TOTAL	20,386.4	100.0	331,800	100.0

Population economically active (2006): total 337,200; activity rate of total population 32.8% (participation rates: ages 15 and over, n.a.; female, n.a.; unemployed, c. 30%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	86.0	92.2	95.4	100.0	105.3	113.8	128.2

Land use as % of total land area (2007): in temporary crops 10.3%, in permanent crops 0.8%, in pasture 66.9%, forest area 32.0%¹³.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 5,000,000, corn (maize) 68,000, grapefruit and pomelos 37,000, oranges 36,000, pineapples 31,000, seed cotton 7,200, potatoes 6,000, peanuts (groundnuts) 4,100; livestock (number of live animals) 585,000 cattle, 276,000 goats, 3,200,000 chickens; roundwood 1,342,000 cu m, of which fuelwood 75%; fisheries production 70 (from aquaculture, negligible). Mining and quarrying (2008): ferrovanadium 500; crushed stone 300,000 cu m. Manufacturing (value of exports in U.S.\$'000; 2007): apparel and clothing accessories (2002) 173,500; sugar 159,821; unbleached wood pulp 97,099; preserved fruit (significantly pineapples) 21,404; wood furniture (2002) 11,800. Energy production (consumption): electricity (kW-hr; 2008) 212,000,000 (1,001,700,000); hard coal (metric tons; 2008) 250,000 ([2007] 223,000); crude petroleum, none (none); petroleum products, none (n.a.); natural gas, none (none).

Household income and expenditure. Average household size (2006–07) 4.6; average annual income per household (2002) c. U.S.\$1,540; sources of income, n.a.; expenditure (1996)¹⁴: food 24.5%, housing 15.9%, household furnishings and operation 13.2%, clothing and footwear 11.0%, transportation and communications 8.2%, education 6.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 32; remittances (2008) 100; foreign direct investment (2005–07 avg.) 8; official development assistance (2007) 63. Disbursements for (U.S.\$'000,000): tourism (2007) 51; remittances (2008) 8.

Foreign trade¹⁵

Balance of trade (current prices)				
	2003	2004	2005	2006
U.S.\$'000,000	+299.3	+400.2	–84.2	+222.7
% of total	9.5%	10.0%	2.6%	7.8%

Imports (2007): U.S.\$1,164,200,000 (food products 18.2%, of which cereals/flour 7.6%; chemicals and chemical products 13.6%; refined petroleum 13.4%; machinery and apparatus 12.5%; road vehicles/parts 6.5%). **Major import sources:** South Africa 92.9%; Namibia 2.2%; Lesotho 1.4%.

Exports (2007): U.S.\$1,082,300,000 (essential oils for food/drink industries 29.4%; food 21.0%, of which raw sugar 14.1%; silicates 19.9%; apparel/clothing accessories 4.4%; organic chemicals 4.3%; rough/sawn wood 4.2%). **Major export destinations:** South Africa 45.2%; Botswana 31.6%; U.K. 14.2%; U.S. 3.2%.

Transport and communications

Transport. Railroads (2006): route length 187 mi, 301 km; passenger-km, n.a.¹⁶; metric ton-km cargo (2004) 710,000,000. Roads (2002): total length 2,233 mi, 3,594 km (paved 30%). Vehicles (2004)¹⁷: passenger cars 44,113; trucks and buses 47,761. Air transport: n.a.

Communications					
Medium	date	number in '000s	units per 1,000 persons	Medium	date
Televisions	2003	38	34	PCs	2006
Telephones				Dailies	2007
Cellular	2008	457 ¹⁹	346 ¹⁹	Internet users	2008
Landline	2008	44	33	Broadband	2008

Education and health

Educational attainment (2006–07)²⁰. Percentage of population age 25 and over having: no formal schooling 22.3%; incomplete primary education 23.9%; complete primary 10.1%; incomplete/complete secondary 33.6%; higher 8.9%; unknown 1.2%. **Literacy** (2007): total population age 15 and over literate 84.0%; males literate 84.7%; females literate 83.4%.

Education (2004–05)			
	teachers	students	student/ teacher ratio
Primary (age 6–12)	6,741	221,596	32.9
Secondary/Voc. (age 13–17)	4,241	71,124	16.8
Tertiary ²¹	462	5,692	12.3

Health: physicians (2004) 171 (1 per 7,240 persons); hospital beds (2006) 2,688 (1 per 476 persons); infant mortality rate per 1,000 live births (2008) 72.4⁶; undernourished population (2002–04) 250,000 (22% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (2006): c. 3,000 troops. **Military expenditure as percent of GDP** (2004): 1.8%; per capita expenditure U.S.\$39.

¹Controversial constitution became effective by royal decree on Feb. 8, 2006. ²Includes 20 nonelective seats. ³Includes 10 nonelective seats and one ex officio seat (the speaker who may be designated from outside the House of Assembly). ⁴Lobamba and Ludzizini, royal residences close to Lobamba, have national symbolic significance. ⁵Preliminary de jure figure; undefined final census figure equals 1,018,449. ⁶Estimate of U.S. Bureau of the Census International Data Base (June 2009 update). ⁷Statistically derived midpoint of range. ⁸Rough estimates. ⁹Includes informally employed. ¹⁰Indirect taxes less imputed bank service charges and less subsidies. ¹¹Includes unemployed. ¹²Includes public short-term external debt. ¹³Forest area overlaps with other categories. ¹⁴Weights of consumer price index components. ¹⁵Imports c.i.f.; exports f.o.b. ¹⁶Passenger service is for tourists and private charter only. ¹⁷January 1. ¹⁸Circulation of daily newspapers. ¹⁹Subscribers. ²⁰Based on 4,457 individuals age 25 and over in the Swaziland Demographic and Health Survey 2006–07. ²¹2005–06.

Internet resources for further information:

- Central Bank of Swaziland <http://www.centralbank.org.sz>
- Swaziland Government <http://www.gov.sz>

Sweden

Official name: Konungariket Sverige (Kingdom of Sweden).

Form of government: constitutional monarchy with one legislative house (Riksdag, or Parliament [349]).

Chief of state: King.

Head of government: Prime Minister.

Capital: Stockholm.

Official language: Swedish.

Official religion: none.

Monetary unit: Swedish krona (SEK); valuation (Sept. 1, 2009)

1 U.S.\$ = SEK 7.17; 1 £ = SEK 11.63.



Area and population

	area	population		area	population
	sq km	2009 ¹ estimate		sq km	2009 ¹ estimate
Counties			Counties		
Blekinge	3,055	152,259	Södermanland	6,607	267,524
Dalarna	30,404	275,867	Stockholm	6,789	1,981,263
Gävleborg	19,756	275,908	Uppsala	7,206	327,188
Gotland	3,184	57,004	Värmland	19,388	273,374
Halland	5,719	293,572	Västerbotten	59,284	257,812
Jämtland	54,100	126,897	Västernorrland	23,107	243,372
Jönköping	11,253	335,246	Västmanland	6,614	249,974
Kalmar	11,694	233,397	Västra Götaland	25,389	1,558,130
Kronoberg	9,429	182,224	TOTAL LAND AND		
Norrbottnen	106,012	249,677	SMALL LAKES AREA	441,348 ²	
Örebro	9,343	277,732	4 LARGE LAKES	8,926 ²	
Östergötland	11,646	423,169	OTHER UNDISTRIBUTED	21	
Skåne	11,369	1,214,758	TOTAL	450,295	9,256,347

Demography

Population (2009): 9,290,000.

Density (2009)³: persons per sq mi 58.6, persons per sq km 22.6.

Urban-rural (2008): urban 85.0%; rural 15.0%.

Sex distribution (2009¹): male 49.74%; female 50.26%.

Age breakdown (2009¹): under 15, 16.7%; 15–29, 19.3%; 30–44, 20.4%; 45–59, 19.1%; 60–74, 15.9%; 75–89, 7.8%; 90 and over, 0.8%.

Population projection: (2020) 9,840,000; (2030) 10,207,000.

Ethnic composition (2009¹): Swedish 86.2%; other European 7.9%, of which Finnish 1.9%; Asian 3.9%, of which Iraqi 1.2%; other 2.0%.

Religious affiliation (2005): Church of Sweden (including nonpracticing) c. 77%; other Protestant c. 4.5%; Muslim c. 4%; Roman Catholic c. 1.5%; Orthodox c. 1%; other c. 12%.

Major cities (2009¹): Stockholm 810,120; Göteborg 500,197; Malmö 286,535; Uppsala 190,668; Linköping 141,863.

Vital statistics

Birth rate per 1,000 population (2008): 11.8 (world avg. 20.3); (2008) within marriage 45.4%, outside of marriage 54.6%.

Death rate per 1,000 population (2008): 9.9 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.91.

Marriage/divorce rates per 1,000 population (2008): 5.5/2.3.

Life expectancy at birth (2008): male 79.1 years; female 83.2 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 415.2, of which ischemic heart disease 183.8, cerebrovascular disease 85.1; malignant neoplasms (cancers) 247.5; diseases of the respiratory system 62.3.

National economy

Budget (2007). Revenue: SEK 857,200,000,000 (current revenue 95.2%, of which tax revenue 87.7%; capital revenue 2.1%; other 2.7%). Expenditures: SEK 768,604,000,000 (social insurance 37.6%; defense 6.0%; health 5.9%; education 5.7%; debt service 5.4%).

Public debt (October 2009): U.S.\$157,935,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): wheat 2,241,600, sugar beets 1,975,000, barley 1,671,600, potatoes 853,000, oats 820,000, triticale 274,100, rapeseed 259,400; livestock (number of live animals) 1,609,289 pigs, 1,558,381 cattle, 524,780 sheep, (2006) 254,893 reindeer; roundwood (2007) 77,200,000 cu m, of which fuelwood 8%; fisheries production (2007) 243,618 (from aquaculture 2%). Mining and quarrying (2007): iron ore 16,100,000; zinc 214,576; copper 62,905; silver 323,171 kg⁵. Manufacturing (value added in SEK '000,000; 2007⁶): electrical machinery, telecommunications equipment, and electronics 243,346; transportation equipment 81,295; nonelectrical machinery 70,506; chemicals and chemical products 63,716; paper and paper products 46,860; fabricated metal products 44,637; food, beverages, and tobacco 36,518; base metals 26,466. Energy production (consumption): electricity (kW-hr; 2008–09) 136,553,000,000 ([2008] 159,114,000,000); coal (metric tons; 2006) none (3,235,000); crude petroleum (barrels; 2008) none (128,417,950); petroleum products (metric tons; 2006) 17,682,000 (11,390,000); natural gas (cu m; 2008) none (913,000,000).

Household income and expenditure (2008). Average household size 2.1; average annual disposable income per household (2004) SEK 258,900 (U.S.\$35,230); sources of gross income (2004): wages and salaries 60.2%, transfer payments 30.7%, self-employment 2.8%; expenditure: housing and energy 24.6%, recreation and culture 18.9%, transportation 17.3%, food and nonalcoholic beverages 16.2%, household furnishings 5.9%.

Land use as % of total land area (2007): in temporary crops 6.4%, in permanent crops 0.01%, in pasture 1.2%, forest area 67.1%.

Gross national income (GNI; 2008): U.S.\$469,744,000,000 (U.S.\$50,940 per capita); purchasing power parity GNI (U.S.\$38,180 per capita).

Structure of gross domestic product and labour force

	2008			
	in value SEK '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	42,993	1.4	101,000	2.1
Mining and quarrying	18,442	0.6	9,000	0.2
Manufacturing	525,867	16.7	655,000	13.4
Public utilities	87,669	2.8	24,000	0.5
Construction	141,497	4.5	306,000	6.2
Transp. and commun.	175,171	5.5	275,000	5.6
Trade, hotels	362,886	11.5	711,000	14.5
Finance, real estate	671,406	21.3	791,000	16.2
Pub. admin., defense	560,210	17.7	261,000	5.3
Services	181,469	5.7	1,455,000	29.7
Other	389,271 ⁷	12.3 ⁷	310,000 ⁸	6.3 ⁸
TOTAL	3,156,881	100.0	4,898,000	100.0

Population economically active (2008): total 4,898,000; activity rate of total population 53.2% (participation rates: ages 15–74, 71.2%; female 47.4%; unemployed [October 2009] 8.1%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.3	99.2	99.5	100.0	101.4	103.6	107.2
Hourly earnings index	92.0	94.6	97.1	100.0	103.0	106.6	111.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 12,004; remittances (2008) 822; foreign direct investment (FDI; 2005–07 avg.) 18,094. Disbursements for (U.S.\$'000,000): tourism (2007) 13,972; remittances (2008) 912; FDI (2005–07 avg.) 28,747.

Foreign trade⁹

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
SEK '000,000	+149,100	+146,500	+165,600	+143,500	+159,300	+120,400
% of total	10.2%	9.7%	10.1%	7.9%	8.1%	5.6%

Imports (2006): SEK 908,300,000,000 (road vehicles 10.9%; crude and refined petroleum 10.8%; nonelectrical machinery and apparatus 10.1%; office machines/telecommunications equipment 9.9%; base metals 6.8%). **Major import sources:** Germany 17.9%; Denmark 9.4%; Norway 8.7%; Netherlands 6.3%; U.K. 6.2%; Finland 5.9%.

Exports (2006): SEK 1,067,600,000,000 (nonelectrical machinery and apparatus 14.4%; road vehicles 13.6%; telecommunications equipment 8.5%; paper and paper products 6.8%; medicines and pharmaceuticals 6.0%; iron and steel 5.7%). **Major export destinations:** Germany 9.9%; U.S. 9.4%; Norway 9.3%; U.K. 7.2%; Denmark 7.0%; Finland 6.1%.

Transport and communications

Transport. Railroads (2006): length (2008) 11,633 km; passenger-km 9,642,000,000; metric ton-km cargo 22,271,000,000. Roads (2008): total length 425,440 km (paved 33%). Vehicles (2009¹): passenger cars 4,270,031; trucks and buses 522,313. Air transport (2008–09): passenger-km 4,721,000,000; metric ton-km cargo 1,603,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	8,645	965	PCs	2005	7,548	836
Telephones				Dailies	2007	4,595 ¹⁰	503 ¹⁰
Cellular	2008	10,892 ¹¹	1,183 ¹¹	Internet users	2008	8,086	878
Landline	2008	5,323	578	Broadband	2008	3,791 ¹¹	412 ¹¹

Education and health

Educational attainment (2008). Percentage of population age 16–74 having: incomplete or complete primary education 7.6%; lower secondary 15.0%; upper secondary 44.5%; vocational and higher 30.9%; unknown 2.0%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	62,897	626,847	10.0	95
Secondary/Voc. (age 13–18)	79,085	750,567	9.5	99
Tertiary	36,386	422,614	11.6	79 (age 19–23)

Health (2007): physicians 29,400 (1 per 311 persons); hospital beds 26,184 (1 per 349 persons); infant mortality rate per 1,000 live births (2008) 2.5; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 16,900 (army 60.4%, navy 18.3%, air force 21.3%); reserve 262,000. **Military expenditure as percentage of GDP** (2008): 1.2%; per capita expenditure U.S.\$570.

¹January 1. ²Area of small lakes equals 31,034 sq km; total inland water area including 4 large lakes equals 39,960 sq km. ³Density based on land area only (410,335 sq km). ⁴Foreign-born persons or those with both parents born abroad are identified by country of origin. ⁵Metal content. ⁶At constant prices of 2000. ⁷Taxes less subsidies. ⁸Includes 305,000 unemployed. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation of daily newspapers. ¹¹Subscribers.

Internet resources for further information:

- Statistics Sweden <http://www.scb.se>
- Sveriges Riksbank <http://www.riksbank.com>

Switzerland

Official name: Swiss Confederation¹.
Form of government: federal state with
 two legislative houses (Council of
 States [46]; National Council [200]).
Head of state and government:
 President of the Federal Council.
Capital: Bern².
Official languages: French; German;
 Italian; Romansh (locally).
Official religion: none.
Monetary unit: Swiss franc (CHF);
 valuation (Sept. 1, 2009) 1 U.S.\$ =
 CHF 1.06; 1 £ = CHF 1.72.



Area and population					
	area	population		area	population
		2008 ³			2008 ³
		estimate			estimate
Cantons	sq km		Cantons	sq km	
Aargau	1,404	581,100	Nidwalden ⁴	276	40,400
Appenzell Ausser-Rhodens ⁴	243	52,900	Obwalden ⁴	491	34,100
Appenzell Inner-Rhodens ⁴	173	15,500	Sankt Gallen	2,026	465,900
Basel-Landschaft ⁴	518	269,000	Schaffhausen	298	74,500
Basel-Stadt ⁴	37	185,000	Schwyz	908	141,000
Bern	5,959	962,700	Solothurn	791	250,400
Fribourg	1,671	264,000	Thurgau	991	238,200
Genève	282	437,400	Ticino	2,812	328,700
Glarus	685	38,100	Uri	1,077	34,900
Graubünden	7,105	188,400	Valais	5,224	298,900
Jura	839	69,600	Vaud	3,212	671,700
Luzern	1,493	363,000	Zug	239	109,000
Neuchâtel	803	170,000	Zürich	1,729	1,307,300
			TOTAL	41,285 ⁵	7,591,400 ^{5, 6}

Demography

Population (2009): 7,739,000.
Density (2009): persons per sq km 485.5, persons per sq km 187.5.
Urban-rural (2005): urban 75.2%; rural 24.8%.
Sex distribution (2008³): male 49.08%; female 50.92%.
Age breakdown (2008³): under 15, 15.5%; 15–29, 18.3%; 30–44, 23.0%; 45–59, 20.9%; 60–74, 14.4%; 75–84, 5.7%; 85 and over, 2.2%.
Population projection: (2020) 8,339,000; (2030) 8,786,000.
National composition (2008³): Swiss 78.9%; Italian 3.8%; German 2.7%; Serb/Montenegrin 2.5%; Portuguese 2.4%; Turkish 1.0%; other 8.7%.
Religious affiliation (2000): Roman Catholic 41.8%; Protestant 33.0%; Muslim 4.3%; Orthodox 1.8%; Jewish 0.2%; other Christian 2.7%; nonreligious 11.1%; other 0.8%; unknown 4.3%.
Major urban agglomerations (2008³): Zürich 1,132,200; Geneva 503,600; Basel 489,900; Bern 346,300; Lausanne 317,000; Luzern (2007³) 200,282.

Vital statistics

Birth rate per 1,000 population (2008): 10.1 (world avg. 20.3); within marriage 83.0%; outside of marriage 17.0%.

Death rate per 1,000 population (2008): 8.1 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.48.

Marriage/divorce rates per 1,000 population (2008): 5.4/2.6.

Life expectancy at birth (2008): male 79.7 years; female 84.4 years.

Major causes of death per 100,000 population (2005): diseases of the circulatory system 307.4; malignant neoplasms (cancers) 207.3; diseases of the respiratory system 57.4; accidents, suicide, violence 46.5.

National economy

Budget (2007)⁷. Revenue: CHF 165,097,000,000 (tax revenue 59.1%, of which taxes on income and wealth 39.6%; nontax revenue 22.2%; social security obligations 18.7%). Expenditures: CHF 170,738,000,000 (social security 19.0%; social welfare 16.2%; education 16.2%; health 11.3%; transportation 8.4%; defense 2.9%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 4,000,000, sugar beets 1,584,000, wheat 562,200, potatoes 490,000, apples 250,000, pig meat 250,000, cattle meat 135,000, grapes 130,000, pears 80,000; livestock (number of live animals) 1,650,000 pigs, 1,565,000 cattle; roundwood 5,690,558 cu m, of which fuelwood 23%; fisheries production 2,594 (from aquaculture 47%). Mining (2007): salt 560,000.⁸ Manufacturing (value added in CHF '000,000; 2006): chemicals/chemical products/refined petroleum 18,260; professional and scientific equipment/ watches 13,488; non-electrical machinery and apparatus 12,804; fabricated metal products 8,564; food products, beverages, and tobacco 8,325. Energy production (consumption): electricity (kW-hr; 2007) 65,918,000,000 ([2006] 66,741,000,000); hard coal (metric tons; 2006) none (152,000); crude petroleum (barrels; 2006) none (39,800,000); petroleum products (metric tons; 2006) 5,418,000 (10,924,000); natural gas (cu m; 2006) none (3,226,000,000).

Population economically active (2006): total 4,220,000⁹; activity rate of total population 55.8% (participation rates: ages 15–64, 81.2%; female 45.7%; unemployed [May 2007–April 2008] 2.6%).

Price index (2005 = 100)	2002	2003	2004	2005	2006	2007	2008
Consumer price index	97.4	98.1	98.8	100.0	101.1	101.8	104.3

Household income and expenditure (2007). Average household size (2008) 2.2; average disposable income per household CHF 75,312 (U.S.\$62,739); sources of income: wages and salaries 63.8%, transfers 21.5%, self-employment

10.0%, investment income 4.7%; expenditure: housing and energy 16.0%, transportation 8.3%, recreation 7.4%, food and nonalcoholic beverages 7.1%, restaurants and hotels 6.0%.
Gross national income (GNI; 2008): U.S.\$498,534,000,000 (U.S.\$65,330 per capita); purchasing power parity GNI (U.S.\$46,460 per capita).

Structure of gross domestic product and labour force				
	2007			
	in value CHF '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	5,801	1.1	160,000	3.7
Mining	804	0.2	5,000	0.1
Manufacturing	98,306	18.9	684,000	15.7
Public utilities	9,701	1.9	24,000	0.5
Construction	26,516	5.1	297,000	6.8
Transp. and commun.	30,530	5.9	253,000	5.8
Trade, restaurants	75,771	14.5	806,000	18.4
Finance, insurance ¹⁰	119,437	22.9	672,000	15.4
Pub. admin., defense	50,621	9.7	158,000	3.6
Services	73,609	14.1	837,000	19.2
Other	29,971 ¹¹	5.8 ¹¹	473,000	10.8
TOTAL	521,068 ⁹	100.0 ⁹	4,369,000	100.0

Public debt (December 2006): U.S.\$188,701,000,000.
Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 12,185; remittances (2008) 2,358; foreign direct investment (FDI: 2005–07 avg.) 21,708. Disbursements for (U.S.\$'000,000): tourism (2007) 10,265; remittances (2008) 18,954; FDI (2005–07 avg.) 57,429.
Land use as % of total land area (2007): in temporary crops 10.2%, in permanent crops 0.6%, in pasture 28.3%, forest area 30.7%.

Foreign trade¹²

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
CHF '000,000	+6,877	+9,325	+7,883	+8,095	+13,892	+19,447
% of total	2.6%	3.3%	2.6%	2.2%	3.6%	4.9%

Imports (2006): CHF 177,287,000,000 (machinery and apparatus 18.8%, medicine and pharmaceuticals 10.5%, base and fabricated metals [excluding gold] 10.2%, mineral fuels 7.9%, road vehicles 6.5%). *Major import sources* (2008): Germany 34.7%; Italy 11.4%; France 9.7%; U.S. 5.1%; Netherlands 4.8%.

Exports (2006): CHF 185,382,000,000 (medicine and pharmaceuticals 21.1%, nonelectrical machinery and equipment 15.1%, wrist watches 6.9%, organic chemicals 6.8%). *Major export destinations* (2008): Germany 20.3%; U.S. 9.4%; Italy 8.8%; France 8.6%; U.K. 4.7%.

Transport and communications

Transport. Railroads (2005): length (2006) 5,062 km; passenger-km 16,144,000,000; metric ton-km cargo 10,149,000,000. Roads (2007³): total length 71,353 km. Vehicles (2007): passenger cars 3,955,787; trucks and buses 324,153. Air transport (2008): passenger-km 28,140,000,000; metric ton-km cargo 1,142,000,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	4,300	576	PCs	2007	6,977	918
Telephones				Dailies	2007	3,695 ¹³	576 ¹³
Cellular	2008	8,897 ¹⁴	1,180 ¹⁴	Internet users	2008	5,739	761
Landline	2008	4,835	641	Broadband	2008	2,576 ¹⁴	342 ¹⁴

Education and health

Educational attainment (2008). Percentage of resident Swiss and resident alien population age 25–64 having: compulsory education 13.2%; secondary 53.1%; higher 33.7%.

Education (2005–06)	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–12)	...	517,056	...	89
Secondary/Voc. (age 13–19)	...	584,073	...	82
Tertiary	32,545	204,999	6.3	46 (age 20–24)

Health: physicians (2005) 28,251 (1 per 263 persons); hospital beds (2006) 40,347 (1 per 185 persons); infant mortality rate per 1,000 live births (2008) 4.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 22,823¹⁵. *Military expenditure as percentage of GDP* (2008): 0.9%; *per capita expenditure* U.S.\$515.

¹Official long-form name in French is Confédération Suisse; in German, Schweizerische Eidgenossenschaft; in Italian, Confederaziun Svizzerza; in Romansh, Confederaziun Svizra. ²The federal supreme court is located in Lausanne. ³January 1. ⁴Demicanton; functions as a full canton. ⁵Detail does not add to total given because of rounding. ⁶Includes nonresident population of 1,601,900. ⁷Combines federal, cantonal, and communal budgets. ⁸Polished diamond exports (2006): U.S.\$661,000,000. ⁹Foreign workers account for c. 26% of population economically active. ¹⁰Includes consulting services. ¹¹Taxes less subsidies. ¹²Imports c.i.f.; exports f.o.b. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Excludes 218,200 reservists; the 85,000-member civil defense forces are not part of the armed forces.

Internet resources for further information:

- Swiss National Bank <http://www.snb.ch/en>
- Swiss Federal Statistical Office <http://www.statistik.admin.ch>

Syria

Official name: Al-Jumhūriyah al-'Arabiyyah as-Sūriyah (Syrian Arab Republic).

Form of government: unitary multiparty republic with one legislative house (People's Assembly [250]).

Head of state and government: President.

Capital: Damascus.

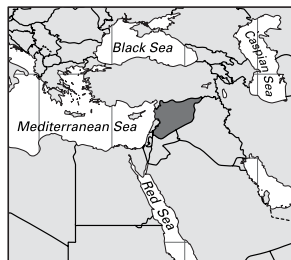
Official language: Arabic.

Official religion: none¹.

Monetary unit: Syrian pound

(S.P); valuation (Sept. 1, 2009)

1 U.S.\$ = S.P 46.00; 1 £ = S.P 74.64.



Area and population

	area	population		area	population
	sq km	2007 ² estimate		sq km	2007 ² estimate
Governorates			Governorates		
Dar'a	3,730	890,000	Al-Lādhiqiyah (Latakia)	2,297	928,000
Dayr al-Zawr	33,060	1,061,000	Al-Qunaytirah	1,861 ³	76,000
Dimashq (Damascus)	18,032	2,406,000	Al-Raqqa	19,616	833,000
Halab (Aleppo)	18,500	4,281,000	Al-Suwaydā'	5,550	341,000
Hamāh	8,883	1,458,000	Tartūs	1,892	739,000
Al-Hasakah	23,334	1,345,000	Municipality		
Himş (Homs)	42,223	1,610,000	Damascus	105	1,647,000
Idlib	6,097	1,326,000	TOTAL	185,180³	18,941,000⁴

Demography

Population (2009): 21,763,000⁴.

Density (2009): persons per sq mi 304.4, persons per sq km 117.5.

Urban-rural (2005): urban 50.6%; rural 49.4%.

Sex distribution (2008): male 50.85%; female 49.15%.

Age breakdown (2008): under 15, 37.0%; 15–29, 30.8%; 30–44, 17.8%; 45–59, 9.1%; 60–74, 4.0%; 75–84, 1.1%; 85 and over, 0.2%.

Population projection: (2020) 24,744,000; (2030) 28,224,000.

Ethnic composition (2000): Syrian Arab 74.9%; Bedouin Arab 7.4%; Kurd 7.3%; Palestinian Arab 3.9%; Armenian 2.7%; other 3.8%.

Religious affiliation (2000): Muslim c. 86%, of which Sunni c. 74%, 'Alawite (Shī'ī) c. 11%; Christian c. 8%, of which Orthodox c. 5%, Roman Catholic c. 2%; Druze c. 3%; nonreligious/atheist c. 3%.

Major cities (2004): Aleppo 2,181,061; Damascus 1,552,161; Himş (Homs) 750,501; Hamāh 467,807; Latakia 424,392.

Vital statistics

Birth rate per 1,000 population (2008): 25.6 (world avg. 20.3).

Death rate per 1,000 population (2008): 3.7 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 3.23.

Marriage/divorce rates per 1,000 population (2007)⁵: 10.9/0.9.

Life expectancy at birth (2008): male 71.6 years; female 76.4 years.

Major causes of death per 100,000 population (2002): diseases of the circulatory system 156, of which ischemic heart disease 64, cerebrovascular disease 44; malignant neoplasms (cancers) 56; accidents, injuries 38.

National economy

Budget (2007). Revenue: S.P 458,571,000,000 (nonpetroleum nontax revenues 30.0%; petroleum royalties and taxes 21.7%; nonpetroleum tax on income and profits 16.2%; taxes on international trade 7.3%). Expenditures: S.P 520,531,000,000 (current expenditures 62.6%, capital expenditures 37.4%).

Public debt (external, outstanding; 2008): U.S.\$5,678,000,000.

Gross national income (GNI; 2008): U.S.\$44,439,000,000 (U.S.\$2,090 per capita); purchasing power parity GNI (U.S.\$4,350 per capita).

Structure of gross domestic product and labour force

	2007			
	in value S.P '000,000	% of total value	labour force ⁶	% of labour force ⁶
Agriculture	413,877	20.5	946,500	17.5
Mining			34,700	0.6
Manufacturing	645,003 ⁷	31.9	633,100	11.7
Public utilities			33,500	0.6
Construction	72,676	3.6	735,900	13.7
Transp. and commun.	201,155	10.0	352,200	6.5
Trade, restaurants, hotels	352,774	17.5	783,100	14.5
Finance, real estate	112,328	5.6	132,400	2.5
Pub. admin.	200,662	9.9	648,500	12.0
Services	49,261	2.4	646,200	12.0
Other	-27,926 ⁸	-1.4 ⁸	454,700 ⁹	8.4 ⁹
TOTAL	2,019,810	100.0	5,400,800	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 4,500,000, sugar beets 1,150,000, seed cotton 1,100,000, tomatoes 950,000, barley 730,000, potatoes 640,000, olives 550,000, oranges 430,000, apples 365,000, grapes 310,000, grapefruit 290,000, eggplants 156,000, almonds 132,000; livestock (number of live animals) 21,000,000 sheep, 1,350,000 goats, 1,150,000 cattle; roundwood 65,200 cu m, of which fuelwood 39%; fisheries production 17,881 (from aquaculture 47%). Mining and quarrying (2007): phosphate rock 3,678,000; gypsum 447,900. Manufacturing (value added in S.P '000,000; 2007): textiles and clothing 35,953; food, beverages, and tobacco 28,975; fabricated metals 20,003; cement, bricks, and tiles 14,186. Energy production (consumption): electricity (kW-hr; 2007) 38,784,000,000 (38,784,000,000); coal, none (none); crude petroleum (barrels; 2008) 134,800,000 ([2006] 95,700,000); petroleum products (metric tons;

2006) 11,229,000 (11,988,000); natural gas (cu m; 2006) 6,087,000,000 (6,087,000,000).

Population economically active (2007)⁶: total 5,400,800; activity rate of total population 27.5% (participation rates: ages 15 and over 45.7%; female 15.7%; unemployed 8.4%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	84.4	89.3	93.2	100.0	110.0	114.3	132.3

Household income and expenditure. Average household size (2004) 5.2; income per household: n.a.; sources of income (2003–04)¹⁰: wages 49.2%, self-employment 39.8%; expenditure: n.a.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 3,199; remittances (2008) 850; foreign direct investment (FDI; 2005–07 avg.) 662; official development assistance (2007) 75. Disbursements for (U.S.\$'000,000): tourism (2007) 719; remittances (2008) 235; FDI (2005–07 avg.) 57.

Land use as % of total land area (2007): in temporary crops 20.5%, in permanent crops 5.2%, in pasture 44.7%, forest area 2.6%.

Foreign trade¹¹

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+2,049	+620	-1,666	-1,448	-569	-3,109
% of total	18.6%	5.7%	13.4%	10.1%	2.5%	11.9%

Imports (2006): U.S.\$11,488,000,000 (refined petroleum 24.4%; food 10.7%; road vehicles 8.6%; iron and steel 8.3%; nonelectrical machinery and equipment 7.3%). **Major import sources:** Russia 10.2%; China 6.5%; Ukraine 5.3%; Egypt 5.2%; Saudi Arabia 5.1%; unspecified 15.6%.

Exports (2006): U.S.\$10,919,000,000 (crude petroleum 33.6%; food and live animals 14.9%, of which vegetables and fruit 6.0%; apparel/clothing accessories 7.9%; textile yarn, fabrics, and made-up articles 7.5%; refined petroleum 6.7%). **Major export destinations** (2007): Italy 23.7%; France 11.5%; Saudi Arabia 10.6%; Iraq 5.6%; Turkey 5.2%.

Transport and communications

Transport. Railroads (2007): length 2,833 km; passenger-km 744,110,000; metric ton-km cargo 2,550,742,000. Roads (2007): total length 55,041 km (paved 93%). Vehicles (2007): passenger cars 446,132; trucks and buses 566,976. Air transport¹²: passenger-km (2008) 2,448,000,000; metric ton-km cargo (2006) 16,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	3,093	178	PCs	2007	1,844	90
Telephones				Dailies	2007	155 ¹³	7.6 ¹³
Cellular	2008	7,056 ¹⁴	331 ¹⁴	Internet users	2008	3,565	167
Landline	2008	3,633	170	Broadband	2008	11 ¹⁴	0.5 ¹⁴

Education and health

Educational attainment (2003–04)¹⁰. Percentage of population having: no formal education (illiterate) 14.3%; no formal education (literate) 9.9%; primary education 45.8%; secondary 22.5%; incomplete higher 3.9%; higher 3.6%. **Literacy** (2005): percentage of population age 15 and over literate 78.4%; males literate 90.6%; females literate 66.1%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–9)	124,665	2,310,168 ¹⁵	17.6	95 ¹⁶
Secondary/Voc. (age 10–17)	65,218 ¹⁶	2,549,444 ¹⁵	18.1 ¹⁶	66 ¹⁵
Tertiary ¹⁷	7,759	191,328	24.7	... (age 18–22)

Health (2007): physicians 29,506 (1 per 694 persons); hospital beds 28,750 (1 per 713 persons); infant mortality rate per 1,000 live births (2008) 17.3; undernourished population (2002–04) 600,000 (4% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 292,600 (army 73.5%, navy 2.6%, air force 10.3%, air defense 13.6%); reserve 314,000. UN peacekeeping troops in Golan Heights (June 2009) 1,043. **Military expenditure as percent of GDP** (2007): 3.9%; per capita expenditure U.S.\$68.

¹Islam is required to be the religion of the head of state and is the basis of the legal system. ²January 1. ³Includes 1,176 sq km (454 sq mi) of territory in the Golan Heights recognized internationally as part of Syria but occupied by Israel or UN peacekeepers. ⁴Includes 1,200,000 Iraqi refugees and 450,000 long-term Palestinian refugees in mid-2009. ⁵Syrian Arabs only. ⁶Labour force survey of Syrian population only, age 15 years and over. ⁷Mining constitutes c. 74% of 645,003. Manufacturing c. 22%. Public utilities c. 4%. ⁸Import duties less subsidies and less imputed bank service charges. ⁹Unemployed. ¹⁰Based on the Household Income and Expenditure Survey with a survey population of 124,525. ¹¹Imports c.i.f.; exports f.o.b. ¹²SyrianAir only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵2006–07. ¹⁶2001–02. ¹⁷Al-Baath, Aleppo, Damascus, and Tishreen universities only.

Internet resources for further information:

- Central Bureau of Statistics <http://www.cbssyr.org>
- Central Bank of Syria <http://www.banquecentrale.gov.sy/index.html>

Taiwan

Official name: Chung-hua Min-kuo (Republic of China).

Form of government: multiparty republic with one legislative body (Legislative Yuan [113¹]).

Chief of state: President.

Head of government: Premier.

Capital: Taipei.

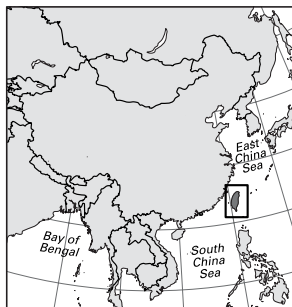
Official language: Mandarin Chinese.

Official religion: none.

Monetary unit: New Taiwan dollar

(NT\$); valuation (Sept. 1, 2009)

1 U.S.\$ = NT\$32.85; 1 £ = NT\$53.30.



Area and population

area			population		
Taiwan area			Special municipalities		
Countries	sq km	2008 ² estimate	Countries	sq km	2008 ² estimate
Chang-hua	1,074	1,314,354	Kao-hsiung	154	1,520,555
Chia-i	1,902	551,345	Taipei	272	2,629,269
Hsin-chu	1,428	495,821	Municipalities		
Hua-lien	4,628	343,302	Chi-lung	133	390,397
I-lan	2,144	460,398	Chia-i	60	273,075
Kao-hsiung	2,793	1,244,313	Hsin-chu	104	399,035
Miao-li	1,820	560,163	T'ai-chung	163	1,055,898
Nan-you	4,106	533,717	T'ai-nan	176	764,658
P'eng-hu	127	92,390	Non-Taiwan area		
P'ing-tung	2,776	889,563	Countries		
T'ai-chung	2,051	1,550,896	Kinmen		
T'ai-nan	2,016	1,105,403	(Quemoy)	153	81,547
T'ai-pei	2,052	3,798,015	Lienchiang		
T'ai-tung	3,515	233,660	(Matsu)	29	9,946
T'ao-yüan	1,221	1,934,968	TOTAL		
Yün-lin	1,291	725,672		36,188 ³	22,958,360

Demography

Population (2009): 23,069,000.

Density (2009): persons per sq mi 1,651, persons per sq km 637.4.

Urban-rural (2005): urban 81%; rural 19%.

Sex distribution (2008²): male 50.57%; female 49.43%.

Age breakdown (2008²): under 15, 17.6%; 15–29, 23.2%; 30–44, 24.4%; 45–59, 21.2%; 60–74, 9.3%; 75–84, 3.5%; 85 and over, 0.8%.

Population projection: (2020) 23,740,000; (2030) 23,811,000.

Ethnic composition (2003): Taiwanese c. 84%; mainland Chinese c. 14%; indigenous tribal peoples c. 2%, of which Ami 0.6%.

Religious affiliation (2002): Buddhism 23.8%; Taoism 19.7%; Christian 4.5%, of which Protestant 2.6%, Roman Catholic 1.3%; I-kuan Tao 3.7% (syncretistic religion); Muslim 0.6%; other (mostly Chinese folk-religionist or non-religious) 47.7%.

Major cities/metropolitan areas (2008²): Taipei 2,629,269/6,698,319; Kao-hsiung 1,520,555/2,767,655; T'ai-chung 1,055,898/2,218,527; T'ao-yüan 391,822/1,905,973; T'ai-nan 764,658/1,255,450.

Vital statistics

Birth rate per 1,000 population (2008): 8.6 (world avg. 20.3); (2007) within marriage 95.6%, outside of marriage 4.4%.

Death rate per 1,000 population (2008): 6.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 2.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.05.

Marriage/divorce rates per 1,000 population (2008): 6.7/2.4.

Life expectancy at birth (2007): male 75.1 years; female 81.9 years.

Major causes of death per 100,000 population (2007): malignant neoplasms (cancers) 142.6; heart disease 44.4; cerebrovascular diseases 43.8; diabetes mellitus 35.5; accidents 27.9; pneumonia 19.6; chronic liver disease and cirrhosis 18.4.

National economy

Budget (2006; general government). Revenue: NT\$2,172,436,000,000 (tax revenue 71.7%; income from public enterprises 14.3%; fees 4.2%). Expenditures: NT\$2,261,958,000,000 (education, science, and culture 21.6%; economic development 17.0%; general administration 15.3%; social welfare 13.6%; defense 10.5%).

Population economically active (2006): total 10,522,000; activity rate of total population 46.3% (participation rates: ages 15–64, 57.9%; female 42.4%; unemployed [2007] 3.9%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	96.5	96.2	97.7	100.0	100.6	102.4	106.0
Annual earnings index	95.6	96.9	98.7	100.0	101.2	103.5	...

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 1,363,458, pineapples 476,811, bamboo shoots 291,709, mangoes 215,292, pears 150,429, betel nuts 134,497, grapes 90,081, tea 17,502; livestock (number of live animals; 2006) 7,068,621 pigs, 134,793 cattle; roundwood 36,200 cu m, of which fuelwood 25%; fisheries production 1,498,197 (from aquaculture 22%). Mining and quarrying (2008): marble 25,811,000. Manufacturing (value added in NT\$'000,000,000; 2006): electronic parts and components 610; base metals 288; base chemicals 230; refined petroleum/coal products 206; computers, telecommunications, video electronics 191; nonelectrical machinery and equipment 164. Energy production (consumption): electricity (kW-hr; 2005) 210,300,000,000 (201,580,000,000); coal (metric tons; 2006) none

(66,000,000); crude petroleum (barrels; 2007) 292,000 ([2006] 347,000,000); natural gas (cu m; 2007) 396,000,000 (11,298,000,000).

Gross national income (2008): U.S.\$401,806,000,000 (U.S.\$17,542 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value NT\$'000,000,000	% of total value	labour force ⁴	% of labour force ⁴
Agriculture	208	1.7	554,000	5.3
Mining, quarrying	52	0.4	7,000	0.1
Manufacturing	2,683	21.7	2,777,000	26.4
Construction	287	2.3	829,000	7.9
Public utilities	69	0.6	88,000	0.8
Transp. and commun.	721	5.8	626,000	5.9
Trade, restaurants	2,646	21.4	2,424,000	23.0
Finance, real estate	2,300	18.6	473,000	4.5
Pub. admin., defense	1,293	10.5	333,000	3.2
Services	1,730	14.0	2,000,000	19.0
Other	353 ⁵	2.9 ⁵	411,000 ⁶	3.9 ⁶
TOTAL	12,341⁷	100.0⁷	10,522,000	100.0

Household income and expenditure (2007). Average household size 3.4; average annual income per household NT\$1,108,674 (U.S.\$33,703); sources of income: wages and salaries 57.8%, transfers 16.9%, self-employment 14.5%; expenditure: food 22.4%, housing 20.7%, health care 14.3%, education, recreation, and culture 12.5%, transportation and communication 12.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 5,137; remittances (2006) 355; foreign direct investment (FDI; 2005–07 avg.) 5,737. Disbursements for (U.S.\$'000,000): tourism (2007) 9,070; remittances (2006) 1,370; FDI (2005–07 avg.) 8,178.

Land use as % of total land area (2001): in temporary crops 16.1%, in permanent crops 6.6%, in pasture 0.3%; overall forest area 58.1%.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+22,590	+13,613	+15,817	+21,319	+27,425	+15,181
% of total	8.1%	3.9%	5.6%	5.0%	5.9%	3.1%

Imports (2007): U.S.\$219,252,000,000 (mineral fuels 20.9%, electronic goods/parts 16.6%, base and fabricated metals 12.1%, chemicals and chemical products 11.3%). **Major import sources:** Japan 21.0%; U.S. 12.1%; China 11.3%; South Korea 6.9%; Saudi Arabia 4.5%.

Exports (2007): U.S.\$246,677,000,000 (nonelectrical machinery, electrical machinery, and electronic goods 47.8%; base and fabricated metals 11.3%; precision instruments, watches, and musical instruments 8.1%; plastics and rubber products 7.7%). **Major export destinations:** China 21.0%; Hong Kong 15.4%; U.S. 13.0%; Japan 6.5%; Singapore 4.3%.

Transport and communications

Transport. Railroads (2006)⁹: route length 1,118 km; passenger-km (2008) 19,066,000,000, metric ton-km cargo (2008) 933,000,000. Roads (2006): total length 39,286 km (paved, n.a.). Vehicles (2008): passenger cars 5,674,000; trucks and buses 1,000,000. Air transport (2006)¹⁰: passenger-km 59,108,000,000; metric ton-km cargo 11,470,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	1999	9,200	418	PCs	2005	13,098	575
Telephones				Dailies	2007	4,325 ¹¹	230 ¹¹
Cellular	2008	25,413 ¹²	1,103 ¹²	Internet users	2008	15,143	657
Landline	2008	14,273	620	Broadband	2008	5,024 ¹²	218 ¹²

Education and health

Educational attainment (2003). Percentage of population age 15 and over having: no formal schooling 4.6%; primary 19.8%; vocational 23.7%; secondary 26.8%; some college 12.0%; higher 13.1%. **Literacy** (2007): population age 15 and over literate 97.6%.

Education (2007–08)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	100,182	1,677,303	16.8	99
Secondary/Voc. (age 12–17)	102,958	1,704,855	16.6	95
Tertiary	51,501	1,337,455	20.3	64 (age 18–21)

Health (2007): physicians 35,849¹³ (1 per 639 persons); hospital beds 150,628 (1 per 152 persons); infant mortality rate per 1,000 live births 4.7; undernourished population, n.a.

Military

Total active duty personnel (November 2008): 290,000 (army 69.0%, navy 15.5%, air force 15.5%); reserve 1,657,000. **Military expenditure as percent of GDP** (2008): 2.4%; per capita expenditure U.S.\$456.

¹Includes 6 elected seats reserved for aboriginal peoples. ²January 1. ³Total area per most recent survey is 36,190 sq km (13,973 sq mi). ⁴Civilian persons only. ⁵Import duties and VAT. ⁶Unemployed. ⁷Detail does not add to total given because of rounding. ⁸Imports c.i.f.; exports f.o.b. ⁹Taiwan Railway Administration only. ¹⁰China Airlines, EVA, and Far Eastern Air transport only. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³Excludes 4,862 doctors of Chinese medicine.

Internet resource for further information:

• Statistical Bureau of the Republic of China
<http://eng.stat.gov.tw>

Tajikistan

Official name: Jumhurii Tojikiston (Republic of Tajikistan).

Form of government: republic with two legislative houses (National Assembly [341]; Assembly of Representatives [63]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Dushanbe.

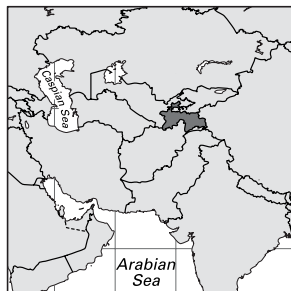
Official language: Tajik.²

Official religion: none.

Monetary unit: somoni (TJS); valuation (Sept. 1, 2009)

1 U.S.\$ = TJS 3.73;

1 £ = TJS 6.05.



Area and population		area		population
Provinces	Capitals	sq mi	sq km	2008 ³ estimate
Khatlon	Kurgan-Tyube	9,600	24,800	2,579,300
Sughd	Khujand	9,800	25,400	2,132,100
Autonomous province				
Kūhistoni Badakhshon (Gorno-Badakhshan)	Khorugh	24,800	64,200	218,000
City				
Dushanbe	—	40	100	679,400
No provincial administration		11,050	28,600	1,606,900
TOTAL		55,300 ⁴	143,100	7,215,700 ⁵

Demography

Population (2009): 6,952,000^{5, 6}.

Density (2009): persons per sq mi 125.7, persons per sq km 48.6.

Urban-rural (2007): urban 26.3%; rural 73.7%.

Sex distribution (2007): male 49.74%; female 50.26%.

Age breakdown (2007): under 15, 35.0%; 15–29, 31.5%; 30–44, 18.8%; 45–59, 9.7%; 60–74, 3.8%; 75 and over, 1.2%.

Population projection: (2020) 8,446,000; (2030) 9,618,000.

Doubling time: 35 years.

Ethnic composition (2000): Tajik 80.0%; Uzbek 15.3%; Russian 1.1%; Tatar 0.3%; other 3.3%.

Religious affiliation (2005): Sunnī Muslim c. 78%; Shīʿī Muslim c. 6%; nonreligious c. 12%; other (mostly Christian) c. 4%.

Major cities (2008³): Dushanbe 679,400; Khujand 155,900; Kulyab 93,900; Kurgan-Tyube 71,000; Istaravshan (Ura-Tyube) 60,200.

Vital statistics

Birth rate per 1,000 population (2007): 27.3 (world avg. 20.3).

Death rate per 1,000 population (2007): 7.0 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 20.0 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 3.09.

Marriage/divorce rates per 1,000 population (2006): 8.2/0.4.

Life expectancy at birth (2007): male 61.6 years; female 67.8 years.

Major causes of death per 100,000 population (2004)⁷: diseases of the circulatory system 363.7, of which ischemic heart disease 146.5, hypertensive diseases 89.7; diseases of the respiratory system 78.7; malignant neoplasms (cancers) 58.2; accidents 37; diseases of the digestive system 35.9.

National economy

Budget (2008). Revenue: TJS 3,436,000,000 (tax revenue 95.8%; nontax revenue 4.2%). Expenditures: TJS 5,058,000,000 (current expenditure 54.5%; capital expenditure 43.8%; net lending 1.7%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 659,900, wheat 612,000, raw seed cotton 419,700, tomatoes 241,000, onions 217,000, corn (maize) 157,500, grapes 116,600; livestock (number of live animals) 1,922,000 sheep, 1,418,000 cattle, 1,250,000 goats, 42,000 camels; roundwood 90,000, of which fuelwood 100%; fisheries production 172 (from aquaculture 15%). Mining and quarrying (2006): antimony (metal content) 2,000; silver 5,000 kg; gold 3,000 kg. Manufacturing (value of production in TJS '000,000; 2007): nonferrous metals (nearly all aluminum) 585,103; food 301,156; textiles 209,375; grain mill products 94,649; basic chemicals 17,209. Energy production (consumption): electricity (kW-hr; 2008) 16,127,000,000 ([2007] 17,600,000,000); hard coal (metric tons; 2008) 216,000 ([2006] 94,000); lignite (metric tons; 2006) 15,000 (15,000); crude petroleum (barrels; 2008) 185,000 ([2006] 117,000); petroleum products (metric tons; 2006) none (1,542,000); natural gas (cu m; 2008) 12,000,000 (510,000,000).

Population economically active (2007): total 2,201,000; activity rate of total population 30.5% (participation rates: ages 15–62 [male], 15–57 [female] 51.7%; female [2004] 41.7%; officially unemployed 2.3%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	75.0	87.2	93.4	100.0	110.0	124.4	149.9
Monthly earnings index	39.0	53.3	73.9	100.0	139.1	195.3	...

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2004) 1.0; remittances (2008) 1,750; foreign direct investment (2005–07 avg.) 265; official development assistance (2007) 221. Disbursements for (U.S.\$'000,000): tourism (2004) 3.0; remittances (2008) 184.

Gross national income (GNI; 2008): U.S.\$4,074,000,000 (U.S.\$600 per capita); purchasing power parity GNI (U.S.\$1,860 per capita).

Structure of gross domestic product and labour force

	2007			
	in value TJS '000,000	% of total value	labour force	% of labour force
Agriculture	2,525.9	19.8	1,430,000	65.0
Mining				
Public utilities	1,966.9	15.4	114,000	5.2
Manufacturing				
Construction	1,115.6	8.7	63,000	2.9
Transp. and commun.	646.4	5.0	62,000	2.8
Trade, hotels	2,529.3	19.8	115,000	5.2
Finance, real estate	46.3	0.4	...	...
Pub. admin., defense	297.3	2.3	34,000	1.5
Services	2,132.3	16.7	332,000	15.1
Other	1,519.7 ⁹	11.9 ⁹	51,700 ¹⁰	2.3 ¹⁰
TOTAL	12,779.7	100.0	2,201,000⁴	100.0

Public debt (external, outstanding; 2007): U.S.\$1,065,000,000.

Household income and expenditure (2007). Average household size (2004) 5.2; average disposable income per household (2005) TJS 3,462 (U.S.\$1,111); sources of income: wages and salaries 42.3%, self-employment 22.1%, transfers 3.8%; expenditure: food 58.4%, household furnishings 9.4%, clothing 9.4%, transportation and communications 7.0%.

Land use as % of total land area (2007): in temporary crops 5.1%, in permanent crops 0.7%, in pasture 26.9%, forest area 2.9%.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–84	–276	–421	–326	–1,079	–1,864
% of total	5.0%	13.1%	18.8%	10.4%	26.9%	39.8%

Imports (2007): U.S.\$2,547,000,000 (petroleum products 10.8%; grain and flour 5.3%; electricity 2.6%; natural gas 2.6%; other [significantly alumina] 78.7%).

Major import sources (2008): China 25.9%; Russia 24.8%; Kazakhstan 10.6%; Uzbekistan 6.8%; Turkey 5.4%.

Exports (2007): U.S.\$1,468,000,000 (cotton fibre 9.4%, electricity 4.1%, other [significantly aluminum] 86.5%). **Major export destinations** (2008): Israel 39.6%; Turkey 8.7%; Russia 7.6%; Italy 7.4%; Norway 7.2%.

Transport and communications

Transport. Railroads (2006): length 299 mi, 482 km; passenger-km (2005) 46,000,000; metric ton-km cargo (2005) 1,066,000,000. Roads (2000): total length 17,254 mi, 27,767 km (paved [1996] 83%). Vehicles (2007): passenger cars 192,973; trucks and buses 64,324. Air transport (2005)¹²: passenger-km 1,030,000,000; metric ton-km cargo 7,031,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	2,350	357	PCs	2007	87	13
Telephones				Dailies	2007	217 ¹³	32 ¹³
Cellular	2008	2,459 ¹⁴	360 ¹⁴	Internet users	2008	600	88
Landline	2008	360	53	Broadband	2008	—	—

Education and health

Educational attainment (2007), n.a. **Literacy** (2007): percentage of total population age 15 and over literate 99.6%; males literate 99.8%; females literate 99.5%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–10)	31,482	680,308	21.6	97
Secondary/Voc. (age 11–17)	61,186	1,012,275	16.5	81
Tertiary	7,761	147,294	19.0	20 (age 18–22)

Health (2008³): physicians 13,400 (1 per 505 persons); hospital beds 38,800 (1 per 175 persons); infant mortality rate per 1,000 live births (2007) 43.6; undernourished population (2002–04) 3,500,000 (56% of total population based on the consumption of a minimum daily requirement of 1,910 calories).

Military

Total active duty personnel (November 2008): 8,800 (army 83%, air force 17%); Russian troops (November 2008) 5,500. **Military expenditure as percentage of GDP** (2007): 2.4%; per capita expenditure U.S.\$13.

¹Includes 8 members appointed by the President and 1 seat reserved for the outgoing president. ²Russian is the language of communication between nationalities per the constitution. ³January 1. ⁴Detail does not add to total given because of gross rounding. ⁵Includes at least 1 million Tajik workers abroad (particularly in Russia). ⁶Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁷Projected rates based on about 56% of total deaths. ⁸At 1998 constant prices. ⁹Indirect taxes less subsidies. ¹⁰Unemployed. ¹¹Imports c.i.f.; exports f.o.b. ¹²Tajikistan Airlines only. ¹³Circulation of daily newspapers. ¹⁴Subscribers.

Internet resources for further information:

- **State Committee on Statistics**
<http://www.stat.tj/english/home.htm>
- **National Bank of Tajikistan**
<http://nbt.tj/en>

Tanzania

Official name: Jamhuri ya Muungano wa Tanzania (Swahili); United Republic of Tanzania (English).

Form of government: unitary multiparty republic with one legislative house (National Assembly [323]).

Head of state and government: President.

Capital: Dar es Salaam (acting)².

Official languages: Swahili; English.

Official religion: none.

Monetary unit: Tanzanian shilling

(TZS); valuation (Sept. 1, 2009)

1 U.S.\$ = TZS 1,315;

1 £ = TZS 2,133.



Area and population

Administrative regions	area	population	Administrative regions	area	population
	sq km	2008 estimate		sq km	2008 estimate
Mainland Tanzania (Tanganyika)			Rukwa	68,635	1,399,000
Arusha	36,486	1,570,000	Ruvuma	63,498	1,303,000
Dar es Salaam	1,393	2,961,000	Shinyanga	50,781	3,549,000
Dodoma	41,311	2,005,000	Singida	49,341	1,295,000
Iringa	56,864	1,680,000	Tabora	76,151	2,171,000
Kagera	28,388	2,380,000	Tanga	26,808	1,880,000
Kigoma	37,037	1,669,000			
Kilimanjaro	13,309	1,569,000	Autonomous territory		
Lindi	66,046	887,000	Zanzibar ³		
Manyara	45,820	1,288,000	Pemba	906	460,000
Mara	19,566	1,692,000	Unguja		
Mbeya	60,350	2,502,000	(Zanzibar)	1,554	734,000
Morogoro	70,799	2,022,000	TOTAL LAND AREA	883,749	
Mtwara	16,707	1,272,000	INLAND WATER	59,050	
Mwanza	19,592	3,364,000	TOTAL	942,799 ⁴	40,668,000 ⁵
Pwani (Coast)	32,407	1,015,000			

Demography

Population (2009): 41,049,000.

Density (2009)⁶: persons per sq mi 120.3, persons per sq km 46.4.

Urban-rural (2008): urban 25.6%; rural 74.4%.

Sex distribution (2006): male 49.46%; female 50.54%.

Age breakdown (2006): under 15, 44.3%; 15–29, 29.1%; 30–44, 14.6%; 45–59, 7.6%; 60–74, 3.6%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 49,989,000; (2030) 56,530,000.

Ethnolinguistic composition (2000): 130 different Bantu tribes 95%, of which Sukuma 9.5%, Hehe and Bena 4.5%, Gogo 4.4%, Haya 4.2%, Nyamwezi 3.6%, Makonde 3.3%, Chagga 3.0%, Ha 2.9%; other 5%.

Religious affiliation (2005): Muslim c. 35%, of which Sunnī c. 30%, Shīʿī c. 5%; Christian c. 35%; other (significantly traditional beliefs) c. 30%; Zanzibar only is 99% Muslim.

Major urban areas (2006): Dar es Salaam 2,805,500; Mwanza 458,100; Zanzibar (Unguja) 422,300; Arusha 362,900; Mbeya 304,200; Dodoma 188,200.

Vital statistics

Birth rate per 1,000 population (2008): 38.3 (world avg. 20.3).

Death rate per 1,000 population (2008): 12.6 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2006): 4.93.

Life expectancy at birth (2006): male 48.5 years; female 50.9 years.

Adult population (ages 15–49) *living with HIV* (2007): 6.2% (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: TZS 3,691,247,900,000 (tax revenue 68.5%, of which excise tax 27.6%, income tax 19.4%; nontax revenue 5.7%; grants 25%). Expenditures: TZS 4,474,680,900,000 (current expenditure 70.1%, of which interest payments on debt 4.8%; capital expenditure 29.9%).

Gross national income (GNI; 2008): U.S.\$18,350,000,000⁷ (U.S.\$440 per capita); purchasing power parity GNI (U.S.\$1,230 per capita).

Structure of gross domestic product and labour force	2007		2002	
	in value TZS '000,000 ⁷	% of total value ⁷	labour force ⁸	% of labour force ⁸
Agriculture, fishing	5,690,446	27.2	11,592,000	81.1
Mining	742,932	3.5	71,000	0.5
Manufacturing	1,625,504	7.8	272,000	1.9
Construction	1,641,741	7.8	157,000	1.1
Public utilities	420,880	2.0	43,000	0.3
Transp. and commun.	1,373,976	6.6	129,000	0.9
Trade, restaurants	2,976,228	14.2	1,101,000	7.7
Finance, real estate	2,327,107	11.1	29,000	0.2
Pub. admin., defense	1,652,556	7.9		
Services	746,757	3.6	901,000	6.3
Other	1,750,278 ⁹	8.4 ⁹		
TOTAL	20,948,405	100.0 ⁵	14,294,000 ⁵	100.0

Public debt (external, outstanding; 2007): U.S.\$3,684,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 6,600,000, corn (maize) 3,400,000, rice 1,240,000, sweet potatoes 960,000, sorghum 900,000, coconuts 370,000, seed cotton 210,000, cashew nuts 92,000, tobacco leaves 53,000, coffee 52,000, tea 31,000, cloves 9,900; livestock (number of live animals) 18,000,000 cattle, 12,550,000 goats, 3,550,000 sheep; roundwood 24,441,200 cu m, of which fuelwood 91%; fisheries production 328,827 (from aquaculture, negligible). Mining and quar-

rying (2007): gold 40,193 kg; garnets 5,900 kg; tanzanites 3,400 kg; rubies 2,700 kg; diamonds 282,786 carats. Manufacturing (2005): cement 1,281,000; wheat flour 347,296; sugar 202,200; soft drinks 36,566,355 hectolitres; *konyagi* (a Tanzanian liquor) 41,050 hectolitres; cigarettes 4,308,000,000 units. Energy production (consumption): electricity (kW-hr; 2006) 2,776,000,000 (2,899,000,000); coal (metric tons; 2006) 80,000 (80,000); petroleum products (metric tons; 2006) none (1,216,000); natural gas (cu m; 2006) 374,000,000 (374,000,000).

Population economically active (2002): total 14,841,000; activity rate of total population 43.1% (participation rates: over age 9, 64.9%; female 48.0%; officially unemployed 3.7%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	86.3	90.9	95.2	100.0	107.3	114.8	126.6

Household income and expenditure (2007)⁷. Average household size 4.8; annual income per household TZS 2,267,000 (U.S.\$1,820); sources of income: agricultural income 59.4%, wages and salaries 17.8%, self-employment 12.6%, remittances 3.0%; expenditure: food 64.1%, other nondurable goods 26.7%, education 1.8%, health 1.8%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,037; remittances (2008) 15; foreign direct investment (2005–07 avg.) 563; official development assistance (2007) 2,811. Disbursements for (U.S.\$'000,000): tourism (2007) 645; remittances (2008) 46.

Land use as % of total land area (2007): in temporary crops 10.2%, in permanent crops 1.4%, in pasture 27.1%, forest area 38.9%.

Foreign trade¹⁰

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
TZS '000,000,000	−746	−1,093	−1,494	−2,678	−3,546	−4,118
% of total	22.8%	25.4%	28.8%	38.1%	41.7%	36.1%

Imports (2006): TZS 5,558,000,000,000 (refined petroleum 23.7%, nonelectrical machinery and equipment 12.0%, chemicals and chemical products 11.5%, road vehicles 9.9%, food 6.5%). **Major import sources** (2008): U.A.E. 12.4%; India 11.9%; South Africa 11.0%; China 9.9%; Singapore 6.1%.

Exports (2006): TZS 2,116,000,000,000 (gold 34.9%, other metal ores [including copper and silver] 11.0%, fish 10.2%, tobacco 6.2%, vegetables and fruit 4.7%, coffee 4.3%). **Major export destinations** (2008): Switzerland 20.8%; Kenya 8.6%; South Africa 8.5%; China 8.2%; India 6.3%.

Transport and communications

Transport. Railroads (2001): length 3,690 km; passenger-km (2003) 1,305,000,000; metric ton-km cargo (2003) 4,461,000,000. Roads (2008): length 78,892 km (paved 6%). Vehicles (2007): passenger cars 80,913; trucks and buses 393,005. Air transport (2008): passenger-km 156,000,000; metric ton-km 1,452,000.

Communications						
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s
Televisions	2003	1,500	41	PCs	2005	356
Telephones				Dailies	2007	115 ¹¹
Cellular	2008	13,007 ¹²	306 ¹²	Internet users	2008	520
Landline	2008	124	2.9	Broadband	2008	—

Education and health

Educational attainment (2002). Percentage of population age 25 and over having: no formal schooling 49.4%; primary education 44.0%; secondary 5.5%; postsecondary 0.9%; other 0.2%. **Literacy** (2007): percentage of population age 15 and over literate 72.3%; males 79.0%; females 65.9%.

Education (2005–06) ⁷				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 7–13)	151,882	7,959,884	52.4	98
Secondary/Voc. (age 14–19)	...	...	...	...
Tertiary ¹³	2,735	51,080	18.7	1 (age 20–24)

Health (2002): physicians 822 (1 per 42,085 persons); hospital beds 36,853 (1 per 939 persons); infant mortality rate (2006) 73.0; undernourished population (2003–05) 13,000,000 (35% of total population based on the consumption of a minimum daily requirement of 1,730 calories).

Military

Total active duty personnel (November 2008): 27,000 (army 85.2%, navy 3.7%, air force 11.1%). **Military expenditure as percentage of GDP** (2007): 1.1%; per capita expenditure U.S.\$4.

¹Includes 80 indirectly elected seats (75 for women, 5 for Zanzibar), 10 seats appointed by the President, and a seat for the Attorney General serving ex officio. ²Only the legislature meets in Dodoma, the longtime planned capital. ³Has local internal government structure; Unguja (Zanzibar) island has 3 administrative regions, Pemba island has 2. ⁴A recent survey indicates a total area of 945,090 sq km (364,901 sq mi). ⁵Detail does not add to total given because of rounding. ⁶Based on land area only. ⁷Mainland Tanzania only. ⁸Employed only. ⁹Net taxes less imputed bank service charge. ¹⁰Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2004–05.

Internet resources for further information:

- Bank of Tanzania <http://www.bot-tz.org>
- National Bureau of Statistics <http://www.nbs.go.tz>

Thailand

Official name: Ratcha Anachak

Thai (Kingdom of Thailand).

Form of government: constitutional monarchy with two legislative houses (Senate [150¹]; House of Representatives [480]).

Chief of state: King.

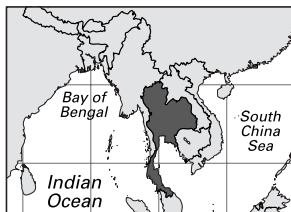
Head of government: Prime Minister.

Capital: Bangkok.

Official language: Thai.

Official religion: none.

Monetary unit: baht (THB); valuation (Sept. 1, 2009) 1 U.S.\$ = THB 34.02; 1 £ = THB 55.19.



Area and population		area		population
Regions ²	Principal cities	sq mi	sq km	2008 estimate
Bangkok and vicinities	Bangkok	2,997	7,762	11,971,000
Eastern	Chon Buri	14,094	36,503	4,567,000
Northeastern	Udon Thani	65,195	168,855	22,190,000
Northern	Chiang Mai	65,500	169,644	11,602,000
Southern	Surat Thani	27,303	70,715	9,097,000
Sub-central	Saraburi	6,407	16,594	3,088,000
Western	Ratchaburi	16,621	43,047	3,633,000
TOTAL		198,117	513,120	66,148,000

Demography

Population (2009): 65,998,000.

Density (2009): persons per sq mi 333.1, persons per sq km 128.6.

Urban-rural (2008): urban 33.8%; rural 66.2%.

Sex distribution (2008): male 49.44%; female 50.56%.

Age breakdown (2008): under 15, 21.2%; 15–29, 23.9%; 30–44, 24.5%; 45–59, 18.2%; 60–74, 9.2%; 75–89, 2.9%; 90 and over, 0.1%.

Population projection: (2020) 69,659,000; (2030) 71,408,000.

Ethnic composition (2000): Thai peoples 81.4%, of which Thai (Siamese) 34.9%, Lao 26.5%; Han Chinese 10.6%; Malay 3.7%; Khmer 1.9%; other 2.4%.

Religious affiliation (2005): Buddhist c. 83%; Muslim (nearly all Sunni) c. 9%; traditional beliefs c. 2.5%; nonreligious c. 2%; other (significantly Christian) c. 3.5%.

Major cities (2000): Bangkok (2007) 6,704,000; Samut Prakan 378,741; Nonthaburi 291,555; Udon Thani 222,425; Nakhon Ratchasima 204,641.

Vital statistics

Birth rate per 1,000 population (2008): 13.6 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.1 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 1.64.

Marriage/divorce rates per 1,000 population (2006): 5.5/1.5.

Life expectancy at birth (2008): male 70.5 years; female 75.3 years.

Major causes of death per 100,000 population (2002): infectious and parasitic diseases c. 170, of which HIV/AIDS-related c. 91; cardiovascular diseases c. 135; malignant neoplasms (cancers) c. 97; accidents c. 52.

Adult population (ages 15–49) living with HIV (2007): 1.4% (world avg. 0.8%).

National economy

Budget (2008). Revenue: THB 1,839,600,000,000 (tax revenue 89.9%, of which VAT 27.4%, corporate taxes 25.0%, excise tax 15.1%, income tax 11.1%; non-tax revenue 10.1%). Expenditures: THB 1,633,300,000,000 (current expenditure 79.9%; capital expenditure 20.1%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): sugarcane 76,018,410, rice 32,119,350, cassava 23,809,670, oil palm fruit 6,389,980, corn (maize) 4,032,300, natural rubber 3,166,840, pineapples 2,319,791³, bananas 2,000,000³, mangoes 1,800,000³, coconuts 1,721,640; livestock (number of live animals; 2007) 8,381,122 pigs, 6,480,876 cattle, 209,105,000 chickens; roundwood (2007) 28,315,200 cu m, of which fuelwood 69%; fisheries production (2007) 3,858,815 (from aquaculture 36%). Mining and quarrying (2007): gypsum (2008) 8,500,401; dolomite 1,123,425; feldspar 684,668; zinc [metal content] 32,921; gemstones (significantly rubies and sapphires) 102,000 carats; silver 7,400 kg; gold 3,000 kg. Manufacturing (value added in U.S.\$'000,000; 2000): textiles and wearing apparel 1,905; electronics 1,817; food products 1,311; motor vehicles 1,225; office machines and computers 1,045; electrical machinery and parts 964; tobacco products 821. Energy production (consumption): electricity (kW-hr; 2007) 142,538,000,000 (138,609,000,000); hard coal (metric tons; 2006) none (6,252,000); lignite (metric tons; 2008) 18,171,950 ([2006] 18,852,000); crude petroleum (barrels; 2008–09) 79,899,830 ([2008] 340,545,000); petroleum products (metric tons; 2006) 43,459,000 (37,489,000); natural gas (cu m; 2008) 28,760,000,000 (37,310,000,000).

Land use as % of total land area (2007): in temporary crops 29.8%, in permanent crops 7.3%, in pasture 1.6%, forest area 28.2%.

Population economically active (2008; end of 3rd quarter): total 38,344,700; activity rate of total population 58.5% (participation rates: ages 15–59, 79.3%; female 46.0%; unemployed [April 2008–March 2009] 1.5%).

Price and earnings indexes (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.4	93.1	95.7	100.0	104.6	107.0	112.8
Monthly earnings index ⁴	106.1	100.4	95.7	100.0	108.3	109.2	...

Gross national income (GNI; 2008): U.S.\$191,650,000,000 (U.S.\$2,840 per capita); purchasing power parity GNI (U.S.\$5,990 per capita).

Structure of gross domestic product and labour force

	2008			
	in value THB '000,000	% of total value	labour force ⁵	% of labour force ⁵
Agriculture, forestry, fishing	1,056,838	11.6	16,067,000	41.9
Mining and quarrying	314,823	3.5	55,000	0.1
Manufacturing	3,169,629	34.9	5,231,400	13.6
Construction	280,717	2.9	2,012,100	5.3
Public utilities	262,123	2.9	103,100	0.3
Transp. and commun.	643,244	7.1	1,090,500	2.9
Trade, hotels	1,720,694	19.0	7,988,100	20.8
Services	680,095	7.5	2,834,300	7.4
Finance, real estate	566,891	6.2	1,113,200	2.9
Pub. admin., defense	400,439	4.4	1,303,300	3.4
Other	—	—	546,700 ⁶	1.4 ⁶
TOTAL	9,075,493	100.0	38,344,700	100.0

Public debt (external, outstanding; 2007): U.S.\$9,841,000,000.

Household income and expenditure (2007). Average household size (2004) 3.5; average annual income per household THB 223,920 (U.S.\$7,522); sources of income: wages and salaries 39.9%, self-employment 31.7%, nonmonetary income 14.5%, transfers 9.9%; expenditure: food and nonalcoholic beverages 31.0%, transportation and communications 21.6%, housing, energy, and household furnishings 20.1%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 16,667; remittances (2008) 1,800; foreign direct investment (FDI; 2006–08 avg.) 10,258. Disbursements for (U.S.\$'000,000): tourism (2007) 5,143; remittances, n.a.; FDI (2005–07 avg.) 1,097.

Foreign trade⁷

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
THB '000,000,000	+186.9	+72.6	−315.3	−5.6	+431.9	−94.9
% of total	2.9%	0.9%	3.4%	0.1%	4.2%	0.8%

Imports (2008): THB 5,946,311,060,000 (mineral fuels 20.7%, of which crude petroleum 16.2%; chemicals and chemical products 10.1%; electronic parts 8.5%; electrical machinery 8.3%; iron and steel 7.6%; nonelectrical machinery and equipment 6.5%; fabricated metal products 5.7%). **Major import sources:** Japan 18.8%; China 11.3%; U.S. 6.4%; U.A.E. 6.2%; Malaysia 5.4%.

Exports (2008): THB 5,851,371,140,000 (computers and parts 9.4%; transportation equipment 9.4%; agricultural products 9.0%; integrated circuits and parts 8.7%; electrical machinery and apparatus 6.8%; refined petroleum products 5.4%; nonelectrical machinery and equipment 4.9%). **Major export destinations:** U.S. 11.4%; Japan 11.3%; China 9.1%; Singapore 5.7%; Hong Kong 5.7%; Malaysia 5.6%.

Transport and communications

Transport. Railroads (2008): route length 4,071 km; passenger-km 8,570,000,000; metric ton-km cargo 3,139,000,000. Roads (2007): total length 51,538 km (paved 99%). Vehicles (2007): passenger cars 3,560,222; trucks and buses 3,615,153. Air transport (2008–09): passenger-km 51,852,000,000; metric ton-km cargo 2,050,901,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	17,971	289	PCs	2007	4,039	62
Telephones				Dailies	2007	7,300 ⁸	112 ⁸
Cellular	2008	62,000 ⁹	920 ⁹	Internet users	2008	16,100	239
Landline	2008	7,024	104	Broadband	2008	950 ⁹	14 ⁹

Education and health

Educational attainment (2007). Percentage of employed population having: no formal schooling 4.9%; incomplete primary education 32.4%; complete primary 21.2%; lower secondary 29.6%; upper secondary/higher 11.4%; other/unknown 0.5%. **Literacy** (2007): population age 15 and over literate 94.1%; males literate 95.9%; females literate 92.6%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	321,930	5,703,756	17.7	94
Secondary/Voc. (age 12–17)	227,929	4,789,339	21.0	76
Tertiary	66,431	2,503,572	37.7	50 (age 18–22)

Health (2005): physicians 19,546 (1 per 3,287 persons); hospital beds 134,016 (1 per 470 persons); infant mortality rate per 1,000 live births (2008) 18.1; undernourished population (2002–04) 13,800,000 (22% of total population based on the consumption of a minimum daily requirement of 1,870 calories).

Military

Total active duty personnel (November 2008): 306,600 (army 62.0%, navy 23.0%, air force 15.0%). **Military expenditure as percentage of GDP** (2007): 1.4%; per capita expenditure U.S.\$51.

¹Includes 74 appointed seats. ²Actual local administration is based on 76 provinces.

³2007. ⁴Manufacturing only. ⁵Third quarter. ⁶Includes 450,900 unemployed. ⁷Imports

c.i.f.; exports f.o.b. ⁸Circulation of daily newspapers. ⁹Subscribers.

Internet resources for further information:

- National Statistical Office <http://web.nso.go.th/index.htm>
- Bank of Thailand <http://www.bot.or.th>

Togo

Official name: République Togolaise (Togolese Republic).

Form of government: multiparty republic with one legislative body (National Assembly [81]).

Head of state and government: President assisted by Prime Minister.

Capital: Lomé.

Official language: French.

Official religion: none.

Monetary unit: CFA franc (CFAF); valuation (Sept. 1, 2009) 1 U.S.\$ = CFAF 458.60; 1 £ = CFAF 744.12.



Population			
Regions	population	Regions	population
Prefectures	2005 ¹ estimate	Prefectures	2005 ¹ estimate
Centrale	510,446	Yoto	159,380
Blitta	111,997	Zio	261,684
Sotouboua	141,073	Plateaux	1,201,810 ²
Tchamba	83,997	Agou	88,305
Tchaoudjo	173,379	Amou	100,151
Kara	689,210 ²	Danyi	43,076
Assoli	53,845	Est-Mono	79,690
Bassar	108,766	Haho	194,917
Binah	67,844	Kloto	192,763
Dankpen	77,536	Moyen-Mono	75,382
Doufelgou	87,228	Ogou	264,915
Kéran	73,229	Wawa	162,610
Kozah	220,763	Savanes	628,904 ²
Maritime	2,196,857	Kpendjal	120,612
Avé	91,536	Oti	138,919
Golfe ³	1,224,425	Tandjouraré	92,613
Lacs	234,762	Tône	276,761
Vo	225,070	TOTAL	5,227,227 ⁴

Demography

Area: 21,925 sq mi, 56,785 sq km.

Population (2009): 6,032,000⁵.

Density (2009): persons per sq mi 275.1, persons per sq km 106.2.

Urban-rural (2007): urban 41.4%; rural 58.6%.

Sex distribution (2008): male 49.12%; female 50.88%.

Age breakdown (2008): under 15, 41.6%; 15–29, 30.0%; 30–44, 15.9%; 45–59, 8.1%; 60–74, 3.6%; 75–84, 0.7%; 85 and over, 0.1%.

Population projection: (2020) 8,045,000; (2030) 10,105,000.

Ethnic composition (2000): Ewe 22.2%; Kabre 13.4%; Wachi 10.0%; Mina 5.6%; Kotokoli 5.6%; Bimoba 5.2%; Losso 4.0%; Gurma 3.4%; Lamba 3.2%; Adja 3.0%; other 24.4%.

Religious affiliation (2004): Christian 47.2%, of which Roman Catholic 27.8%, Protestant 9.5%, independent and other Christian 9.9%; traditional beliefs 33.0%; Muslim 13.7%; nonreligious 4.9%; other 1.2%.

Major cities (2005): Lomé 921,000 (urban agglomeration [2007] 1,452,000); Sokodé 106,300; Kara 100,400; Atakpamé 72,700; Kpalimé 71,400.

Vital statistics

Birth rate per 1,000 population (2008): 36.7 (world avg. 20.3).

Death rate per 1,000 population (2008): 9.1 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 4.85.

Life expectancy at birth (2008): male 57.0 years; female 61.6 years.

Adult population (ages 15–49) living with HIV (2007): 3.3%⁶ (world avg. 0.8%).

Major causes of death per 100,000 population (2002): infectious and parasitic diseases *c.* 572, of which HIV/AIDS-related *c.* 220, malaria *c.* 136; lower respiratory infections *c.* 180; perinatal conditions *c.* 86.

National economy

Budget (2008). Revenue: CFAF 249,900,000,000 (tax revenue 84.5%, of which taxes on international trade 66.5%; grants 11.7%; nontax revenue 3.8%). Expenditures: CFAF 253,300,000,000 (current expenditure 80.2%, capital expenditure 19.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cassava 770,000, yams 630,000, corn (maize) 500,000, sorghum 200,000, rice 74,200, dry beans 52,000, peanuts (groundnuts) 37,000, coffee 10,080, cacao beans 7,000; livestock (number of live animals) 1,950,100 sheep, 1,499,000 goats; roundwood 6,037,000 cu m, of which fuelwood 97%; fisheries production 24,905 (from aquaculture 20%). Mining and quarrying (2007): limestone 2,400,000; phosphate rock (2008; gross weight) 686,472; diamonds 17,362 carats. Manufacturing (value added in CFAF '000,000; 2006): food products, beverages, and tobacco manufactures 33,800; bricks, cement, and ceramics 19,300; base and fabricated metals 10,800; wood and wood products 7,300. Energy production (consumption): electricity (kW-hr; 2006) 221,000,000 (726,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (268,000); natural gas, none (none).

Population economically active (2006): total 2,521,000⁹; activity rate of total population 39.3%⁹ (participation rates: age 15–64, 70.0%⁹; female 38.4%⁹; unemployed [2004] *c.* 32%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.2	93.3	93.6	100.0	102.2	103.2	112.2

Gross national income (GNI; 2008): U.S.\$2,607,000,000 (U.S.\$400 per capita); purchasing power parity GNI (U.S.\$820 per capita).

Structure of gross domestic product and labour force					
	2008		2003		
	in value CFAF '000,000,000	% of total value	labour force	% of labour force	
Agriculture, forestry, fishing	574.2	39.7	1,210,000	57.9	
Mining	57.6	4.0			
Manufacturing	120.5	8.3			
Construction	48.2	3.3			
Public utilities	39.0	2.7	881,000	42.1	
Transp. and commun.	73.9	5.1			
Trade, hotels	148.1	10.2			
Finance, real estate	240.2	16.6			
Pub. admin., defense					
Services					
Other	143.2 ⁸	9.9 ⁸	2,091,000	100.0	
TOTAL	1,444.7 ²	100.0 ²			

Public debt (external, outstanding; 2007): U.S.\$1,655,000,000.

Household income and expenditure. Average household size (2004) 6.0; expenditure (2004)⁷: food products 36.1%, hotels and restaurants 12.9%, housing and energy 12.4%, transportation 8.5%, clothing and footwear 6.0%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 21; remittances (2008) 229; foreign direct investment (2005–07 avg.) 74; official development assistance (2007) 121. Disbursements for (U.S.\$'000,000): tourism (2006) 5; remittances (2008) 35.

Land use as % of total land area (2007): in temporary crops 45.2%, in permanent crops 3.1%, in pasture 18.4%, forest area 6.4%.

Foreign trade¹⁰

Balance of trade (current prices)						
	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	–154.7	–73.8	–167.9	–232.7	...	–507.1
% of total	23.6%	6.9%	17.7%	24.4%	...	47.5%

Imports (2007): U.S.\$787,100,000 (refined petroleum 26.7%; food 10.6%, of which cereals 5.2%; machinery and apparatus 9.4%; cement clinker 7.9%; medicinal and pharmaceutical products 6.2%). **Major import sources:** France 19.2%; China 15.8%; Netherlands 11.1%; U.S. 4.2%; Belgium 3.7%.

Exports (2007): U.S.\$280,000,000 (portland cement 24.1%; cement clinker 19.6%; iron and steel 12.5%; crude fertilizer 11.2%; food 9.5%; cotton 8.9%).

Major export destinations: Niger 12.7%; Benin 10.9%; India 9.8%; Burkina Faso 9.8%; Mali 7.1%; unspecified zones 19.7%.

Transport and communications

Transport. Railroads (2006): route length 568 km; passenger-km, none; metric ton-km cargo (2001) 440,000,000. Roads (2001): total length 7,500 km (paved 24%). Vehicles (2007): passenger cars 10,611; trucks and buses 2,412. Air transport (2007): passenger-km, n.a.; metric ton-km cargo, n.a.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	650	107	PCs	2007	171	30
Telephones				Dailies	2007	5 ¹¹	0.9 ¹¹
Cellular	2008	1,547 ¹²	264 ¹²	Internet users	2008	350	60
Landline	2008	141	24	Broadband	2008	1.9 ¹²	0.3 ¹²

Education and health

Educational attainment (1998)¹³. Percentage of population age 25 and over having: no formal education 56.3%; primary education 24.5%; secondary and higher 18.3%; unknown 0.9%. **Literacy** (2007): total population age 15 and over literate 65.8%; males 79.1%; females 52.8%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	26,103	1,021,617	39.1	77
Secondary/Voc. (age 12–18)	13,469 ¹⁴	399,038 ¹⁴	29.6 ¹⁴	22 ¹⁵
Tertiary	400 ¹⁶	13,500 ¹⁶	33.8 ¹⁶	4 ¹⁷ (age 19–23)

Health: physicians (2004) 225 (1 per 23,364 persons); hospital beds (2005) 4,862 (1 per 1,111 persons); infant mortality rate per 1,000 live births (2008) 58.2; undernourished population (2002–04) 1,200,000 (24% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): 8,550 (army 94.7%, navy 2.3%, air force 3.0%). **Military expenditure as percentage of GDP** (2007): 1.6%; per capita expenditure U.S.\$7.

¹January 1. ²Detail does not add to total given because of rounding. ³Golfe prefecture includes Lomé commune. ⁴Official country estimate. ⁵Estimate of U.S. Bureau of the Census International Data Base (June 2009 update). ⁶Statistically derived midpoint of range. ⁷Weights of consumer price index components. ⁸Import duties and taxes. ⁹ILO estimate. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³Based on the 1998 Togo Demographic and Health Survey, of which 14,075 respondents were age 25 and over. ¹⁴2004–05. ¹⁵1999–2000. ¹⁶2003–04. ¹⁷2000–01.

Internet resources for further information:

- Banque Centrale des Etats de l'Afrique de l'Ouest <http://www.bceao.int>
- DGSCN-Togo <http://www.stat-togo.org>

Tonga

Official name: Fakatu'i 'o Tonga (Tongan); Kingdom of Tonga (English).

Form of government: hereditary constitutional monarchy with one legislative house (Legislative Assembly [32]).

Chief of state: King².

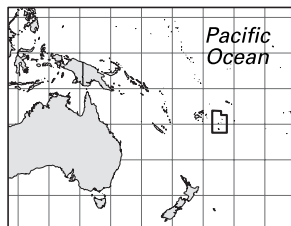
Head of government: Prime Minister.

Capital: Nuku'alofa.

Official languages: Tongan; English.

Official religion: none.

Monetary unit: pa'anga (T\$); valuation (Sept. 1, 2009) 1 U.S.\$ = T\$1.93; 1 £ = T\$3.13.



Area and population		area		population
Divisions ³	Principal towns	sq mi	sq km	2006 census
'Eua ⁴	'Ohonua	34	87	5,206
Ha'apai ⁵	Pangai	42	109	7,570
Niuas	Hihifo	28	72	1,665
Tongatapu ⁴	Nuku'alofa	101	261	72,045
Vava'u ⁵	Neiafu	47	121	15,505
UNINHABITED ISLANDS		26 ⁶	68 ⁶	—
TOTAL LAND AREA		277 ⁷	718	
INLAND WATER		12	30	
TOTAL		289	748	101,991

Demography

Population (2009): 103,000.

Density (2009)⁸: persons per sq mi 371.8, persons per sq km 143.5.

Urban-rural (2006): urban 23.2%; rural 76.8%.

Sex distribution (2006): male 50.76%; female 49.24%.

Age breakdown (2006): under 15, 38.2%; 15–29, 26.3%; 30–44, 17.2%; 45–59, 10.1%; 60–74, 6.1%; 75 and over, 2.1%.

Population projection: (2020) 109,000; (2030) 115,000.

Doubling time: 36 years.

Ethnic composition (2006): Tongan 96.6%; Tongan/other 1.6%; white 0.6%; Chinese 0.4%; other 0.8%.

Religious affiliation (2006): Protestant 64.9%, of which Methodist-related denominations 55.9%; Mormon 16.8%; Roman Catholic 15.6%; Bahā'ī 0.7%; unknown 1.4%; other 0.6%.

Major towns (2006): Nuku'alofa (on Tongatapu) 23,658 (Greater Nuku'alofa [including rural population] 34,311); Neiafu (on Vava'u) 4,123; Haveloloto 3,405⁹; Tofoa-Koloua 3,213⁹; Pangai-Hihifo (in the Ha'apai Group) 2,523.

Vital statistics

Birth rate per 1,000 population (2008): 25.3 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 19.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.76.

Marriage/divorce rates per 1,000 population (2004): 6.7¹⁰/1.1.

Life expectancy at birth (2008): male 74.4 years; female 74.4 years.

Major causes of death per 100,000 population (2004)¹¹: circulatory diseases 150.5; malignant neoplasms (cancers) 71.8; endocrine, nutritional, and metabolic disorders 51.8; respiratory diseases 39.9.

National economy

Budget (2005–06). Revenue: T\$172,446,000 (tax revenue 72.9%; grants 15.1%; nontax revenue 12.0%). Expenditures: T\$166,031,000 (current expenditure 93.0%; development expenditure 7.0%).

Public debt (external, outstanding; 2008¹²): U.S.\$89,600,000.

Gross national income (GNI; 2008): U.S.\$265,000,000 (U.S.\$2,560 per capita); purchasing power parity GNI (U.S.\$3,880 per capita).

Structure of gross domestic product and labour force				
	2007–08		2003	
	in value T\$'000	% of total value	labour force	% of labour force
Agriculture	112,294	20.8	10,990	30.1
Mining	2,049	0.4	60	0.2
Manufacturing	11,969	2.2	8,540	23.4
Construction	36,652	6.8	1,440	3.9
Public utilities	12,372	2.3	530	1.5
Transp. and commun.	24,681	4.6	1,580	4.3
Trade, restaurants	69,714	12.9	3,570	9.8
Finance, real estate	58,300	10.8	760	2.1
Pub. admin., defense	80,989	15.0	2,590	7.1
Services	46,307	8.6	4,500	12.4
Other	85,119 ¹³	15.7 ¹³	1,890 ¹⁴	5.2 ¹⁴
TOTAL	540,445 ⁷	100.0 ⁷	36,450	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 58,500, pumpkins, squash, and gourds 21,000, cassava 9,700, sweet potatoes 6,800, yams 4,700, plantains 3,300, vanilla 150; livestock (number of live animals) 81,200 pigs, 12,600 goats, 11,500 horses, 11,250 cattle, 330,000 chickens; roundwood 2,000 cu m, of which fuelwood, none; fisheries production 2,549 (from aquaculture, negligible); aquatic plants production 107 (from aquaculture, negligible). Mining and quarrying: coral and sand for local use. Manufacturing (value of production in T\$'000; 2005): food products and beverages 19,722; bricks, cement, and ceramics 4,109; chemicals and chemical products 2,044; printing and publishing 1,313; furniture 1,310; fabricated

metal products 1,193. Energy production (consumption): electricity (kW-hr; 2008) 55,000,000 (47,000,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (56,000).

Population economically active (2003): total 36,450; activity rate 34.1% (participation rates: ages 15–64 (1996) 60.4%; female 41.9%; unemployed 5.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	74.5	83.2	92.3	100.0	106.4	112.7	124.5
Earnings index ¹⁵	80.7	93.0	97.4	100.0	...	...	...

Household income and expenditure (2000–01). Average household size (2006) 5.8; cash income per household¹⁶ T\$12,871 (U.S.\$6,511); sources of cash income¹⁶: wages and salaries 35.6%, remittances from overseas 19.7%, sales of own produce 16.1%, other 28.6%; cash expenditure (2002)¹⁷: food and nonalcoholic beverages 44.4%, transportation 14.2%, alcoholic beverages, kava, and tobacco 12.3%, household furnishings and operation 12.0%, housing 5.3%, clothing and footwear 3.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 15; remittances (2008) 100; foreign direct investment (2005–07 avg.) 17; official development assistance (2007) 30. Disbursements for (U.S.\$'000,000): tourism (2007) 10; remittances (2008) 12.

Land use as % of total land area (2007): in temporary crops 20.8%, in permanent crops 16.7%, in pasture 5.6%, forest area 5.0%.

Foreign trade¹⁸

Balance of trade (current prices)

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08
T\$'000,000	–124.4	–140.8	–173.1	–214.4	–190.8	–238.9
% of total	61.7%	71.3%	73.6%	77.6%	78.1%	83.6%

Imports (2006–07): T\$245,200,000 (food and beverages 31.4%, refined petroleum 29.5%, machinery and transport equipment 14.2%). **Major import sources:** New Zealand 33.5%; Fiji 27.3%; Australia 13.8%; U.S. 10.3%.

Exports (2006–07): T\$20,900,000 (fish 40.2%, squash 26.8%, root crops 13.9%, kava 6.7%). **Major export destinations:** Japan 35.2%; New Zealand 20.2%; U.S. 12.2%; Australia 6.1%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 680 km (paved 27%). Vehicles (2004): passenger cars 7,705; trucks and buses 5,297. Air transport (2002): passenger-km 14,000,000; metric ton-km cargo 1,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	7.1	70	PCs	2005	5.0	50
Telephones				Dailies	2005	0	0
Cellular	2008	51 ¹⁹	487 ¹⁹	Internet users	2008	8.4	81
Landline	2008	26	247	Broadband	2008	0.7 ¹⁹	7.0 ¹⁹

Education and health

Educational attainment (2006). Percentage of population age 25 and over having: no formal schooling 1.5%; primary education 29.5%; lower secondary 46.7%; upper secondary 11.0%; higher 11.0%, of which university 3.6%; other 0.3%. **Literacy** (2007): 99.2%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 5–10)	760	16,941	22.3	96 ²⁰
Secondary/Voc. (age 11–16)	1,012 ²¹	13,938	14.4 ²¹	60
Tertiary	...	657	...	6 ²² (age 17–21)

Health (2004): physicians 41 (1 per 2,447 persons); hospital beds 296 (1 per 332 persons); infant mortality rate per 1,000 live births (2006) 20.0; undernourished population, n.a.

Military

Total active duty personnel (October 2007): 450-member force includes air and coast guard elements. Tonga has defense cooperation agreements with both Australia and New Zealand. **Military expenditure as percentage of GDP** (2004): 1.0%; per capita expenditure U.S.\$23.

¹Includes 14 nonelective seats and 9 nobles elected by the 29 hereditary nobles of Tonga.

²The king voluntarily ceded much of his power in July 2008. ³Divisions have no administrative functions; 3 island councils constitute the local administrative framework (including a combined islands council for 'Eua, Niuas, and Tongatapu. ⁴'Eua and Tongatapu together constitute Tongatapu island group. ⁵Also the name of an island group. ⁶Estimated figure. ⁷Detail does not add to total given because of rounding.

⁸Based on land area. ⁹Within Nuku'alofa urban agglomeration. ¹⁰Marriages on Tongatapu only. ¹¹Deaths occurring in hospitals only. ¹²January 1. ¹³Indirect taxes less subsidies and less imputed bank service charges. ¹⁴Unemployed. ¹⁵Manufacturing only.

¹⁶Noncash annual income equals T\$5,734 (U.S.\$2,901), of which consumption of own produce 45.6%, imputed rent 43.1%. ¹⁷Weights of consumer price index components.

¹⁸Imports f.o.b. in balance of trade and c.i.f. in commodities and trading partners.

¹⁹Subscribers. ²⁰2004–05. ²¹2001–02. ²²2003–04.

Internet resources for further information:

- **Tonga Department of Statistics**
<http://www.spc.int/prism/Country/TO/stats>
- **National Reserve Bank of Tonga**
<http://www.reservebank.to>

Trinidad and Tobago

Official name: Republic of Trinidad and Tobago.

Form of government: multiparty republic with two legislative houses (Senate [31¹]; House of Representatives [41]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Port of Spain.

Official language: English.

Official religion: none.

Monetary unit: Trinidad and Tobago dollar (TT\$); valuation (Sept. 1, 2009) 1 U.S.\$ = TT\$6.31; 1 £ = TT\$10.25.



Area and population

	area	population		area	population
	sq km	2000 census		sq km	2000 census
Trinidad	4,852	1,208,282	City corporations		
Regional corporations			Port of Spain	13	49,031
Couva/Tabaquite/Talparo	720	162,779	San Fernando	19	55,419
Diego Martin	128	105,720	Borough corporations		
Mayaro/Rio Claro	853	33,480	Arima	11	32,278
Penal/Debe	247	83,609	Chaguanas	60	67,433
Princes Town	621	91,947	Point Fortin	24	19,056
San Juan/Laventille	220	157,295	Tobago²	303	54,084
Sangre Grande	899	64,343	TOTAL	5,155	1,262,366
Siparia	510	81,917			
Tunapuna/Piarco	527	203,975			

Demography

Population (2009): 1,302,000.

Density (2009): persons per sq mi 654.3; persons per sq km 252.6.

Urban-rural (2005): urban 12.2%; rural 87.8%.

Sex distribution (2007): male 50.59%; female 49.41%.

Age breakdown (2007): under 15, 20.1%; 15–29, 28.3%; 30–44, 21.8%; 45–59, 18.7%; 60–74, 8.4%; 75–84, 2.2%; 85 and over, 0.5%.

Population projection: (2020) 1,280,000; (2030) 1,220,000.

Ethnic composition (2000): black 39.2%; East Indian 38.6%; mixed 16.3%; Chinese 1.6%; white 1.0%; other/not stated 3.3%.

Religious affiliation (2005): Roman Catholic c. 29%; Hindu c. 24%; Protestant c. 19%; independent and other Christian c. 7%; Muslim c. 7%; nonreligious c. 2%; other/unknown c. 12%.

Major cities/built-up areas (2006): Chaguanas 73,100; San Juan 57,100³; San Fernando 56,600; Port of Spain 49,800 (greater Port of Spain [2004] 264,000); Arima 35,600³; Scarborough (on Tobago) 4,600.

Vital statistics

Birth rate per 1,000 population (2008): 14.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 7.7 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 6.4 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.73.

Marriage/divorce rates per 1,000 population (2002): 5.8/1.2.

Life expectancy at birth (2007): male 67.6 years; female 73.5 years.

Major causes of death per 100,000 population (2002): ischemic heart disease 163.1; HIV/AIDS-related 141.0; malignant neoplasms (cancers) 107.2; diabetes mellitus 102.0; cerebrovascular disease 94.8.

National economy

Budget (2008). Revenue: TT\$55,584,400,000 (taxes on oil/natural gas corporations 47.5%; nonoil company taxes 12.1%; VAT 11.9%; personal income taxes 7.5%; nontax revenue 4.8%; import duties 4.3%). Expenditures: TT\$45,767,000,000 (current expenditures 78.0%; development expenditures and net lending 22.0%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 358,000, chicken meat 60,000, bananas 7,000, oranges 5,250, pineapples 4,500, pig meat 3,000, cocoa 639, coffee 250; livestock (number of live animals) 60,000 goats, 45,000 pigs, 28,500,000 chickens; roundwood 98,800 cu m, of which fuelwood 34%; fisheries production 8,406 (from aquaculture, negligible). Mining and quarrying (2007): limestone 850,000; natural asphalt 16,200. Manufacturing (value added in U.S.\$'000,000; 2003): refined petroleum products/natural gas products 732; base chemicals 515; food products 129; beverages 124; cement, bricks, and ceramics 79; iron and steel 61. Energy production (consumption): electricity (kW-hr; 2008) 7,760,000,000 ([2006] 6,901,000,000); coal, none (none); crude petroleum (barrels; 2008) 41,800,000 ([2006] 56,500,000); petroleum products (metric tons; 2006) 8,093,000 (1,209,000); natural gas (cu m; 2008) 41,839,000,000 ([2006] 14,688,000,000).

Household income and expenditure. Average household size (2004) 3.8; average income per household⁴ TT\$53,015 (U.S.\$8,484); expenditure (2003): housing 20.4%, food and nonalcoholic beverages 18.0%, transportation 16.7%, recreation and culture 8.5%, energy 5.8%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 463; remittances (2008) 109; official development assistance (2007) 18; foreign direct investment (FDI; 2005–07 avg.) 921. Disbursements for (U.S.\$'000,000): tourism (2007) 94; remittances, n.a.; FDI (2005–07 avg.) 330.

Land use as % of total land area (2007): in temporary crops 4.9%, in permanent crops 4.3%, in pasture 1.4%, forest area 43.9%.

Gross national income (GNI; 2008): U.S.\$22,123,000,000 (U.S.\$16,540 per capita); purchasing power parity GNI (U.S.\$23,950 per capita).

Structure of gross domestic product and labour force

	2008		2006	
	in value TT\$'000,000	% of total value	labour force	% of labour force
Agriculture	467	0.3	25,700	4.1
Petroleum, natural gas, other mining	70,454	46.3	20,400	3.2
Manufacturing	7,959	5.2	55,500	8.9
Construction	14,309	9.4	104,500	16.7
Public utilities	1,393	0.9		
Transp. and commun.	7,314	4.8	42,700	6.8
Trade	17,334 ⁵	11.4 ⁵	106,600	17.1
Finance, real estate	16,866	11.1	48,100	7.7
Pub. admin., defense	9,455	6.2		
Services	5,274 ⁶	3.5 ⁶	181,000	29.0
Other	1,290 ⁷	0.8 ⁷	40,600 ⁸	6.5 ⁸
TOTAL	152,115	100.0⁹	625,200⁹	100.0

Population economically active (2008): total 626,600; activity rate of total population c. 48% (participation rates: ages 15–64, 70.2%; female 41.5%; unemployed 4.6%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	86.9	90.2	93.6	100.0	108.3	116.9	130.9

Public debt (external, outstanding; March 2009): U.S.\$1,494,000,000.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+1,299	+1,648	+3,918	+7,541	+5,733	+9,017
% of total	14.2%	13.5%	25.6%	37.1%	27.2%	32.0%

Imports (2007): U.S.\$7,663,000,000 (crude petroleum 31.0%, nonelectrical machinery and equipment 11.4%, base and fabricated metals 8.6%, food products 7.1%, iron ore agglomerates 5.8%, road vehicles 5.5%). **Major import sources:** United States 25.1%; Brazil 10.6%; Colombia 8.8%; Gabon 6.8%; Republic of the Congo 5.7%.

Exports (2007): U.S.\$13,396,000,000 (liquefied natural gas 30.8%, refined petroleum 16.2%, crude petroleum 12.8%, ammonia 8.9%, methanol 7.2%, iron and steel 3.9%). **Major export destinations:** United States 57.7%; Jamaica 4.6%; Spain 4.0%; Dominican Republic 2.6%; Germany 2.2%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 8,320 km (paved 51%).

Vehicles (2005): passenger cars 320,000; trucks and buses 71,000. Air transport (2008)¹¹: passenger-km 2,285,000,000; metric ton-km cargo 19,696,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	461	359	PCs	2007	172	132
Telephones				Dailies	2007	140 ¹²	107 ¹²
Cellular	2008	1,505 ¹³	1,155 ¹³	Internet users	2008	227	174
Landline	2008	307	236	Broadband	2007	36 ¹³	27 ¹³

Education and health

Educational attainment (2000). Percentage of population age 15 and over having: no formal schooling 2.5%; primary education 35.4%; secondary 52.0%; university 4.6%; other/not stated 5.5%. **Literacy** (2002): total population age 15 and over literate 98.5%; males 99.0%; females 97.9%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–11)	7,839	129,703	16.5	85
Secondary/Voc. (age 12–16)	5,896	97,080	16.5	65
Tertiary	1,800	16,920	9.4	11 (age 17–21)

Health (2008): physicians 1,735 (1 per 751 persons); hospital beds 3,499 (1 per 372 persons); infant mortality rate per 1,000 live births (2007) 32.2; undernourished population (2002–04) 130,000 (10% of total population based on the consumption of a minimum daily requirement of 1,950 calories).

Military

Total active duty personnel (November 2008): 4,063 (army 73.8%, coast guard 26.2%). **Military expenditure as percentage of GNP** (2007): 0.3%; per capita expenditure U.S.\$42.

¹All seats are nonelected. ²Semiautonomous island. ³Within greater Port of Spain. ⁴Approximately 2002; exact date of information is unknown. ⁵Excludes hotels. ⁶Includes hotels. ⁷Net of VAT less imputed bank service charges. ⁸Includes 39,000 unemployed. ⁹Detail does not add to total given because of rounding. ¹⁰Imports c.i.f.; exports f.o.b.

¹¹Caribbean Airlines. ¹²Circulation of daily newspapers. ¹³Subscribers.

Internet resources for further information:

- Central Bank of Trinidad and Tobago <http://www.central-bank.org.tt>
- Central Statistical Office <http://www.cso.gov.tt>

Tunisia

Official name: Al-Jumhūriyah at-Tūnisīyah (Tunisian Republic).
Form of government: multiparty republic¹ with two legislative houses (Chamber of Councillors [126²]; Chamber of Deputies [214]).
Chief of state: President.
Head of government: Prime Minister.
Capital: Tunis.
Official language: Arabic.
Official religion: Islam.
Monetary unit: dinar (TND); valuation (Sept. 1, 2009) 1 U.S.\$ = TND 1.32; 1 £ = TND 2.14.



Area and population

area		population	area		population
	sq km	2009 ³ estimate		sq km	2009 ³ estimate
Governorates			Governorates		
Al-Ariānah	498	485,700	Al-Qasrayn	8,066	428,300
Bājah	3,558	304,600	Al-Qayrawān	6,712	555,900
Banzart	3,685	542,400	Qibīlī	22,084	149,100
Bin 'Arūs	761	567,500	Safāqīs	7,545	917,000
Jundūbah	3,102	421,200	Sīdī Bū Zayd	6,994	408,800
Al-Kāf	4,965	256,100	Sīlānah	4,631	233,100
Madānīn	8,588	451,200	Sūsah	2,621	602,300
Al-Mahdiyyah	2,966	392,900	Tātāuīn	38,889	145,000
Manūbah	1,060	364,600	Tawzar	4,719	102,300
Al-Munastīr	1,019	504,700	Tūnis	346	994,900
Nābul	2,788	743,500	Zaghwān	2,768	169,100
Qābis	7,175	357,400	TOTAL	163,610⁴	10,432,500
Qafshah	8,990	334,900			

Demography

Population (2009): 10,272,000⁵.
Density (2009): persons per sq mi 162.6, persons per sq km 62.8.
Urban-rural (2008): urban 66.5%; rural 33.5%.
Sex distribution (2008): male 50.30%; female 49.70%.
Age breakdown (2005): under 15, 25.9%; 15–29, 30.1%; 30–44, 22.1%; 45–59, 13.2%; 60–74, 6.6%; 75–84, 1.8%; 85 and over, 0.3%.
Population projection: (2020) 11,366,000; (2030) 12,127,000.
Ethnic composition (2000): Tunisian Arab 67.2%; Bedouin Arab 26.6%; Algerian Arab 2.4%; Amazigh (Berber) 1.4%; other 2.4%.
Religious affiliation (2005): Muslim c. 99%, of which Sunni c. 97%; other c. 1%.
Major cities (2004): Tunis (2007) 745,000; Safāqīs 265,131; Al-Ariānah 240,749⁶; Sūsah 173,047; Ettadhamen 118,487⁶.

Vital statistics

Birth rate per 1,000 population (2008–09): 15.3 (world avg. 20.3).
Death rate per 1,000 population (2008–09): 4.3 (world avg. 8.5).
Total fertility rate (avg. births per childbearing woman; 2007): 2.03.
Marriage/divorce rates per 1,000 population: (2008–09) 5.2/(1999) 0.1.
Life expectancy at birth (2007): male 72.4 years; female 76.3 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases 267; accidents, injuries, and violence 62; malignant neoplasms (cancers) 57.

National economy

Budget (2007). Revenue: TND 13,880,700,000 (tax revenue 68.6%, of which VAT 19.2%, income tax 9.8%; grants and loans 17.5%; nontax revenue 13.9%). Expenditures: TND 15,089,000,000 (social services 40.9%; debt service 26.0%; economic services 17.4%).
Production (metric tons except as noted). Agriculture, forestry, fishing (2008): tomatoes 1,200,000, olives 1,000,000, wheat 918,800, potatoes 370,000, chilies and peppers 291,000, barley 253,800, grapes 132,000, dates 127,000, almonds (2007) 58,000; livestock (live animals; 2007) 7,618,350 sheep, 1,550,650 goats, 710,130 cattle, 230,000 camels; roundwood (2007) 2,380,800 cu m, of which fuelwood 91%; fisheries production 92,982 (from aquaculture [2007] 3%). Mining and quarrying (2008–09): phosphate rock 8,017,200; iron ore 178,900. Manufacturing (value added in TND '000,000; 2008): crude and refined petroleum and natural gas 4,033; electrical machinery 2,144; textiles, leather, and clothing 2,133; chemicals and chemical products 1,706; food products 1,563. Energy production (consumption): electricity (kW-hr; 2008–09) 13,854,200,000 (11,861,200,000); coal (metric tons; 2006) none (none); crude petroleum (barrels; 2008–09) 31,975,500 (12,739,100); petroleum products (metric tons; 2008–09) 1,710,800 (3,336,900); natural gas (cu m; 2008–09) 2,789,000,000 (4,256,900,000).

Land use as % of total land area (2007): in temporary crops 17.7%, in permanent crops 14.0%, in pasture 31.5%, forest area 7.0%.

Household income and expenditure (2005). Average household size (2008) 4.3; income per household TND 8,211 (U.S.\$6,329); expenditure: food and beverages 34.8%, housing and energy 22.8%, transportation 10.7%, health and personal care 10.3%, household furnishings 8.8%.

Population economically active (2008): total 3,677,700; activity rate of total population 36.2% (participation rates: age 15 and over [2007] 46.8%; female [2007] 25.3%; unemployed 14.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.1	94.6	98.0	100.0	104.5	107.8	113.1
Hourly earnings index ⁷	...	...	...	100.0	102.9	106.5	111.5

Gross national income (GNI; 2008): U.S.\$33,998,000,000 (U.S.\$3,290 per capita); purchasing power parity GNI (U.S.\$7,070 per capita).

Structure of gross domestic product and labour force

	2008		2007	
	in value TND '000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	4,884,300	9.6	570,700	15.9
Mining and quarrying	554,900	1.1		
Public utilities	4,743,800 ⁸	9.3 ⁸		
Manufacturing	9,425,600	18.5	1,002,700	27.9
Construction	2,728,800	5.4		
Transp. and commun.	5,709,900	11.2		
Trade, hotels	7,412,100	14.5		
Finance, real estate	6,221,300	12.2	1,511,700	42.1
Pub. admin., defense	5,327,700	10.5		
Services	1,079,700	2.1		
Other	2,866,500 ⁹	5.6 ⁹	508,100 ¹⁰	14.1 ¹⁰
TOTAL	50,954,600	100.0	3,593,200	100.0

Public debt (external, outstanding; June 2009): U.S.\$14,673,200,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2008) 2,658; remittances (2008) 1,870; foreign direct investment (FDI; 2005–07 avg.) 1,904; official development assistance (2007) 310. Disbursements for (U.S.\$'000,000): tourism (2007) 437; remittances (2008) 15; FDI (2005–07 avg.) 22.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
TND '000,000	–3,696	–3,781	–3,498	–4,446	–5,029	–6,568
% of total	15.2%	13.2%	11.3%	12.5%	11.5%	12.2%

Imports (2008): TND 30,241,200,000 (mineral fuels 16.2%, of which refined petroleum products 10.2%; textiles and wearing apparel 13.5%, of which fabric 7.0%; food products 11.0%; chemicals and chemical products 8.2%; base metals 6.8%; transportation equipment 6.7%). **Major import sources:** France 18.5%; Italy 17.2%; Germany 7.0%; Libya 4.4%; Spain 3.9%.

Exports (2008): TND 23,673,000,000 (textiles and wearing apparel 25.8%, of which clothing 19.3%; mineral fuels 17.2%, of which crude petroleum 13.6%, refined petroleum products 3.6%; electrical machinery 16.3%; phosphate products [mostly fertilizers] 12.3%; food products 9.1%). **Major export destinations:** France 28.5%; Italy 20.6%; Germany 6.9%; Spain 4.9%; U.K. 4.6%.

Transport and communications

Transport. Railroads (2008–09): route length (2008) 2,165 km; passenger-km 1,509,700,000; metric ton-km cargo 1,854,200,000. Roads (2004): total length 19,232 km (paved 66%). Vehicles (2004): passenger cars 825,990; trucks and buses 119,064. Air transport (2008): passenger-km 3,357,000,000; metric ton-km cargo 15,380,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2006	2,300	231	PCs	2008	997	98
Telephones				Dailies	2008	272 ¹²	27 ¹²
Cellular	2008	8,602 ¹³	846 ¹³	Internet users	2008	2,800	275
Landline	2008	1,239	122	Broadband	2008	227 ¹³	22 ¹³

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling 22.0%; primary education 36.5%; secondary 33.1%; higher 8.4%. **Literacy** (2007): total population age 10 and over literate 77.9%; males literate 87.0%; females literate 68.7%.

Education (2005–06)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	59,265	1,134,414	19.1	96
Secondary/Voc. (age 12–18)	64,761	1,247,046	19.3	64 ¹⁴
Tertiary	16,919	325,325	19.2	31 (age 19–23)

Health (2008): physicians (2007) 10,554 (1 per 969 persons); hospital beds 18,851 (1 per 539 persons); infant mortality rate 19.3; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 35,800 (army 75.4%, navy 13.4%, air force 11.2%). **Military expenditure as percentage of GDP** (2007): 1.3%; per capita expenditure U.S.\$47.

¹A single party dominates the political system in practice. ²Statutory number; 41 seats are nonelective. ³July 1. ⁴Total includes 9,080 sq km (3,506 sq mi) of saline lakes that are not distributed by governorate. ⁵Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁶Within Tunis urban agglomeration. ⁷Minimum wage for 40-hour workweek. ⁸Includes the extraction and refining of petroleum and natural gas. ⁹Indirect taxes less subsidies and less imputed bank service charges. ¹⁰Unemployed. ¹¹Imports c.i.f.; exports f.o.b. ¹²Circulation of six top daily newspapers only. ¹³Subscribers. ¹⁴2002–03.

Internet resources for further information:

- Central Bank of Tunisia <http://www.bct.gov.tn>
- National Statistics Institute <http://www.ins.nat.tn>

Turkey

Official name: Türkiye Cumhuriyeti (Republic of Turkey).

Form of government: multiparty republic with one legislative house (Grand National Assembly of Turkey [550]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Ankara.

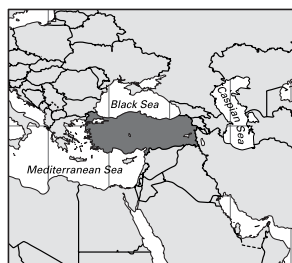
Official language: Turkish.

Official religion: none.

Monetary unit: New Turkish lira

(YTL); valuation (Sept. 1, 2009)

1 U.S.\$ = YTL 1.50; 1 £ = YTL 2.44.



Area and population

Geographic regions ²	area	population	Geographic regions ²	area	population
	sq km	2009 ¹ estimate ³		sq km	2009 ¹ estimate ³
Aegean	90,251	9,384,848	Black Sea, East	35,163	2,507,387
Anatolia, Central	91,809	3,792,508	Black Sea, West	73,840	4,478,029
Anatolia, Central East	82,948	3,618,056	Istanbul	5,313	12,697,164
Anatolia, North East	71,003	2,201,862	Marmara, East	49,383	6,579,426
Anatolia, South East	76,938	7,350,752	Marmara, West	42,989	3,107,425
Anatolia, West	75,362	6,748,952	Mediterranean	90,348	9,050,691
			TOTAL	785,347	71,517,100

Demography

Population (2009): 71,983,000.

Density (2009): persons per sq mi 237.4, persons per sq km 91.7.

Urban-rural (2007): urban 70.5%; rural 29.5%.

Sex distribution (2009): male 50.20%; female 49.80%.

Age breakdown (2009): under 15, 26.3%; 15–29, 26.5%; 30–44, 22.2%; 45–59, 15.1%; 60–74, 7.2%; 75–84, 2.4%; 85 and over, 0.3%.

Population projection: (2020) 80,698,000; (2030) 86,953,000.

Ethnic composition (2000): Turk 65.1%; Kurd 18.9%; Crimean Tatar 7.2%; Arab 1.8%; Azerbaijani 1.0%; Yoruk 1.0%; other 5.0%.

Religious affiliation (2005): Muslim c. 97.5%, of which Sūnnī c. 82.5%, Shīʿī (mostly nonorthodox Alevi) c. 15.0%; nonreligious c. 2.0%; other (mostly Christian) c. 0.5%.

Major cities (2007): Istanbul 10,757,327; Ankara 3,763,591; İzmir 2,606,294; Bursa 1,431,172; Adana 1,366,027; Gaziantep 1,175,042.

Vital statistics

Birth rate per 1,000 population (2008): 17.9 (world avg. 20.3).

Death rate per 1,000 population (2008): 6.4 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2008): 2.14.

Marriage/divorce rates per 1,000 population (2008): 9.0/1.4.

Life expectancy at birth (2008): male 71.4 years; female 75.8 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 309; malignant neoplasms (cancers) 100; accidents 15; infectious and parasitic diseases 14.

National economy

Budget (2007). Revenue: YTL 218,858,000,000 (tax revenue 72.1%, of which taxes on goods and services 42.2%, individual income taxes 16.2%; nontax revenue 27.4%; grants 0.5%). Expenditures: YTL 206,965,000,000 (public debt transactions 24.1%; remainder 75.9%).

Production (in '000 metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 17,678, sugar beets 14,800, tomatoes 9,920, barley 7,423, potatoes 4,281, grapes 3,923, corn (maize) 3,875, watermelons 3,445, seed cotton 2,500, apples 2,266, cucumbers and gherkins 1,876, cantaloupes 1,779⁵, onions 1,779, olives 1,525, oranges 1,472, sunflower seeds 1,031, lentils 580, apricots 528, chickpeas 523, hazelnuts 499, green beans 499, cherries 392, figs 271, tea 192, tobacco 98; livestock (number of live animals) 25,462,000 sheep, 11,037,000 cattle, 191,066 angora goats, 344,820,000 chickens; roundwood 17,664,000 cu m, of which fuelwood 26%; fisheries production 772 (from aquaculture 18%). Mining (2007): magnesite 2,100; refined borates 1,093; chromite 466; copper ore (metal content) 49; marble 2,802,000 cu m; silver 198,000 kg. Manufacturing (value added in U.S.\$'000,000; 2005): food products 8,800; telecommunications equipment, electronics 7,450; chemicals and chemical products 7,400; base metals 7,000; motor vehicles and parts 6,500; textiles 6,100. Energy production (consumption): electricity (kW-hr; 2008) 198,600,000,000 ([2006] 174,636,000,000); hard coal (metric tons; 2008) 3,340,000 ([2006] 22,800,000); lignite (metric tons; 2008) 86,100,000 ([2006] 60,800,000); crude petroleum (barrels; 2008) 15,600,000 ([2006] 194,100,000); petroleum products (metric tons; 2006) 21,563,000 (24,383,000); natural gas (cu m; 2007) 906,000,000 (36,586,000,000).

Population economically active (2006): total 24,775,000; activity rate of total population 34.2% (participation rates: ages 15–64, 51.1%; female 26.1%; unemployed [July 2008–June 2009] 13.1%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	65.5	82.1	90.8	100.0	110.5	120.2	132.7

Household income and expenditure. Average household size (2005) 4.1; average annual income per household (2003) U.S.\$7,174; sources of income (2005): wages and salaries 39.2%, self-employment 28.8%, transfers 23.0%; expenditure (2007): housing 28.4%, food and nonalcoholic beverages 24.4%, transportation 11.0%, household furnishings 6.0%.

Gross national income (GNI; 2008): U.S.\$690,706,000,000 (U.S.\$9,340 per capita); purchasing power parity GNI (U.S.\$13,770 per capita).

Structure of gross domestic product and labour force

	2007		2006	
	in value YTL '000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	64,278,298	7.5	6,088,000	24.6
Mining	10,536,592	1.2	128,000	0.5
Manufacturing	142,125,440	16.6	4,186,000	16.9
Construction	40,992,321	4.8	1,267,000	5.1
Public utilities	16,126,298	1.9	93,000	0.4
Transp. and commun.	117,091,301	13.7	1,163,000	4.7
Trade, hotels	122,294,642	14.3	4,730,000	19.1
Finance, real estate	152,906,039	17.9	1,010,000	4.1
Pub. admin., defense	33,013,998	3.9	1,225,000	4.9
Services	54,612,263	6.4	2,440,000	9.8
Other	99,659,046 ⁷	11.7 ⁷	2,446,000 ⁸	9.9 ⁸
TOTAL	853,636,236⁹	100.0⁹	24,775,000⁹	100.0

Public debt (external, outstanding; December 2008): U.S.\$74,917,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 18,487; remittances (2008) 1,360; foreign direct investment (FDI; 2005–07 avg.) 17,350; official development assistance (2007) 797. Disbursements for (U.S.\$'000,000): tourism (2007) 3,260; remittances (2008) 111; FDI (2005–07 avg.) 1,365.

Land use as % of total land area (2007): in temporary crops 23.0%, in permanent crops 3.8%, in pasture 19.0%, forest area 13.3%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−22,087	−34,373	−43,298	−54,041	−62,844	−69,820
% of total	18.9%	21.4%	22.8%	24.0%	22.7%	20.9%

Imports (2007): U.S.\$170,057,000,000 (machinery and apparatus 21.1%, mineral fuels 20.6%, base and fabricated metals 15.2%, transportation equipment 8.5%). **Major import sources:** Russia 13.8%; Germany 10.3%; China 7.8%; Italy 5.9%; U.S. 4.8%; France 4.6%.

Exports (2007): U.S.\$107,213,000,000 (textiles/clothing 21.4%, transportation equipment 17.0%, machinery and apparatus 15.1%, base and fabricated metals 14.6%, vegetables/fruits/nuts 4.1%). **Major export destinations:** Germany 11.2%; U.K. 8.1%; Italy 7.0%; France 5.6%; Russia 4.4%; U.S. 3.9%.

Transport and communications

Transport. Railroads (2007): length 8,697 km; passenger-km 5,553,000; metric ton-km cargo 9,921,000,000. Roads (2006): total length 427,099 km (paved [2004] 45%). Vehicles (2007): passenger cars 6,472,156; trucks and buses 3,181,390. Air transport (2008)¹¹: passenger-km 51,183,000,000; metric ton-km cargo 533,501,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2002	29,440	424	PCs	2007	4,207	60
Telephones				Dailies	2007	5,165 ¹²	74 ¹²
Cellular	2008	65,824 ¹³	926 ¹³	Internet users	2008	24,483	345
Landline	2008	17,502	246	Broadband	2008	5,750 ¹³	81 ¹³

Education and health

Educational attainment (2007). Percentage of population age 25–64 having: no formal schooling through primary education 61%; lower secondary 10%; upper secondary 18%; university 11%. **Literacy** (2006): total population age 15 and over literate 88.1%; males literate 96.0%; females literate 80.4%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	...	7,949,758	...	91
Secondary/Voc. (age 12–16)	...	5,388,119	...	69
Tertiary	84,785	2,342,898	27.6	35 (age 17–21)

Health: physicians (2006) 114,583 (1 per 604 persons); hospital beds (2007) 184,983 (1 per 379 persons); infant mortality rate per 1,000 live births (2008) 16.0; undernourished population (2002–04) 2,100,000 (3% of total population based on the consumption of a minimum daily requirement of 1,970 calories).

Military

Total active duty personnel (November 2008): 510,600 (army 78.7%, navy 9.5%, air force 11.8%)¹⁴. **Military expenditure as percentage of GDP** (2007): 2.1%¹⁶; per capita expenditure U.S.\$195¹⁶.

¹January 1. ²Administratively divided into 81 provinces as of 2008. ³Based on new registration system. ⁴Projected rates based on about 46% of total deaths. ⁵Includes other melons except watermelons. ⁶Rounded figures. ⁷Import duties less imputed bank service charges. ⁸Unemployed. ⁹Detail does not add to total given because of rounding. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Atlasjet, Turkish, Pegasus, and Onur airlines only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Turkish troops in Turkish Republic of Northern Cyprus (November 2008) 36,000. ¹⁵U.S. troops in Turkey (November 2008) 1,570. ¹⁶Includes coast guard and gendarmerie.

Internet resources for further information:

- Central Bank of Turkey <http://www.tcmb.gov.tr/yeni/eng>
- Turkish Statistical Institute <http://www.turkstat.gov.tr/Start.do>

Turkmenistan

Official name: Türkmenistan (Turkmenistan).

Form of government¹: unitary single-party² republic with one legislative body (Mejlis, or Assembly [125]).

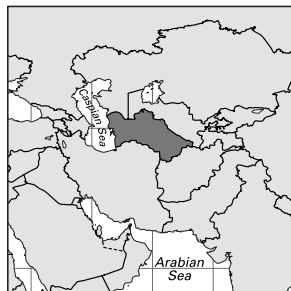
Head of state and government: President.

Capital: Ashgabat.

Official language: Turkmen.

Official religion: none.

Monetary unit: (new) manat (TMT)³; valuation (Sept. 1, 2009) 1 U.S.\$ = TMT 2.85⁴; 1 £ = TMT 4.62.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2002 estimate
Ahal	Ashgabat	36,700	95,100	794,600
Balkan	Balkanabat	53,500	138,500	481,300
Daşoguz	Daşoguz	28,400	73,600	1,203,100
Lebap	Türkmenabat (Chärjew)	36,200	93,800	1,169,100
Mary	Mary	33,500	86,800	1,291,800
City				
Ashgabat	—	100	300	733,100
TOTAL		188,500 ⁵	488,100	5,673,000

Demography

Population (2009): 4,885,000⁶.

Density (2009): persons per sq mi 25.9, persons per sq km 10.0.

Urban-rural (2008): urban 48.2%; rural 51.8%.

Sex distribution (2005): male 49.24%; female 50.76%.

Age breakdown (2005): under 15, 31.8%; 15–29, 30.0%; 30–44, 20.6%; 45–59, 11.4%; 60–74, 4.6%; 75–84, 1.4%; 85 and over, 0.2%.

Population projection⁶: (2020) 5,529,000; (2030) 6,027,000.

Doubling time: 37 years.

Ethnic composition (2000): Turkmen 79.2%; Uzbek 9.0%; Russian 3.0%; Kazakh 2.5%; Tatar 1.1%; other 5.2%.

Religious affiliation (2000): Muslim (mostly Sunnī) 87.2%; Russian Orthodox 1.7%; nonreligious 9.0%; other 2.1%.

Major cities (2004): Ashgabat (2007) 744,000; Türkmenabat 256,000; Daşoguz 210,000; Mary 159,000; Balkanabat 139,000.

Vital statistics

Birth rate per 1,000 population (2008): 21.8 (world avg. 20.3); (1998) within marriage 96.2%, outside of marriage 3.8%.

Death rate per 1,000 population (2008): 8.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 13.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 2.48.

Marriage/divorce rates per 1,000 population: (1998) 5.4/(1994) 1.5.

Life expectancy at birth (2008): male 59.1 years; female 67.4 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 462.1, of which ischemic heart diseases 243.4, hypertensive heart disease 105.7; lower respiratory infections 77.6; infectious and parasitic diseases 65.6; malignant neoplasms (cancers) 60.9.

National economy

Budget (2006)⁷. Revenue: TMM 22,474,000,000,000 (tax revenue 93.8%; non-tax revenue 6.2%). Expenditures: TMM 16,631,000,000,000 (current expenditure 94.2%; development expenditure 5.8%).

Public debt (external, outstanding; 2007): U.S.\$648,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): wheat 2,700,000, cow's milk 1,332,800, seed cotton 946,000, tomatoes 256,000, watermelons 240,000, grapes 175,000, cattle meat 102,000, sheep meat 90,200, wool 20,200; livestock (number of live animals) 15,500,000 sheep, 1,948,000 cattle; roundwood 3,400 cu m, of which fuelwood 100%; fisheries production 15,016 (from aquaculture, negligible). Mining and quarrying (2006): iodine 270,000, salt 215,000, gypsum 100,000. Manufacturing (2004): distillate fuel (gas-diesel oil) 2,511,000; residual fuel oils 1,745,000; motor spirits (gasoline) 1,265,000; wheat flour (2003) 503,000; cement 450,000. Energy production (consumption): electricity (kW-hr; 2006) 13,650,000,000 (12,310,000,000); coal, none (none); crude petroleum (barrels; 2007) 65,700,000 (40,200,000); petroleum products (metric tons; 2006) 7,702,000 (4,191,000); natural gas (cu m; 2006) 62,000,000,000 (14,677,000,000).

Household income and expenditure. Average household size (2002) 5.7; income per household: n.a.; sources of income (1998): wages and salaries 70.6%, pensions and grants 20.9%, self-employment (mainly agricultural income) 2.3%, nonwage income of workers 1.1%; expenditure (1998): food 45.2%, clothing and footwear 16.8%, furniture 13.3%, transportation 7.6%, health 7.0%.

Population economically active (2006): total 2,181,000⁸; activity rate of total population 44.5%⁸ (participation rates: ages 15–64, 68.5%⁸; female 46.9%⁸; unofficially unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	80.8	85.3	90.4	100.0	110.5	120.4	134.9

Gross national income (2008): U.S.\$14,260,000,000 (U.S.\$2,840 per capita); purchasing power parity GNI (U.S.\$6,210 per capita).

Structure of gross domestic product and labour force

	2008		1998	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture	1,846.6	22.6	892,400	48.5
Mining				
Manufacturing	3,069.2	37.6	226,800	12.3
Public utilities			48,300	2.6
Construction	353.8	4.3	108,200	5.9
Transp. and commun.	259.7	3.2	90,700	4.9
Trade, hotels	169.2	2.1	115,800	6.4
Finance			12,600	0.7
Public administration, defense	2,470.7	30.2	28,800	1.6
Services			284,900	15.5
Other			30,200	1.6
TOTAL	8,169.2	100.0	1,838,700	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism, n.a.; remittances (2006) 4⁹; foreign direct investment (2005–07 avg.) 651; official development assistance (2007) 28. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances (2006) 1⁹.

Land use as % of total land area (2007): in temporary crops 3.9%, in permanent crops 0.1%, in pasture 65.3%, forest area 8.8%.

Foreign trade¹⁰

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	+1,030	+1,270	+705	+1,997	+4,598	+5,216
% of total	21.9%	20.6%	10.1%	25.3%	47.3%	41.2%

Imports (2003): U.S.\$2,450,000,000 (machinery and transport equipment 45.9%, basic manufactures 19.9%, chemicals and chemical products 11.1%, food products 5.3%). **Major import sources** (2007): U.A.E. c. 15%; Turkey c. 11%; China c. 10%; Ukraine c. 9%; Russia c. 8%; Iran c. 7%.

Exports (2003): U.S.\$3,720,000,000 (natural gas 49.7%, petrochemicals 18.3%, crude petroleum 8.9%, cotton fibre 3.2%, cotton yarn 2.2%). **Major export destinations** (2007): Ukraine c. 49%; Iran c. 18%; Azerbaijan c. 5%; Turkey c. 5%.

Transport and communications

Transport. Railroads (2006): length 1,852 mi, 2,980 km; (1999) passenger-km 701,000,000; (2002) metric ton-km cargo 7,476,000,000. Roads (2001): total length 22,000 km (paved 82%). Vehicles (1995): passenger cars 220,000; trucks and buses 58,200. Air transport (2005)¹¹: passenger-km 1,913,000,000; metric ton-km cargo 25,997,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	855	182	PCs	2005	348	72
Telephones				Dailies	2007	56 ¹²	17 ¹²
Cellular	2008	1,135 ¹³	225 ¹³	Internet users	2008	75	15
Landline	2008	478	95	Broadband	2008	...	...

Education and health

Educational attainment (2000)¹⁴. Percentage of population age 25 and over having: no formal schooling 3.0%; incomplete primary to complete standard secondary education 60.1%; vocational secondary 23.5%; higher 13.2%; unknown 0.2%. **Literacy** (2007): total population age 15 and over literate 99.5%; males literate 99.7%; females literate 99.3%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–9)
Secondary/Voc. (age 10–15)
Tertiary (age 16–20)

Health (2006): physicians 12,210 (1 per 387 persons); hospital beds 20,296 (1 per 233 persons); infant mortality rate per 1,000 live births 55.2; undernourished population (2003–05) 300,000 (6% of total population based on the consumption of a minimum daily requirement of 1,880 calories).

Military

Total active duty personnel (November 2008): 22,000 (army 84.1%, navy 2.3%, air force 13.6%). **Military expenditure as percentage of GDP** (2007): 1.7%; per capita expenditure U.S.\$44.

¹New constitution adopted on Sept. 26, 2008. ²Single party in practice if not in principle. ³The manat was redenominated on Jan. 1, 2009. As of this date 1 (new) manat (TMT) = 5,000 (old) manat (TMM). ⁴Stabilized rate from the beginning of 2009. ⁵Detail does not add to total given because of rounding. ⁶Estimate of U.S. Bureau of the Census International Database (December 2008 update); official Turkmen estimates are significantly higher. ⁷Budget statistics are unreliable because the government spends large amounts of extra-budgetary funds. ⁸Estimate of the ILO Employment Trends Unit. ⁹2nd quarter only; from/to Russia only. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Turkmenistan Airlines only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Based on 2000 Turkmenistan Demographic and Health Survey of 13,566 people age 25 and over.

Internet resource for further information:

• Asia Development Bank: Turkmenistan
<http://www.adb.org/Turkmenistan/default.asp>

Tuvalu

Official name: Tuvalu.

Form of government: constitutional monarchy with one legislative house (Parliament [15]).

Chief of state: British Monarch, represented by Governor-General.

Head of government: Prime Minister.

Capital: government offices are at Vaiaku, Fongafale (Funafuti) islet, of Funafuti atoll.

Official language: none.

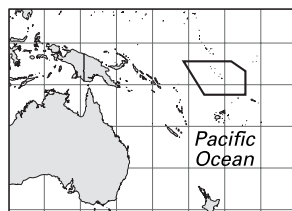
Official religion: none.

Monetary units: Tuvaluan dollar =

Australian dollar (\$T = \$A)¹;

valuation (Sept. 1, 2009)

1 U.S.\$ = \$A 1.19; 1 £ = \$A 1.94.



Area and population

Atolls/islands ²	Principal villages	area		population
		sq mi	sq km	2002 census
Funafuti	Alapi	1.08	2.79	4,492
Nanumaga	Tonga	1.07	2.78	589
Nanumea	...	1.49	3.87	664
Niulakita	...	0.16	0.42	35
Niutao	Teava	0.98	2.53	663
Nui	...	1.09	2.83	548
Nukufetau	Aulotu	1.15	2.99	586
Nukulaelae	...	0.70	1.82	393
Vaitupu	Motufoua	2.16	5.60	1,591
TOTAL		9.903 ⁴	25.633	9,561

Demography

Population (2009): 11,100.

Density (2009): persons per sq mi 1,121, persons per sq km 433.1.

Urban-rural (2007): urban 49.0%; rural 51.0%.

Sex distribution (2009): male 49.73%; female 50.27%.

Age breakdown (2007): under 15, 29.7%; 15–29, 27.9%; 30–44, 20.0%; 45–59, 14.9%; 60–74, 5.7%; 75 and over, 1.8%.

Population projection: (2020) 12,000; (2030) 13,000.

Doubling time: 57 years.

Ethnic composition (2004–05)⁵: Tuvaluan (Polynesian) 95.1%; mixed (Tuvaluan/other) 3.4%; I-Kiribati 1.1%; other 0.4%.

Religious affiliation (2002): Christian 97.0%, of which Church of Tuvalu (Congregational) 91.0%, Seventh-day Adventist 2.0%, Roman Catholic 1.0%; Bahā'ī 1.9%; other 1.1%.

Major villages (2002): Alapi (on Fongafale islet) 1,024; Fakaifou (on Fongafale islet) 1,007; Vaiaku (on Fongafale islet) 516; Motufoua (on Vaitupu) 506.

Vital statistics

Birth rate per 1,000 population (2008): 21.8 (world avg. 20.3); (2005) within marriage 92.7%, outside of marriage 7.3%.

Death rate per 1,000 population (2008): 9.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 12.3 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 3.70.

Marriage/divorce rates per 1,000 population (2007): n.a./n.a.

Life expectancy at birth (2007): male 66.4 years; female 71.0 years.

Major causes of death per 100,000 population (2007): cardiac arrest 82.9; diabetes mellitus 51.8; pneumonia 41.5; hypertension 31.1; congestive heart failure 31.1; cerebrovascular diseases 20.7.

National economy

Budget (2007). Revenue: \$A 19,126,000 (tax revenue 33.1%, nontax revenue⁶ 48.1%, grants 18.8%). Expenditures: \$A 23,682,000 (current expenditure 91.6%, development expenditure 8.4%).

Public debt (external; 2007): U.S.\$8,600,000.

Gross national income (2008): U.S.\$31,800,000 (U.S.\$2,889 per capita).

Structure of gross domestic product and labour force

	2008		2002	
	in value U.S.\$'000	% of total value	labour force ⁷	% of labour force ⁷
Agriculture, fishing	5,798	18.2	1,259 ⁸	36.4 ⁸
Manufacturing, handicrafts	1,186	3.7		
Mining	1,971	6.2		
Public utilities	1,611	5.1	435	12.6
Construction	3,886	12.2	178	5.1
Transp. and commun.	4,418	13.9	198	5.7
Trade, hotels, and restaurants	16,042	50.5	395	11.4
Finance, real estate			712	20.6
Pub. admin., defense			286 ¹⁰	8.3 ¹⁰
Services	–3,139 ⁹	–9.9 ⁹	286 ¹⁰	8.3 ¹⁰
Other	31,773	100.0 ⁴	3,463	100.0 ⁴
TOTAL				

Production (metric tons except as noted). Agriculture¹¹, forestry, fishing (2007): coconuts 1,700, vegetables 540, bananas 280, roots and tubers 150, other agricultural products include breadfruit, *pulaka* (taro), pandanus fruit, sweet potatoes, and pawpaws; livestock (number of live animals) 13,600 pigs, 45,000 chickens, 15,000 ducks; roundwood, n.a.; fisheries production 2,201 (from aquaculture, negligible). Mining and quarrying: n.a. Manufacturing (value added in \$A '000; 2002): local cigarettes 755, cottage industries (including handicrafts and garments) 158. Energy production (consumption): elec-

tricity (kW-hr; 2006) n.a. (4,235,100); coal, none (none); crude petroleum, none (none); petroleum products, none (none); natural gas, none (none).

Population economically active (2004): total 4,302⁷; activity rate of total population 44.8% (participation rates: ages 15 and over [2002] 58.2%; female [2002] 43.4%; unemployed 16.3%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.2	94.2	96.8	100.0	101.7	106.6	118.3 ¹²

Household income and expenditure (2004–05). Average household size 5.3; average annual net income per household \$A 13,007 (U.S.\$9,746); sources of income: wages and salaries 47.0%, rents, interest, bonuses, and other 28.7%, self-employment 12.1%, overseas remittances 9.1%; expenditure: food and nonalcoholic beverages 48.9%, housing 18.8%, household furnishings and energy 12.2%, education, health, and recreation 9.5%, transportation 6.3%, alcohol and tobacco 2.6%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (1998) 0.2; remittances (2007) 1.5; foreign direct investment (FDI; 2005–07 avg.) 2; official development assistance (2007) 12. Disbursements for (U.S.\$'000,000): tourism (2007) n.a.; remittances (2007) n.a.

Land use as % of total land area (2007): in temporary crops, n.a., in permanent crops c. 67%, in pasture, n.a., forest area c. 33%.

Foreign trade¹³

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
\$A '000	–20,086	–23,896	–15,317	–16,828	–17,773	–18,277
% of total	97.3%	98.8%	97.7%	99.1%	98.6%	98.8%

Imports (2007): \$A 18,386,120 (food products [including live animals] 30.2%; mineral fuels 16.1%, of which diesel fuel 9.1%; telecommunications equipment 4.4%; clothing 4.1%; base and fabricated metals 3.9%; wood products 3.4%). **Major import sources:** Australia 24.9%; Fiji 24.6%; Singapore 13.5%; New Zealand 11.3%; China 7.7%.

Exports (2007): \$A 109,413 ([2005] precision instruments 18.6%; machinery and apparatus 17.4%; base and fabricated metals 15.4%; wood and wood products 12.5%; transportation equipment 11.6%). **Major export destinations:** Fiji 93.1%; El Salvador 4.6%; New Zealand 2.2%; U.K. 0.1%.

Transport and communications

Transport. Railroads: none. Roads (2002): total length 8 km (paved 100%).

Vehicles (2007): passenger cars 15; trucks and buses 2. Air transport: n.a.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2007	0.3	33	PCs	2007	...	...
Telephones	2007	...	...	Dailies	2007	... ¹⁴	... ¹⁴
Cellular	2008	2.0 ¹⁵	182 ¹⁵	Internet users	2008	4.2	382
Landline	2008	1.5	136	Broadband	2007	0.4 ¹⁵	37 ¹⁵

Education and health

Educational attainment (2004–05)⁵. Percentage of population age 15 and over having: no formal education/unknown 8.8%; primary education 52.4%; secondary 29.8%; higher 9.0%. **Literacy** (2004): total population literate 95%.

Education (2003–04)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–11)	73	1,460 ¹⁶	19.2	...
Secondary/Voc. (age 12–17)	...	912 ¹⁷	...	...
Tertiary ¹⁸	...	...	...	... (age 18–22)

Health: physicians (2008) 7 (1 per 1,573 persons); hospital beds (2001) 56 (1 per 170 persons); infant mortality rate per 1,000 live births (2007) 19.5; undernourished population, n.a.

Military

Total active duty personnel (November 2007): none; Tuvalu has nonformal security arrangements with Australia and New Zealand.

¹Transactions over \$A 1 are conducted in \$A only. ²Local government councils have been established on all true atolls and isolated reef islands. ³Another survey puts the area at 9.4 sq mi (24.4 sq km). ⁴Detail does not add to total given because of rounding. ⁵Based on the 2004–05 Household Income and Expenditure Survey, comprising 459 households. ⁶Includes remittances from phosphate miners in Nauru and seafarers on German ships, rentals of fishing resources to Japan, Taiwan, and the U.S., and the leasing of the country's Internet domain "tv." ⁷Total number of wage earners, unpaid workers, and subsistence workers all over age 15. ⁸Excludes non-handicraft manufacturing. ⁹Indirect taxes less subsidies and less imputed bank service charges. ¹⁰Includes 60 not adequately defined and 226 unemployed. ¹¹Because of poor soil quality, only limited subsistence agriculture is possible on the islands. ¹²May only. ¹³Exports f.o.b.; imports c.i.f. ¹⁴One newspaper is published fortnightly. ¹⁵Subscribers. ¹⁶2005–06. ¹⁷2000–01. ¹⁸Data unavailable for University of the South Pacific, Tuvalu Centre; degrees require completion in Fiji.

Internet resource for further information:

• Central Statistics Division

<http://www.spc.int/prism/country/tv/stats>

Uganda

Official name: Republic of Uganda.

Form of government: multiparty republic with one legislative house (Parliament [327]).

Head of state and government:

President assisted by the Prime Minister.

Capital: Kampala.

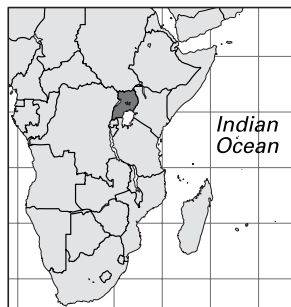
Official languages: English; Swahili.

Official religion: none.

Monetary unit: Ugandan shilling (UGX); valuation (Sept. 1, 2009)

1 U.S.\$ = UGX 2,030;

1 £ = UGX 3,294.



Area and population

Geographic regions ²	Principal cities	area		population
		sq mi	sq km	2009 ³ estimate
Central	Kampala	23,708	61,403	7,958,600
Eastern	Jinja	15,243	39,479	7,960,500
Northern	Gulu	32,970	85,392	7,003,100
Western	Mbarara	21,343	55,277	7,739,200
TOTAL		93,263 ⁴	241,551 ⁵	30,661,400

Demography

Population (2009): 32,710,000⁶.

Density (2009)⁷: persons per sq mi 424.0, persons per sq km 163.7.

Urban-rural (2009³): urban 14.8%; rural 85.2%.

Sex distribution (2009³): male 48.71%; female 51.29%.

Age breakdown (2009³): under 15, 50.2%; 15–29, 27.2%; 30–44, 13.9%; 45–59, 6.3%; 60–74, 2.1%; 75 and over, 0.3%.

Population projection⁶: (2020) 46,319,000; (2030) 60,819,000.

Ethnolinguistic composition (2002): Ganda 17.3%; Nkole 9.8%; Soga 8.6%; Kiga 7.0%; Teso 6.6%; Lango 6.2%; Acholi 4.8%; Gisu 4.7%.

Religious affiliation (2002): Christian 85.3%, of which Roman Catholic 41.9%, Anglican 35.9%, Pentecostal 4.6%, Seventh-day Adventist 1.5%; Muslim 12.1%; traditional beliefs 1.0%; nonreligious 0.9%; other 0.7%.

Major cities (2009³): Kampala 1,533,600; Kira 164,700; Gulu 146,600; Lira 102,200; Mbale 86,200.

Vital statistics

Birth rate per 1,000 population (2008): 48.2 (world avg. 20.3).

Death rate per 1,000 population (2008): 12.3 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 35.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 6.81.

Life expectancy at birth (2008): male 51.3 years; female 53.4 years.

Adult population (ages 15–49) *living with HIV* (2007): 5.4%⁸ (world avg. 0.8%).

National economy

Budget (2006–07). Revenue: UGX 3,574,000,000,000 (tax revenue 63.3%, of which VAT and sales tax 21.7%, petroleum taxes 10.1%, income tax 6.9%; grants 25.4%; nontax revenue 11.3%). Expenditures: UGX 4,031,900,000,000 (current expenditures 60.6%, of which public administration 14.7%, defense 9.3%, public order 4.6%, education 3.9%, health 2.3%; capital expenditures 39.4%).

Public debt (external, outstanding; January 2009): U.S.\$1,835,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): plantains 9,371,000, cassava 5,072,000, sweet potatoes 2,707,000, sugarcane (2007) 2,000,000, corn (maize) 1,266,000, millet 783,000, potatoes 670,000, sorghum 477,000, coffee 211,762, soybeans 178,000, peanuts (groundnuts) 173,000, sesame 173,000, pigeon peas 90,000, cowpeas 79,000, tea 42,808, tobacco 29,040; livestock (number of live animals) 8,523,000 goats, 7,398,000 cattle, 2,186,000 pigs, 1,748,000 sheep, 27,508,000 chickens; roundwood (2007) 41,075,200 cu m, of which fuelwood 92%; fisheries production (2007) 551,110 (from aquaculture 9%). Mining and quarrying (2007): cobalt 698; columbite-tantalite (ore and concentrate) 275 kg. Manufacturing (value added in U.S.\$'000,000; 2002): food and food products 109; chemicals and chemical products 59; beverages 53; fabricated metal products 17; tobacco and tobacco products 15; textiles and wearing apparel 15. Energy production (consumption): electricity (kW-hr; 2007) 2,256,000,000 (2,068,000,000); crude petroleum (barrels; 2008) none (4,745,000); petroleum products (metric tons; 2006) none (766,000).

Gross national income (GNI; 2008): U.S.\$13,254,000,000 (U.S.\$420 per capita); purchasing power parity GNI (U.S.\$1,140 per capita).

Structure of gross domestic product and labour force

	2008–09		2003	
	in value UGX '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	7,055,000	23.7	6,361,600	66.2
Mining and quarrying	85,000	0.3	27,800	0.3
Manufacturing	2,238,000	7.5	564,900	5.9
Construction	3,661,000	12.3	120,400	1.2
Public utilities	1,230,000	4.1	9,300	0.1
Transp. and commun.	2,028,000	6.8	175,900	1.8
Trade, hotels	4,884,000	16.4	1,315,000	13.7
Pub. admin., defense	875,000	2.9	74,100	0.8
Finance, real estate	3,374,000	11.3	37,000	0.4
Services	2,665,000	8.9	574,200	6.0
Other	1,729,000 ⁹	5.8 ⁹	346,000 ¹⁰	3.6 ¹⁰
TOTAL	29,824,000	100.0	9,606,000 ⁴	100.0

Population economically active (2005–06): total 10,848,000; activity rate of total population 37.2% (participation rates: ages 15 and older, 81.6%; female 51.4%; officially unemployed 1.9%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	81.8	88.9	92.2	100.0	107.3	113.9	127.6
Monthly earnings index ¹¹	...	...	...	100.0	111.6	128.6	152.0

Household income and expenditure (2005–06)¹². Average household size 5.2; income per household UGX 2,050,692 (U.S.\$1,126); sources of income: subsistence farming 49.2%, wages and salaries 20.8%, transfers 4.9%; expenditure¹³: food, beverages, and tobacco 31.9%, rent, energy, and services 14.8%, education 14.7%, transportation and communications 12.8%, household durable goods and furnishings 4.5%, clothing and footwear 4.4%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 356; remittances (2008) 489; foreign direct investment (2005–07 avg.) 383; official development assistance (2007) 1,728. Disbursements for (U.S.\$'000,000): tourism (2007) 112; remittances (2008) 281.

Land use as % of total land area (2007): in temporary crops 27.9%, in permanent crops 11.2%, in pasture 25.9%, forest area 17.5%.

Foreign trade¹⁴

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–843.5	–1,061.1	–1,241.3	–1,595.1	–2,158.7	–2,801.6
% of total	44.2%	44.4%	43.3%	45.3%	44.7%	44.8%

Imports (2008): U.S.\$4,525,859,000 (refined petroleum 18.5%; chemicals and chemical products 14.1%; food and food products 11.7%, of which cereals 3.8%; electrical machinery 11.4%; nonelectrical machinery 8.5%; transportation equipment 7.8%; base metals 7.4%). **Major import sources:** U.A.E. 11.4%; Kenya 11.3%; India 10.4%; China 8.1%; South Africa 6.7%; Japan 5.9%.

Exports (2008): U.S.\$1,724,300,000 (food products and beverages 49.6%, of which coffee 23.4%, fresh fish 7.2%; base metals 6.2%; electrical machinery 5.1%; cement, bricks, and ceramics 5.0%; tobacco and tobacco products 4.0%). **Major export destinations:** Sudan 14.3%; Kenya 9.5%; Switzerland 9.0%; Rwanda 7.9%; U.A.E. 7.4%; Dem. Rep. of the Congo 7.2%.

Transport and communications

Transport. Railroads (2008): route length 1,244 km; passenger-km¹⁵; metric ton-km cargo (2005) 185,559,000. Roads (2008)¹⁶: total length 10,965 km (paved 28%). Vehicles (2008): passenger cars 90,856; trucks and buses 137,290. Air transport (2004): passenger-km 272,000,000; metric ton-km cargo 27,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	450	17	PCs	2005	300	10
Telephones				Dailies	2007	100 ¹⁷	3.3 ¹⁷
Cellular	2008	8,555 ¹⁸	270 ¹⁸	Internet users	2008	2,500	79
Landline	2008	169	5.3	Broadband	2008	4.8 ¹⁸	0.2 ¹⁸

Education and health

Educational attainment (2005–06)¹². Percentage of population ages 15 and over having: no formal schooling/unknown 20.0%; incomplete primary education 43.3%; complete primary 14.1%; incomplete secondary 18.1%; complete secondary (some higher) 1.1%; complete higher (including vocational) 3.4%. **Literacy** (2007): population age 15 and over literate 73.2%; males literate 81.7%; females literate 64.8%.

Education (2007–08)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–12)	131,000	7,471,000	57.0	89
Secondary/Voc. (age 13–18)	40,352	827,504	20.5	18
Tertiary ¹⁹	4,168	88,360	21.2	3 (age 19–23)

Health: physicians (2004) 2,209 (1 per 11,947 persons); hospital beds (2006) 32,617 (1 per 909 persons); infant mortality rate (2008) 66.0; undernourished population (2002–04) 4,800,000 (19% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 45,000 (army 100%); Ugandan peacekeeping troops in Somalia (November 2008): 1,700. **Military expenditure as percentage of GDP** (2007): 2.2%; per capita expenditure U.S.\$8.

¹Includes 7 ex officio members appointed by the president; ex officio members do not have any voting rights. ²Actual local administration in 2009 was based on 101 districts.

³July 1. ⁴Detail does not add to total given because of rounding. ⁵Includes water and swamp area of 16,117 sq mi (41,743 sq km); Uganda's portion of Lake Victoria comprises 11,954 sq mi (30,960 sq km). ⁶Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁷Based on land area only. ⁸Statistically derived midpoint of range. ⁹Indirect taxes less imputed bank service charges. ¹⁰Unemployed.

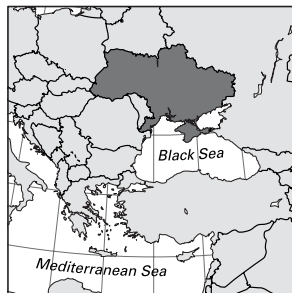
¹¹Manufacturing only. ¹²Based on the Uganda National Household Survey 2005–06, comprising approximately 7,400 households. ¹³Weights of consumer price index components. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵All Uganda passenger rail service was suspended in 1997; limited service resumed in mid-2007. ¹⁶National roads only. ¹⁷Circulation of daily newspapers. ¹⁸Subscribers. ¹⁹2003–04.

Internet resources for further information:

- Bank of Uganda <http://www.bou.or.ug>
- Uganda Bureau of Statistics <http://www.ubos.org>

Ukraine

Official name: Ukrayina (Ukraine).
Form of government: unitary multiparty republic with a single legislative body (Verkhovna Rada¹ [450]).
Head of state: President.
Head of government: Prime Minister.
Capital: Kiev (Kyiv).
Official language: Ukrainian.
Official religion: none.
Monetary unit: hryvnia (UAH); (Sept. 1, 2009) 1 U.S.\$ = UAH 8.46; 1 £ = UAH 13.72.



Area and population

	area	population		area	population
	sq km	2009 ² estimate		sq km	2009 ² estimate
Regions			Regions		
Cherkasy	20,900	1,304,250	Sumy	23,834	1,184,034
Chernihiv	31,865	1,121,329	Ternopil	13,823	1,093,332
Chernivtsi	8,097	904,060	Vinnitsya	26,513	1,659,975
Dnipropetrovsk	31,974	3,374,228	Volyn	20,144	1,036,221
Donetsk	26,517	4,500,477	Zakarpattia		
Ivano-Frankivsk	13,928	1,381,062	(Transcarpathia)	12,777	1,243,363
Kharkiv	31,415	2,782,422	Zaporizhzhya	27,180	1,821,292
Kherson	28,461	1,099,200	Zhytomyr	29,832	1,294,225
Khmelnytsky	20,645	1,341,371	Autonomous republic		
Kirovohrad	24,588	1,027,027	Krym (Crimea)	26,081	1,967,260
Kyiv (Kiev)	28,131	1,727,873	Cities		
Luhansk	26,684	2,331,794	Kiev (Kyiv)	839	2,765,531
Lviv	21,833	2,552,929	Sevastopol	864	380,069
Mykolayiv	24,598	1,195,838	TOTAL	603,628	46,143,714
Odesa (Odessa)	33,310	2,392,176			
Poltava	28,748	1,511,414			
Rivne	20,047	1,150,962			

Demography

Population (2009): 46,029,000.
Density (2009): persons per sq mi 197.5, persons per sq km 76.3.
Urban-rural (2008): urban 68.3%; rural 31.7%.
Sex distribution (2006²): male 45.97%; female 54.03%.
Age breakdown (2006): under 15, 14.3%; 15–29, 23.0%; 30–44, 21.1%; 45–59, 21.2%; 60–74, 14.1%; 75–84, 5.5%; 85 and over, 0.8%.
Population projection: (2020) 43,327,000; (2030) 40,546,000.
Ethnic composition (2001): Ukrainian 77.8%; Russian 17.3%; Belarusian 0.6%; Moldovan 0.5%; Crimean Tatar 0.5%; other 3.3%.
Religious affiliation (2004): Ukrainian Orthodox, of which “Kiev patriarchy” 19%, “no particular patriarchy” 16%, “Moscow patriarchy” 9%, Ukrainian Autocephalous Orthodox 2%; Ukrainian Catholic 6%; Protestant 2%; Latin Catholic 2%; Muslim 1%; Jewish 0.5%; nonreligious/atheist/other 42.5%.
Major cities (2009²): Kiev 2,765,531; Kharkiv 1,455,964; Dnipropetrovsk 1,017,514; Odesa (Odessa) 1,008,627; Donetsk 974,598.

Vital statistics

Birth rate per 1,000 population (2008): 11.1 (world avg. 20.3); within marriage 79.1%; outside of marriage 20.9%.
Death rate per 1,000 population (2008): 16.4 (world avg. 8.6).
Total fertility rate (avg. births per childbearing woman; 2007): 1.30.
Marriage/divorce rates per 1,000 population (2008): 7.0/3.6.
Life expectancy at birth (2007): male 62.5 years; female 74.2 years.
Major causes of death per 100,000 population (2004): diseases of the circulatory system 998.4; malignant neoplasms (cancers) 192.4; accidents 96.7.
Adult population (ages 15–49) *living with HIV* (2007): 1.6% (world avg. 0.8%).

National economy

Budget (2007). Revenue: UAH 165,942,000,000 (tax revenue 70.3%, of which VAT 35.8%, tax on profits of enterprises 20.5%, excise tax 6.3%; nontax revenue 25.4%; other 4.3%). Expenditures: UAH 174,236,000,000 (social security 16.8%; education and health 13.4%; transportation and communications 6.7%; energy and construction 4.7%; agriculture 4.6%; other 53.8%).
Public debt (external; April 2008): U.S.\$15,100,000,000.
Production (metric tons except as noted). Agriculture, forestry, fishing (2007): potatoes 19,102,300, sugar beets 16,978,000, wheat 13,800,000, cow's milk 12,300,000, corn (maize) 6,700,000, barley 6,000,000, sunflower seeds 4,173,700, tomatoes 1,520,000, cabbages 1,300,000³, apples 707,000, cattle meat 563,000, pumpkins/squash 480,000, sour cherries 126,000; livestock (number of live animals) 8,055,000 pigs, 6,175,400 cattle, 145,600,000 chickens; roundwood 16,884,000 cu m, of which fuelwood 56%; fisheries production 241,349 (from aquaculture 12%). Mining and quarrying (2006): iron ore 77,952,000⁴; manganese 550,000⁵; ilmenite concentrate 470,000. Manufacturing (value of sales in UAH '000,000,000; 2007): base and fabricated metals 157.5; food, beverages, and tobacco products 110.0; coke and refined petroleum 52.5; transport equipment 47.0; chemicals and chemical products 31.0. Energy production (consumption): electricity (kW-hr; 2007) 195,230,000,000 ([2006] 182,944,000,000); coal (metric tons; 2007) 58,742,000⁶ ([2006] 68,470,000⁶); crude petroleum (barrels; 2007) 31,700,000 ([2006] 100,960,000); petroleum products (metric tons; 2006) 13,941,000 (13,133,000); natural gas (cu m; 2007) 20,200,000,000 ([2006] 69,445,600,000).
Household income and expenditure (2007). Average household size 2.6; average annual disposable income per household UAH 25,819 (U.S.\$5,113); sources of income: wages and salaries 44.0%, transfers 37.4%; expenditures: food and nonalcoholic beverages 57.1%; housing and energy 12.1%; clothing and footwear 6.6%.

Population economically active (2005): total 22,280,800; activity rate of total population c. 47% (participation rates [2003]: ages 15–64, 65.8%; female 48.9%; unemployed [2007] 6.9%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	76.8	80.8	88.1	100.0	109.1	119.1	149.1

Gross national income (GNI; 2008): U.S.\$148,643,000,000 (U.S.\$3,210 per capita); purchasing power parity GNI (U.S.\$7,210 per capita).

Structure of gross domestic product and labour force

	2008		2005	
	in value UAH '000,000	% of total value	labour force	% of labour force
Agriculture	64,297	6.8	4,005,500	18.0
Mining	49,714	5.2		
Manufacturing	179,644	18.9	4,072,400	18.3
Public utilities	29,583	3.1		
Construction	34,741	3.7	941,500	4.2
Transp. and commun.	91,193	9.6	1,400,500	6.3
Trade, restaurants	130,205	13.7	4,175,200	18.7
Finance, real estate			1,214,500	5.5
Pub. admin., defense	284,353	29.9	1,028,900	4.6
Services			3,841,500	17.2
Other	86,134 ⁸	9.1 ⁸	1,600,800 ⁹	7.2 ⁹
TOTAL	949,864	100.0	22,280,800	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 4,597; remittances (2008) 5,769; foreign direct investment (FDI; 2005–07 avg.) 7,768; official development assistance (2007) 405. Disbursements for (U.S.\$'000,000): tourism (2007) 3,293; remittances (2008) 54.

Land use as % of total land area (2007): in temporary crops 53.2%, in permanent crops 1.6%, in pasture 13.7%, forest area 16.6%.

Foreign trade¹⁰

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+47	+3,669	−1,908	−6,654	−11,421	−18,581
% of total	0.1%	6.0%	2.7%	8.0%	10.4%	12.2%

Imports (2006): U.S.\$45,022,000,000 (machinery and apparatus 17.7%; petroleum 15.2%; chemical products 12.1%; natural gas [in gaseous state] 10.6%; road vehicles/parts 10.5%). **Major import sources:** Russia 30.6%; Germany 9.5%; Turkmenistan 7.8%; China 5.1%; Poland 4.7%.

Exports (2006): U.S.\$38,368,000,000 (iron and steel 38.5%, of which ingots 11.4%; machinery and apparatus 8.8%; petroleum 5.0%; cereals 3.9%; metal ore/metal scrap 3.9%). **Major export destinations:** Russia 22.5%; Italy 6.5%; Turkey 6.2%; Poland 3.5%; Germany 3.3%.

Transport and communications

Transport. Railroads (2008): length 21,700 km; passenger-km 53,100,000,000; metric ton-km cargo 257,000,000,000. Roads (2008): total length 169,500 km (paved 98%). Vehicles (2005): passenger cars 5,538,972; trucks and buses 490,495. Air transport (2008): passenger-km 6,528,000,000; metric ton-km cargo 63,360,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Telephones				Dailies	2007	3,836 ¹¹	95 ¹¹
Cellular	2008	55,695 ¹²	1,211 ¹²	Internet users	2008	10,354	225
Landline	2008	13,177	287	Broadband	2008	1,600 ¹²	35 ¹²

Education and health

Educational attainment (2001). Percentage of population age 25 and over having: no formal schooling 0.7%; incomplete primary education 2.8%; complete primary/incomplete secondary 22.7%; complete secondary 35.9%; incomplete higher 21.7%; complete higher 16.2%. **Literacy** (2004): 99.4%.

Education (2006–07)

	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–9)	100,859	1,647,847	16.3	89
Secondary/Voc. (age 10–16)	348,550 ¹³	3,708,736	11.2 ¹³	84
Tertiary	196,887	2,819,248	14.3	76 (age 17–21)

Health (2006): physicians 225,000 (1 per 208 persons); hospital beds 444,000 (1 per 105 persons); infant mortality rate per 1,000 live births (2008) 9.9; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 129,925 (army 54.5%, air force/air defense 34.8%, navy 10.7%); reserve 1,000,000. Russian naval forces at Sevastopol (November 2008) 13,000. **Military expenditure as percentage of GDP** (2008): 1.7%; per capita expenditure U.S.\$66.

¹Translated as Supreme Council. ²January 1. ³Includes other brassicas. ⁴2007; gross weight. ⁵Metal content. ⁶Includes negligible (less than 1%) production/consumption of lignite. ⁷Includes pensions, scholarships, subsidies, and remittances. ⁸Net indirect taxes and taxes on production less subsidies and less imputed bank service charges. ⁹Unemployed. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2005–06.

Internet resource for further information:

• State Statistics Committee of Ukraine <http://www.ukrstat.gov.ua>

United Arab Emirates

Official name: Al-Imārāt al-‘Arabīyah al-Muttaḥidah (United Arab Emirates).

Form of government: federation of seven emirates with one advisory body (Federal National Council [40]).

Chief of state: President.

Head of government: Prime Minister.

Capital: Abu Dhabi.

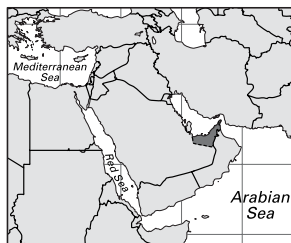
Official language: Arabic.

Official religion: Islam.

Monetary unit: dirham (AED);

valuation (Sept. 1, 2009) 1 U.S.\$ =

AED 3.67; 1 £ = AED 5.96.



Area and population		area ²		population
Emirates	Capitals	sq mi	sq km	2008 estimate
Abū Zaby (Abu Dhabi)	Abu Dhabi	28,210	73,060	1,559,000
‘Ajmān (Ajman)	‘Ajmān	100	260	237,000
Dubayy (Dubai)	Dubai	1,510	3,900	1,596,000
Al-Fujayrah (Fujairah)	Al-Fujayrah	500	1,300	143,000
Ra’s al-Khaymah	Ra’s al-Khaymah	660	1,700	231,000
Al-Shāriqah (Sharjah)	Sharjah	1,000	2,600	946,000
Umm al-Qaywayn	Umm al-Qaywayn	300	780	53,000
TOTAL		32,280	83,600	4,765,000 ³

Demography

Population (2009): 4,765,000³.

Density (2009): persons per sq mi 147.6, persons per sq km 57.0.

Urban-rural (2008): urban 80.0%; rural 20.0%.

Sex distribution (2008): male 68.96%; female 31.04%.

Age breakdown (2008): under 15, 19.1%; 15–29, 32.3%; 30–44, 36.6%; 45–59, 10.5%; 60–74, 1.2%; 75 and over, 0.3%.

Population projection: (2020) 5,844,000; (2030) 6,768,000.

Doubling time: 51 years.

Ethnic composition (2000): Arab 48.1%, of which U.A.E. Arab 12.2%, U.A.E. Bedouin 9.4%, Egyptian Arab 6.2%, Omani Arab 4.1%, Saudi Arab 4.0%; South Asian 35.7%, of which Pashtun 7.1%, Balochi 7.1%, Malayali 7.1%; Persian 5.0%; Filipino 3.4%; white 2.4%; other 5.4%.⁴

Religious affiliation (2005): Muslim c. 62% (mostly Sunnī); Hindu c. 21%; Christian c. 9%; Buddhist c. 4%; other c. 4%.

Major cities (2006): Dubai 1,354,980; Sharjah 685,000; Abu Dhabi 630,000; Al-‘Ajn 350,000; ‘Ajmān 202,244; Ra’s al-Khaymah 113,347.

Vital statistics

Birth rate per 1,000 population (2007): 16.1 (world avg. 20.3).

Death rate per 1,000 population (2007): 2.2 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 13.9 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 2.43.

Marriage/divorce rates per 1,000 population (2008): 3.2/0.8.

Life expectancy at birth (2007): male 73.2 years; female 78.3 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 119.6, of which ischemic heart disease 55.9; accidents 61.9; malignant neoplasms (cancers) 34.1; infectious and parasitic diseases 17.6.

National economy

Budget (2007). Revenue: AED 228,750,000,000 (royalties on hydrocarbons 77.1%; tax revenue 6.0%; other 16.9%). Expenditures: AED 159,726,000,000 (current expenditure 76.0%; loans, net equity, and foreign grants 13.2%; development expenditure 10.8%).

Gross national income (2008): U.S.\$272,053,000,000 (U.S.\$57,094 per capita).

Structure of gross domestic product and labour force				
	2007			
	in value AED ‘000,000	% of total value	labour force	% of labour force
Agriculture	12,797	1.8	225,499	7.3
Crude petroleum ⁵	281,340	38.6	38,783	1.3
Quarrying	1,293	0.2	6,418	0.2
Manufacturing	90,530	12.4	393,173	12.7
Construction	58,301	8.0	624,242	20.2
Public utilities	10,893	1.5	39,958	1.3
Transp. and commun.	42,926	5.9	190,133	6.1
Trade, hotels	84,200	11.5	723,117	23.3
Finance, real estate	96,413	13.2	127,176	4.1
Pub. admin., defense	49,266	6.7	334,207	10.8
Services	12,417	1.7	393,942	12.7
Other	–10,645 ⁶	–1.5 ⁶	—	—
TOTAL	729,732 ⁷	100.0	3,096,646 ⁷	100.0

Public debt (2008): c. U.S.\$117,000,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): dates 755,000, tomatoes 215,000, alfalfa for forage and silage (2005) 210,000, eggplants 22,000, pumpkins and squash 20,000, cabbages 17,500, cucumbers and gherkins 17,200, onions 16,500, lemons and limes 12,300; livestock (number of live animals) 1,570,000 goats, 615,000 sheep, 260,000 camels, 125,000 cattle; roundwood, n.a.; fisheries production 87,570 (from aquaculture 1%). Mining and quarrying (2007): gypsum 150,000; lime 60,000. Manufacturing (2007): cement 15,000,000; aluminum 890,000; steel 90,000; refined/unrefined gold U.S.\$19,000,000,000⁸; worked/unworked diamonds U.S.\$11,230,000,000⁸. Energy production (consumption): electricity (kW-hr; 2007) 76,532,000,000 (74,717,000,000); coal, none (none); crude petroleum (barrels; 2008)

978,600,000 ([2006] 135,100,000); petroleum products (metric tons; 2006) 21,592,000 (10,071,000); natural gas (cu m; 2008) 50,200,000,000 ([2007] 38,900,000,000).

Population economically active (2005): total 2,559,668; activity rate of total population 54.6% (participation rates: ages 15–64, 78.1%; female 13.5%; unemployed [2008] 4%).

Price index (2005 = 100)								
	2002	2003	2004	2005	2006	2007	2008	
Consumer price index	86.9	89.6	94.2	100.0	109.2	121.4	136.4	

Household income and expenditure (2007–08). Average household size 5.1; average annual income per household AED 218,983 (U.S.\$59,628)⁹; sources of income: n.a.; expenditure: housing and energy 39.4%; food and beverages 14.2%.

Selected balance of payments data. Receipts from (U.S.\$‘000,000): tourism (2008) 7,162; remittances (2008) n.a.; foreign direct investment (FDI; 2005–07 avg.) 12,320. Disbursements for (U.S.\$‘000,000): tourism (2008) 13,288; remittances (2007) c. 5,000; FDI (2005–07 avg.) 7,089.

Land use as % of total land area (2007): in temporary crops 0.8%, in permanent crops 2.6%, in pasture 3.6%, forest area 3.7%.

Foreign trade¹⁰

Balance of trade (current prices)					
	2003	2004	2005	2006	2007
U.S.\$‘000,000	+15,061	+21,163	+34,639	+44,641	+29,633
% of total	12.6%	14.7%	17.6%	31.8%	10.4%

Imports (2006): U.S.\$97,864,000,000 (machinery and apparatus 19.4%, base and fabricated metals 9.9%, road vehicles 8.1%, gold 7.6%, food 5.4%, unspecified 19.1%). **Major import sources** (2008): China 13.2%; India 10.4%; U.S. 8.8%; Germany 6.5%; Japan 6.1%.

Exports (2006): U.S.\$142,505,000,000 (crude petroleum 37.9%; refined petroleum 11.4%; gold [not jewelry] 3.4%; road vehicles/parts 2.5%; natural gas 1.7%; telecommunications equipment 1.4%; diamonds 1.3%; food 1.3%; unspecified 25.6%). **Major export destinations** (2008): Japan 23.0%; South Korea 9.4%; India 7.9%; Iran 6.5%; Thailand 5.3%.

Transport and communications

Transport. Railroads: none. Roads (2008): total length, n.a. (paved roads only, 4,080 km). Vehicles (2007): passenger cars 1,279,098; trucks and buses 48,205. Air transport (2007): passenger-km 90,530,000,000; metric ton-km cargo 5,497,149,000.

Communications							
Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	843	216	PCs	2006	1,396	330
Telephones				Dailies	2007	868 ¹¹	193 ¹¹
Cellular	2008	9,358 ¹²	1,964 ¹²	Internet users	2008	2,922	613
Landline	2008	1,508	317	Broadband	2008	529 ¹²	111 ¹²

Education and health

Educational attainment (2005). Percentage of population age 10 and over having: no formal schooling (illiterate/unknown) 9.4%, (literate) 13.9%; primary education 14.6%; incomplete/complete secondary 43.7%; postsecondary 4.0%; undergraduate 12.8%; graduate 1.6%. **Literacy** (2007): total population age 10 and over literate 90.4%; males literate 90.9%; females literate 89.2%.

Education (2006–07)				
	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–10)	16,523	284,034	17.2	91
Secondary/Voc. (age 11–17)	24,200 ¹³	310,885	12.3 ¹³	79 ¹³
Tertiary	4,710	77,428	16.4	23 (age 18–22)

Health (2007): physicians 8,662 (1 per 518 persons); hospital beds 8,348 (1 per 538 persons); infant mortality rate per 1,000 live births 7.8; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 51,000 (army 86.3%, navy 4.9%, air force 8.8%)¹⁴. **Military expenditure as percentage of GDP** (2007): 5.5%; per capita expenditure U.S.\$2,246.

¹Twenty seats are appointed by the rulers of the 7 emirates and 20 seats are indirectly elected. ²Approximate figures; border/territorial disputes exist with Saudi Arabia/Iran, respectively. ³No population change predicted between 2008 and 2009 by some unofficial sources because of world economic downturn. ⁴U.A.E. citizens constituted only 18.7% of the total population in 2008. ⁵Includes natural gas. ⁶Less imputed bank service charges. ⁷Detail does not add to total given because of rounding. ⁸Total import/export trade value. The U.A.E. has 3 gold refineries. ⁹Average annual income for citizen households AED 437,257 (U.S.\$119,063), for noncitizen households AED 180,892 (U.S.\$49,256). ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Circulation of daily newspapers. ¹²Subscribers. ¹³2005–06. ¹⁴U.S. troops (June 2009) 104; French military base for up to 500 troops officially opened in May 2009.

Internet resources for further information:

- **United Arab Emirates National Media Council**
<http://uaeinteract.com>
- **Central Bank of the United Arab Emirates**
<http://www.centralbank.ae>
- **United Arab Emirates Ministry of Economy**
<http://www.economy.ae>

United Kingdom

Official name: United Kingdom of Great Britain and Northern Ireland.
Form of government: constitutional monarchy with two legislative houses (House of Lords [724]; House of Commons [646]).

Chief of state: Sovereign.

Head of government: Prime Minister.
Capital: London.

Official languages: English; both English and Scots Gaelic in Scotland; both English and Welsh in Wales.

Official religion: 2.

Monetary unit: pound sterling (£); valuation (Sept. 1, 2009) 1 £ = U.S.\$1.62; 1 U.S.\$ = £0.62.



Population (2005 estimate)

Countries	population		population		population
England	50,431,700 ³	Nottingham	278,700	Scotland	5,094,800
Counties		Peterborough	159,700	Unitary Districts	
Buckinghamshire	481,500	Plymouth	246,100	Aberdeen City	205,910
Cambridgeshire	588,900	Poole	137,100	Aberdeenshire	233,430
Cumbria	498,900	Portsmouth	189,600	Angus	108,790
Derbyshire	747,500	Reading	145,100	Argyll and Bute	90,870
Devon	731,000	Redcar and Cleveland	138,600	Clackmannanshire	48,630
Dorset	401,100	Rutland	37,300	Dumfries and Galloway	148,340
East Sussex	497,900	Essex	1,340,000	Dundee City	142,360
Essex	1,340,000	Gloucestershire	248,100	East Ayrshire	119,400
Gloucestershire	575,200	Hampshire	1,259,500	East Dumbarton-shire	105,960
Hampshire	1,259,500	Hertfordshire	1,048,200	East Lothian	91,800
Hertfordshire	1,048,200	Kent	1,369,900	East Renfrewshire	89,600
Kent	1,369,900	Lancashire	1,156,100	Edinburgh, City of	457,830
Lancashire	1,156,100	Leicestershire	627,800	Eilean Siar ⁵	26,370
Leicestershire	627,800	Lincolnshire	678,700	Falkirk	149,150
Lincolnshire	678,700	Norfolk	824,200	Fife	356,740
Norfolk	824,200	North Yorkshire	582,000	Glasgow City	578,790
North Yorkshire	582,000	Northamptonshire	651,800	Highland	213,590
Northamptonshire	651,800	Nottinghamshire	762,700	Inverclyde	82,130
Nottinghamshire	762,700	Oxfordshire	626,900	Midlothian	79,190
Oxfordshire	626,900	Somerset	515,600	Moray	86,590
Somerset	515,600	Staffordshire	816,700	North Ayrshire	135,830
Staffordshire	816,700	Suffolk	692,100	North Lanarkshire	323,420
Suffolk	692,100	Surrey	1,075,500	Orkney Islands	19,590
Surrey	1,075,500	Warwickshire	533,900	Perth and Kinross	138,590
Warwickshire	533,900	West Sussex	764,400	Renfrewshire	170,000
West Sussex	764,400	Worcestershire	555,800	Scottish Borders	109,730
Worcestershire	555,800	Metropolitan Counties/Greater London		Shetland Islands	22,000
Unitary Authorities		Greater London	7,517,700	South Ayrshire	111,780
Bath and NE Somerset	173,700	Greater		South Lanarkshire	306,280
Bedford ⁴	153,000	Manchester	2,547,600	Stirling	86,930
Blackburn with Darwen	140,200	Merseyside	1,367,100	West Dumbarton-shire	91,400
Darwen	140,200	South Yorkshire	1,285,600	West Lothian	163,780
Blackpool	142,900	Tyne and Wear	1,095,200		
Bournemouth	163,600	West Midlands	2,591,300	Northern Ireland	1,724,400 ³
Bracknell Forest	111,200	West Yorkshire	2,118,600	Districts	
Brighton and Hove	255,000			Antrim	50,500
Bristol	398,300	Wales	2,958,600	Ards	75,300
Central Bedfordshire ⁴	244,700	Unitary Districts		Armagh	55,800
Cheshire East ⁴	679,900	Blaenau Gwent	68,400	Ballymena	60,700
Cheshire West & Chester ⁴	517,300	Brigden	130,800	Ballymoney	28,700
Cornwall ⁴	99,200	Caepphilly	170,200	Banbridge	44,800
Darlington	99,200	Cardiff	319,700	Belfast	268,000
Derby	233,700	Carmarthenshire	178,100	Carrickfergus	39,200
Durham ⁴	499,800	Ceredigion	78,300	Castlereagh	65,700
East Riding of Yorkshire	327,400	Conwy	111,500	Coleraine	56,600
Halton	118,800	Denbighshire	96,000	Cookstown	34,100
Hartlepool	90,000	Flintshire	150,200	Craigavon	84,700
Herefordshire	178,800	Gwynedd	118,000	Derry	107,300
Isle of Wight	140,000	Isle of Anglesey	68,900	Down	67,400
Isles of Scilly	2,100	Merthyr Tydfil	54,900	Dungannon	50,700
Kingston upon Hull	249,100	Monmouthshire	87,700	Fermanagh	59,700
Leicester	288,000	Neath and Port Talbot	135,600	Larne	31,100
Luton	184,900	Newport	139,600	Limavady	34,100
Medway	251,100	Pembrokeshire	117,500	Lisburn	111,500
Middlesbrough	137,600	Powys	131,500	Magherafelt	41,800
Milton Keynes	218,500	Rhondda, Cynon, and Taff	231,600	Moyle	16,500
North-east Lincolnshire	157,500	Swansea	226,400	Newry and Mourne	91,600
North Lincolnshire	157,100	Torfaen	90,300	Newtownabbey	80,800
North Somerset	195,100	The Vale of Glamorgan	122,900	North Down	78,300
Northumberland ⁴	311,300	Wrexham	130,500	Omagh	50,700
				Strabane	38,700
				TOTAL	60,209,500

Demography

Population (2009): 61,855,000.

Area: 93,851 sq mi, 243,073 sq km, of which England 50,302 sq mi, 130,281 sq km; Wales 8,005 sq mi, 20,732 sq km; Scotland 30,087 sq mi, 77,925 sq km; Northern Ireland 5,457 sq mi, 14,135 sq km.

Density (2009): persons per sq mi 659.1, persons per sq km 254.5.

Urban-rural (2008): urban 90.0%; rural 10.0%.

Sex distribution (2008): male 49.12%; female 50.88%.

Age breakdown (2007): under 15, 17.6%; 15–29, 19.9%; 30–44, 21.6%; 45–59, 19.2%; 60–74, 14.0%; 75–84, 5.6%; 85 and over, 2.1%.

Population projection: (2020) 65,955,000; (2030) 69,466,000.

Ethnic composition (2007): white 86.8%, of which British 81.6%; Asian 5.3%, of which Indian 2.0%, Pakistani 1.6%, Bangladeshi 0.6%, Chinese 0.4%; black 2.5%, of which from Africa 1.3%, from the Caribbean 1.1%; mixed race 1.1%; other 1.5%; unknown 2.8%.

Religious affiliation (2001): Christian 71.8%, of which Anglican-identified 29%, other Protestant-identified (significantly Presbyterian) 14%, Roman Catholic-identified 10%; Muslim 2.8%; Hindu 1.0%; Sikh 0.6%; Jewish 0.5%; nonreligious 15.0%; other 0.5%; unknown 7.8%.

Major cities/urban agglomerations (2008/2007): London 7,619,800/8,567,000; Birmingham 1,010,400/2,285,000; Manchester 465,900/2,230,000; Leeds 477,600/1,529,000; Glasgow 637,000/1,160,000; Newcastle upon Tyne 200,200/882,000; Liverpool 464,200/811,000; Bristol 465,500; Sheffield 458,100; Edinburgh 452,200; Leicester 348,000; Kingston upon Hull 320,100; Bradford 315,100; Coventry 312,500; Cardiff 310,800; Nottingham 273,300; Belfast 268,400; Stoke-on-Trent 258,600; Plymouth 256,000; Southampton 252,700.

Mobility (2001). Population living in the same residence as 2000, 88.6%; different residence, same country/region (of the U.K.) 8.6%; different residence, different country/region (of the U.K.) 2.1%; from outside the U.K. 0.7%.

Households (2007)⁸. Average household size (2006–07) 2.4; 1 person 29%, 2 persons 35%, 3 persons 16%, 4 persons 13%, 5 or more persons 7%.

Immigration (2007): permanent residents 527,000, from Bangladesh, India, Pakistan, and Sri Lanka 16.9%; Australia 3.0%; United States 2.8%; South Africa 2.5%; New Zealand 1.5%; Canada 0.8%; other 72.5%, of which EU 31.5%.

Vital statistics

Birth rate per 1,000 population (2008): 12.9 (world avg. 20.3); within marriage 54.6%; outside of marriage 45.4%.

Death rate per 1,000 population (2008): 9.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 3.5 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 1.94.

Marriage/divorce rates per 1,000 population (2007): 4.4/2.4.

Life expectancy at birth (2007): male 77.6 years; female 81.7 years.

Major causes of death per 100,000 population (2007): diseases of the circulatory system 319.7, of which ischemic heart disease 150.5, cerebrovascular diseases 87.3; malignant neoplasms (cancers) 255.8; diseases of the respiratory system 128.5, of which pneumonia 51.6; diseases of the digestive system 48.8; accidents 22.4; diseases of the genitourinary system 21.0; diabetes mellitus 10.4; suicide and intentional self-harm 6.4; homicide and assault 0.8.

Social indicators

Educational attainment (2007). Percentage of population age 25–64 having: unknown through lower secondary education 13%; upper secondary 55%; higher 32%, of which at least some university 22%.

Distribution of disposable income (2006–07)

percentage of household income by quintile				
1	2	3	4	5 (highest)
7.4	11.7	16.6	23.3	41.0

Quality of working life. Average full-time workweek (hours; 2008): male 39.0, female 33.8. Annual rate per 100,000 workers for (2007–08): injury or accident 474.1; death 0.8. Proportion of labour force (employed persons) insured for damages or income loss resulting from (2004): injury 100%; permanent disability 100%; death 100%. Average days lost to labour stoppages per 1,000 employee workdays (2008): 28.

Social participation. Eligible voters participating in last national election (May 2005): 61.3%. Population age 16 and over participating in voluntary work (2001)⁸: 39%. Trade union membership in total workforce (2007–08) 26%. Percentage of population attending weekly church services (2001) 8%.

Social deviance (2008–09)⁹. Offense rate per 100,000 population for: theft and handling stolen goods 2,714; criminal damage 1,520; violence against a person 1,467; burglary 1,207; drug offenses 394; fraud and forgery 265; robbery 130; sex offenses 84.

Leisure (2008). Favourite leisure activities: watching television, videos, and DVDs, listening to the radio, watching sporting events, and attending the cinema; the common free-time activity outside of the home is a visit to the pub; favourite sporting activities: for men—walking, golf, snooker, and billiards, for women—walking, swimming, fitness classes, and yoga.

Material well-being (2007). Households possessing: automobile 75%, of which two cars 25%, three cars 6%; refrigerator/freezer 97%; washing machine 96%; central heating 95%; digital, cable, or satellite television receiver 77%; computer 70%; Internet connection 61%; dishwasher 37%.

National economy

Budget (2007–08). Revenue: £548,000,000,000 (income tax 26.9%; production and import taxes 24.1%; social security contributions 18.3%). Expenditures: £557,800,000,000 (social protection 33.5%; health 18.4%; education 14.1%; defense 6.1%; public order 5.8%).

Public debt (December 2008): U.S.\$1,155,620,000,000.

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): wheat 17,227,000, sugar beets (2007) 6,500,000, barley 6,144,000, potatoes (2007) 5,635,000, rapeseed (2007) 2,108,000, oats 784,000, carrots 732,400, onions 349,200, apples 242,900, cauliflower 118,500, mushrooms and truffles (2007) 72,000; livestock (number of live animals) 33,131,000 sheep, 10,107,000 cattle, 4,714,000 pigs; roundwood (2007) 9,018,000 cu m, of which fuelwood 5%; fisheries production (2007) 793,894 (from aquaculture 22%). Mining and quarrying (2007): sand and gravel 95,000,000; rock salt 2,000,000; china clay (kaolin) 1,671,000; slate 870,000¹³; potash 716,000. Manufacturing (value added in U.S.\$'000,000; 2006): chemicals and chemical products 42,400; food and beverages 39,100; nonelectrical machinery and equipment 26,000; printing and publishing 24,800; fabricated metal products 23,900; motor vehicles/parts 19,400; rubber and plastic products 13,300; bricks, cement, and ceramics 11,800; radio, television, and communications equipment 11,800.

Gross national income (GNI; 2008): U.S.\$2,787,159,000,000 (U.S.\$45,390 per capita); purchasing power parity GNI (U.S.\$36,130 per capita).

Structure of gross domestic product and labour force

	2006		2008	
	in value £'000,000	% of total value	labour force ¹⁰	% of labour force ¹⁰
Agriculture, forestry, fishing	10,577	0.8	433,000	1.4
Mining and quarrying	28,093	2.2	127,000	0.4
Manufacturing	152,255	11.7	3,547,000	11.4
Construction	65,921	5.1	2,380,000	7.7
Public utilities	31,532	2.4	199,000	0.6
Transp. and commun.	82,950	6.4	1,963,000	6.3
Trade, hotels, restaurants	175,383	13.5	5,599,000	18.0
Finance, real estate	395,147	30.4	4,881,000	15.7
Pub. admin., defense	58,776	4.5	2,092,000	6.7
Services	211,894	16.3	8,153,000	26.2
Other	87,097 ¹¹	6.7 ¹¹	1,745,000 ¹²	5.6 ¹²
TOTAL	1,299,622 ³	100.0	31,118,000 ³	100.0

Energy production (consumption): electricity (kW-hr; 2008–09) 347,214,000,000 ([2007] 345,800,000,000); hard coal (metric tons; 2008–09) 18,321,000 ([2008] 58,900,000); crude petroleum (barrels; 2008–09) 481,183,700 ([2008] 568,909,000); petroleum products (metric tons; 2008) 80,435,000 (70,249,000); natural gas (cu m; 2008–09) 78,306,700,000 ([2008] 108,143,200,000).

Financial aggregates

	2003	2004	2005	2006	2007	2008
Exchange rate (end of year)						
U.S. dollar per £	1.78	1.93	1.72	1.96	2.00	1.46
SDRs per £	1.20	1.24	1.20	1.30	1.27	0.95
International reserves (U.S.\$)						
Total (excl. gold: '000,000,000)	35.35	39.94	38.47	40.70	48.96	44.35
SDRs ('000,000,000)	0.38	0.33	0.29	0.40	0.36	0.45
Reserve pos. in IMF ('000,000)	6.32	5.53	2.33	1.41	1.10	2.35
Foreign exchange	28.65	34.08	35.85	38.89	47.50	41.55
Gold ('000,000 fine troy oz)	10.07	10.04	9.99	9.97	9.98	9.98
% world reserves	1.1	1.1	1.0	1.0	1.0	1.0
Interest and prices						
Central bank discount (%)	...	...	...	...	...	...
Govt. bond yield (%) long term	4.58	4.93	4.46	4.37	5.04	4.58
Balance of payments (U.S.\$'000,000,000,000)						
Balance of visible trade	-79.45	-111.49	-124.72	-140.66	-179.74	-172.98
Imports, f.o.b.	-387.25	-461.14	-509.04	-588.25	-622.02	-639.32
Exports, f.o.b.	307.80	349.65	384.32	447.59	442.28	466.34
Balance of invisibles	+49.45	+66.08	+65.31	+59.78	+105.01	+127.31
Balance of payments, current account	-30.00	-45.41	-59.41	-80.88	-74.73	-45.67

Manufacturing enterprises (2004)

	no. of employees	annual wages as a % of avg. of all wages	annual value added (U.S.\$'000,000)
Food products	414,711	81.3	31,474
Fabricated metals	329,390	87.4	21,204
Paints, soaps, pharmaceuticals	162,921	133.7	21,011
Publishing	162,710	117.9	16,385
Motor vehicles, trailers, parts	202,398	112.7	16,141
General purpose machinery	173,197	103.6	12,644
Printing	156,611	94.5	12,007
Aircraft and spacecraft	100,477	139.6	11,734
Plastics	181,799	89.0	11,645
Medical, measuring, testing appliances	100,797	110.1	9,323
Bricks, cement, ceramics	92,879	93.6	8,052
Base chemicals	95,165	145.0	7,706
Beverages	51,069	131.8	7,270
Special purpose machinery	96,563	110.4	7,232
Furniture	117,267	78.9	6,311
Paper and paper products	81,171	104.8	5,983

Retail trade and service enterprises (2001)

	no. of enterprises	no. of employees	weekly wage as a % of all wages	annual turnover (£'000,000)
Food, beverages, and tobacco of which	27,074	993,000	...	85,534
meats	8,485	46,000	...	2,216
Household goods, of which	23,553	319,000	...	29,151
electronics, appliances	7,157	101,000	...	10,821
furniture	10,592	119,000	...	8,784
Clothing and footwear	17,869	446,000	...	25,963
Pharmaceuticals and cosmetics	6,915	110,000	...	9,543
Business services, of which	534,956	4,273,000	...	265,631
real estate	30,779	79,000	...	32,779
Transp. and commun.	81,154	1,621,000	...	181,669
Hotels, restaurants	118,988	1,792,000	...	49,902
Social services, of which	35,622	1,026	...	16,233
health	9,683	453,000	...	7,575

Population economically active (2008¹⁰): total 31,118,000; activity rate of total population 50.7% (participation rates: ages 16 and over, 62.5%; female 45.8%; unemployed [April 2008–March 2009] 6.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	91.8	94.4	97.2	100.0	103.2	107.6	111.9
Monthly earnings index	89.0	92.1	96.1	100.0	104.1	108.1	112.0

Household income and expenditure (2006–07). Average household size 2.4; average annual disposable income per household £27,370 (U.S.\$53,596); sources of income: wages and salaries 67.5%, social security benefits 12.6%, income from self-employment 8.1%, transfers 7.2%; expenditure (2008): housing and energy 17.0%, recreation and culture 15.0%, transportation 14.1%, restaurants and hotels 10.0%, food and nonalcoholic beverages 9.1%, clothing and footwear 6.7%, household furnishings 5.4%, communications 2.6%, health 1.6%, education 1.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 37,690; remittances (2008) 8,234; foreign direct investment (FDI; 2005–07 avg.) 183,352. Disbursements for (U.S.\$'000,000): tourism (2007) 72,436; remittances (2008) 5,048; FDI (2005–07 avg.) 144,188.

Land use as % of total land area (2007): in temporary crops 19.6%, in permanent crops 0.2%, in pasture 52.5%, forest area 11.8%.

Foreign trade¹⁴

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
£'000,000	-48,607	-60,900	-68,589	-76,312	-89,754	-92,876
% of total	11.4%	13.8%	13.9%	13.5%	16.9%	15.6%

Imports (2008): £343,964,000,000 (mineral fuels 13.9%, of which crude and refined petroleum products 10.8%; electrical equipment 13.8%; transportation equipment 12.9%; chemicals and chemical products 11.0%, of which pharmaceuticals 3.2%; nonelectrical machinery 8.4%; food products and live animals 7.4%; wearing apparel 3.8%; base metals 3.8%). **Major import sources:** Germany 13.0%; Netherlands 7.5%; U.S. 7.5%; China 6.7%; France 6.7%; Norway 6.3%; Belgium and Luxembourg 5.0%; Italy 4.0%; Ireland 3.6%; Spain 3.1%.

Exports (2008): £251,088,000,000 (chemicals and chemical products 17.5%, of which pharmaceuticals 6.9%; mineral fuels 13.9%, of which crude and refined petroleum products 12.6%; nonelectrical machinery 12.8%; transportation equipment 12.6%; electrical equipment 10.1%; base metals 5.5%; food products and live animals 3.5%). **Major export destinations:** U.S. 13.9%; Germany 11.2%; Netherlands 7.8%; Ireland 7.6%; France 7.2%; Belgium and Luxembourg 5.3%; Spain 4.1%; Italy 3.7%; Sweden 2.1%; China 2.0%.

Transport and communications

Transport. Railroads (2007–08): length (2008) 16,454 km; passenger-km⁸ 49,007,000,000; metric ton-km cargo⁸ 21,200,000,000. Roads (2008)⁸: total length 394,467 km (paved 100%). Vehicles (2009¹⁵)⁸: passenger cars 30,324,000, trucks and buses (2004) 3,522,424. Air transport (2008–09): passenger-km 229,710,000,000; metric ton-km cargo 6,029,510,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	56,576	950	PCs	2006	48,591	802
Telephones				Dailies	2007	18,041 ¹⁶	296 ¹⁶
Cellular	2008	77,361 ¹⁷	1,263 ¹⁷	Internet users	2008	46,684	762
Landline	2008	33,209	542	Broadband	2008	17,276 ¹⁷	282 ¹⁷

Education and health

Literacy (2006): total population literate, about 99%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–10)	249,862	4,517,618	18.1	98
Secondary/Voc. (age 11–17)	368,475	5,357,793	14.5	92
Tertiary	125,585	2,336,111	18.6	59 (age 18–22)

Health (2008): physicians 138,878¹⁸ (1 per 405¹⁸ persons); hospital beds (2007) 208,413 (1 per 293 persons); infant mortality rate per 1,000 live births 4.7; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 160,280 (army 59.7%, navy 19.3%, air force 21.0%); reserve 199,280. U.K. troops deployed abroad (November 2008) 41,700; U.S. troops in the U.K. (July 2009) 9,367. **Military expenditure as percentage of GDP** (2008): 2.3%; per capita expenditure U.S.\$972.

¹Active members as of July 2009 including 92 hereditary peers, 606 life peers, and 26 archbishops and bishops. ²Church of England "established" (protected by the state but not "official"); Church of Scotland "national" (exclusive jurisdiction in spiritual matters per Church of Scotland Act 1921); no established church in Northern Ireland or Wales. ³Detail does not add to total given because of rounding. ⁴One of nine new unitary authorities formally established in April 2009. ⁵Formerly Western Isles. ⁶Total area as of 2001 census. ⁷West Yorkshire urban agglomeration. ⁸Great Britain (England, Scotland, and Wales) only. ⁹England and Wales only. ¹⁰Second quarter. ¹¹VAT and other taxes less subsidies and less imputed bank service charges. ¹²Includes 1,643,000 unemployed. ¹³Includes fill. ¹⁴Imports c.i.f.; exports f.o.b. ¹⁵January 1. ¹⁶Circulation of daily newspapers. ¹⁷Subscribers. ¹⁸England and Scotland only.

Internet resource for further information:

• Office for National Statistics <http://www.statistics.gov.uk>

United States

Official name: United States of America.
Form of government: federal republic with two legislative houses (Senate [100]; House of Representatives [435¹]).
Head of state and government: President.
Capital: Washington, D.C.
Official language: none.
Official religion: none.
Monetary unit: dollar (U.S.\$); valuation (Sept. 1, 2009)
1 U.S.\$ = €0.70; 1 U.S.\$ = £0.62.



Area and population		area		population
States	Capitals	sq mi	sq km	2009 estimate ²
Alabama	Montgomery	51,700	133,902	4,708,708
Alaska	Juneau	589,194	1,526,005	698,473
Arizona	Phoenix	113,999	295,256	6,595,778
Arkansas	Little Rock	53,178	137,730	2,889,450
California	Sacramento	158,633	410,858	36,961,664
Colorado	Denver	104,094	269,602	5,024,748
Connecticut	Hartford	5,006	12,965	3,518,288
Delaware	Dover	2,026	5,247	885,122
Florida	Tallahassee	58,599	151,771	18,537,969
Georgia	Atlanta	58,922	152,607	9,829,211
Hawaii	Honolulu	6,461	16,734	1,295,178
Idaho	Boise	83,570	216,445	1,545,801
Illinois	Springfield	57,915	149,999	12,910,409
Indiana	Indianapolis	36,418	94,322	6,423,113
Iowa	Des Moines	56,271	145,741	3,007,856
Kansas	Topeka	82,277	213,096	2,818,747
Kentucky	Frankfort	40,409	104,659	4,314,113
Louisiana	Baton Rouge	47,716	123,584	4,492,076
Maine	Augusta	33,126	85,796	1,318,301
Maryland	Annapolis	10,454	27,076	5,699,478
Massachusetts	Boston	8,263	21,401	6,593,587
Michigan	Lansing	96,716	250,493	9,969,727
Minnesota	St. Paul	86,939	225,171	5,266,214
Mississippi	Jackson	47,692	123,522	2,951,996
Missouri	Jefferson City	69,704	180,533	5,987,580
Montana	Helena	147,042	380,837	974,989
Nebraska	Lincoln	77,353	200,343	1,796,619
Nevada	Carson City	110,561	286,352	2,643,085
New Hampshire	Concord	9,282	24,040	1,324,575
New Jersey	Trenton	7,813	20,236	8,707,739
New Mexico	Santa Fe	121,590	314,917	2,009,671
New York	Albany	53,097	137,521	19,541,453
North Carolina	Raleigh	52,671	136,417	9,380,884
North Dakota	Bismarck	70,700	183,112	646,844
Ohio	Columbus	44,825	116,096	11,542,645
Oklahoma	Oklahoma City	69,898	181,035	3,687,050
Oregon	Salem	97,047	251,351	3,825,657
Pennsylvania	Harrisburg	46,056	119,284	12,604,767
Rhode Island	Providence	1,223	3,168	1,053,209
South Carolina	Columbia	31,118	80,595	4,561,242
South Dakota	Pierre	77,117	199,732	812,383
Tennessee	Nashville	42,143	109,150	6,296,254
Texas	Austin	266,853	691,146	24,782,302
Utah	Salt Lake City	84,899	219,887	2,784,572
Vermont	Montpelier	9,615	24,903	621,760
Virginia	Richmond	40,600	105,154	7,882,590
Washington	Olympia	68,097	176,370	6,664,195
West Virginia	Charleston	24,230	62,755	1,819,777
Wisconsin	Madison	65,498	169,639	5,654,774
Wyoming	Cheyenne	97,813	253,335	544,270
District				
District of Columbia	—	68	176	599,657
TOTAL		3,676,486 ³	9,522,055 ³	307,006,550

Demography

Population (2009): 307,226,000⁵.
Density (2009)⁶: persons per sq mi 86.8, persons per sq km 33.5.
Urban-rural (2005): urban 80.8%; rural 19.2%.
Sex distribution (2005): male 49.26%; female 50.74%.
Age breakdown (2005): under 15, 20.5%; 15–29, 20.9%; 30–44, 21.6%; 45–59, 20.2%; 60–74, 10.7%; 75–84, 4.4%; 85 and over, 1.7%.
Population projection: (2020) 341,151,000; (2030) 373,247,000.
Doubling time: not applicable; doubling time exceeds 100 years.
Population by race and Hispanic⁷ origin (2006): non-Hispanic white 66.4%; Hispanic 14.8%; non-Hispanic black 12.8%; Asian and Pacific Islander 4.6%; American Indian and Eskimo 1.0%; other 0.4%.
Religious affiliation (2005): Christian 83.3%, of which independent Christian 23.2%, Roman Catholic 19.6%, Protestant (including Anglican) 18.9%, unaffiliated Christian 16.5%, Orthodox 1.8%, other Christian (primarily Mormon and Jehovah's Witness) 3.3%; Jewish 1.9%; Muslim 1.6%; Buddhist 0.9%; New Religionists 0.5%; Hindu 0.4%; traditional beliefs 0.4%; Bahā'ī 0.3%; Sikh 0.1%; nonreligious 9.8%; atheist 0.5%; other 0.3%.
Mobility (2005). Reported gross % of population living in the same residence as in 2004: c. 86%; different residence, same county c. 8%; different county, same state c. 3%; different state c. 3%; moved from abroad c. 1%.
Households (2007). Total households 116,783,000 (married-couple families 58,370,000 [50.0%]). Average household size 2.6; 1 person 27.5%, 2 persons 33.2%, 3 persons 15.9%, 4 persons 13.6%, 5 or more persons 9.8%. Family households: 77,873,000 (66.7%); nonfamily 38,910,000 (33.3%), of which 1-person 82.7%.
Place of birth (2007): native-born 259,545,000 (87.4%); foreign-born 37,279,000 (12.6%), of which (2004) Mexico 10,011,000, the Philippines 1,222,000, China and Hong Kong 1,067,000, India 1,007,000, Cuba 952,000, Vietnam 863,000, El Salvador 765,000, South Korea 701,000.

Components of population change (2000–07)

States	net change in population ⁸	percentage change	births	deaths	net domestic/ international migration
Alabama	180,500	4.1	437,898	335,018	90,493
Alaska	56,547	9.0	74,878	21,712	–889
Arizona	1,208,140	23.5	671,105	318,103	869,368
Arkansas	161,399	6.0	279,228	200,926	90,101
California	2,681,560	7.9	3,944,853	1,712,456	583,434
Colorado	559,496	13.0	499,880	208,563	274,296
Connecticut	96,707	2.8	306,540	214,530	19,631
Delaware	81,164	10.4	82,506	51,349	53,497
Florida	2,268,419	14.2	1,578,928	1,217,956	1,960,446
Georgia	1,357,934	16.6	1,001,287	479,305	725,733
Hawaii	71,851	5.9	130,786	64,005	10,308
Idaho	205,446	15.9	161,485	73,002	117,935
Illinois	432,901	3.5	1,324,293	760,202	–131,259
Indiana	264,768	4.4	631,323	401,809	53,405
Iowa	61,664	2.1	280,703	199,214	–14,031
Kansas	87,173	3.2	286,874	177,032	–21,001
Kentucky	199,193	4.9	401,673	290,796	94,672
Louisiana	–175,754	–3.9	460,782	304,187	–312,739
Maine	42,286	3.3	100,801	90,157	36,665
Maryland	321,836	6.1	543,744	315,834	81,385
Massachusetts	100,650	1.6	574,867	402,613	–99,252
Michigan	133,340	1.3	948,153	628,764	204,072
Minnesota	278,129	5.7	509,246	271,135	54,639
Mississippi	74,129	2.6	311,575	205,552	–19,610
Missouri	281,732	5.0	563,796	394,940	92,888
Montana	55,666	6.2	83,417	59,570	32,545
Nebraska	63,306	3.7	187,564	109,569	–9,319
Nevada	567,125	28.4	251,500	127,010	449,261
New Hampshire	80,042	6.5	107,694	72,233	49,610
New Jersey	271,573	3.2	819,551	528,291	–640
New Mexico	150,869	8.3	204,913	105,298	58,745
New York	320,908	1.7	1,820,204	1,121,233	–589,175
North Carolina	1,014,541	12.6	880,162	527,263	679,832
North Dakota	–2,485	–0.4	58,630	42,022	–16,347
Ohio	113,772	1.0	1,088,880	786,868	–207,387
Oklahoma	166,662	4.8	372,792	251,811	54,047
Oregon	326,019	9.5	336,646	222,770	228,005
Pennsylvania	151,738	1.2	1,050,424	935,629	83,889
Rhode Island	9,513	0.9	91,870	71,316	–6,375
South Carolina	395,893	9.9	409,724	276,833	269,092
South Dakota	41,370	5.5	80,804	49,742	6,977
Tennessee	467,457	8.2	579,255	410,498	278,058
Texas	3,052,581	14.6	2,759,655	1,124,640	1,424,673
Utah	412,132	18.5	367,188	95,054	93,987
Vermont	12,427	2.0	47,131	36,718	4,667
Virginia	633,061	8.9	740,719	416,604	314,832
Washington	574,284	9.7	597,061	330,009	320,442
West Virginia	3,685	0.2	150,776	151,717	12,048
Wisconsin	237,925	4.4	510,107	334,748	52,748
Wyoming	29,048	5.9	49,092	29,669	11,661
District					
District of Columbia	16,233	2.8	56,509	40,913	–17,648
TOTAL/RATE	20,196,555	7.2	29,809,472	17,597,188	7,984,271

Principal metropolitan statistical areas/cities (2008)

Metropolitan statistical area	population	Largest city proper	population
New York-Northern New Jersey-Long Island	19,007,000	New York	8,364,000
Los Angeles-Long Beach-Santa Ana	12,873,000	Los Angeles	3,834,000
Chicago-Naperville-Joliet	9,570,000	Chicago	2,853,000
Dallas-Fort Worth-Arlington	6,300,000	Dallas	1,280,000
Philadelphia-Camden-Wilmington	5,838,000	Philadelphia	1,447,000
Houston-Sugar Land-Baytown	5,728,000	Houston	2,242,000
Miami-Fort Lauderdale-Miami Beach	5,415,000	Miami	413,000
Atlanta-Sandy Springs-Marietta	5,376,000	Atlanta	538,000
Washington-Arlington-Alexandria	5,358,000	Washington	592,000
Boston-Cambridge-Quincy	4,523,000	Boston	609,000
Detroit-Warren-Livonia	4,425,000	Detroit	912,000
Phoenix-Mesa-Scottsdale	4,282,000	Phoenix	1,568,000
San Francisco-Oakland-Fremont	4,275,000	San Francisco	809,000
Riverside-San Bernardino-Ontario	4,116,000	Riverside	295,000
Seattle-Tacoma-Bellevue	3,345,000	Seattle	599,000
Minneapolis-St. Paul-Bloomington	3,230,000	Minneapolis	383,000
San Diego-Carlsbad-San Marcos	3,001,000	San Diego	1,279,000
St. Louis	2,817,000	St. Louis	354,000
Tampa-St. Petersburg-Clearwater	2,734,000	Tampa	341,000
Baltimore-Towson	2,667,000	Baltimore	637,000
Denver-Aurora	2,507,000	Denver	599,000
Pittsburgh	2,351,000	Pittsburgh	310,000
Portland-Vancouver-Beaverton	2,207,000	Portland	558,000
Cincinnati-Middletown	2,155,000	Cincinnati	333,000
Sacramento-Arden-Arcade-Roseville	2,110,000	Sacramento	464,000
Cleveland-Elyria-Mentor	2,088,000	Cleveland	434,000
Orlando-Kissimmee	2,055,000	Orlando	231,000
San Antonio	2,031,000	San Antonio	1,351,000
Kansas City	2,002,000	Kansas City, Mo.	452,000
Las Vegas-Paradise	1,866,000	Las Vegas	558,000
San Jose-Sunnyvale-Santa Clara	1,819,000	San Jose	948,000
Columbus, Ohio	1,773,000	Columbus	755,000
Indianapolis-Carmel	1,715,000	Indianapolis	798,000
Charlotte-Gastonia-Concord	1,702,000	Charlotte	687,000
Virginia Beach-Norfolk-Newport News	1,658,000	Virginia Beach	434,000
Austin-Round Rock	1,653,000	Austin	758,000
Providence-New Bedford-Fall River	1,597,000	Providence	172,000
Nashville-Davidson-Murfreesboro	1,551,000	Nashville	596,000
Milwaukee-Waukesha-West Allis	1,549,000	Milwaukee	604,000
Jacksonville	1,313,000	Jacksonville	808,000
Memphis	1,286,000	Memphis	670,000
Louisville-Jefferson County	1,245,000	Louisville	557,000
Richmond	1,226,000	Richmond	202,000
Oklahoma City	1,206,000	Oklahoma City	552,000
Hartford-West Hartford-East Hartford	1,191,000	Hartford	124,000
New Orleans-Metairie-Kenner	1,134,000	New Orleans	312,000
Buffalo-Niagara Falls	1,124,000	Buffalo	271,000
Birmingham-Hoover	1,118,000	Birmingham	229,000
Salt Lake City	1,116,000	Salt Lake City	182,000
Raleigh-Cary	1,089,000	Raleigh	393,000
Rochester	1,034,000	Rochester	207,000
Tucson	1,012,000	Tucson	542,000

Immigration (2007–08): permanent immigrants admitted 1,107,126, from Mexico 17.2%, China 7.3%, India 5.7%, the Philippines 4.9%, Cuba 4.5%, Dominican Republic 2.9%, Vietnam 2.8%, Colombia 2.7%, South Korea 2.4%, Haiti 2.3%, Pakistan 1.8%, El Salvador 1.8%, Jamaica 1.7%, other 42.0%. Refugees (2005) 380,000.

Vital statistics

Birth rate per 1,000 population (2008): 14.0 (world avg. 20.3); within marriage (2006) 64.2%; outside of marriage (2006) 35.8%.

Death rate per 1,000 population (2008): 8.1 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 5.9 (world avg. 11.8).

Marriage rate per 1,000 population (2008): 7.1; median age at first marriage (2005): men 27.1 years, women 25.8 years.

Divorce rate per 1,000 population (2008): 3.6.

Total fertility rate (avg. births per childbearing woman; 2007): 2.09.

Life expectancy at birth (2005): male 75.2 years, of which white male 78.3 years, black male 69.5 years; female 80.4 years, of which white female 80.8 years, black female 76.5 years.

Vital statistics (2006)

States	live births	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births ⁹	abortion rate per 1,000 live births ¹⁰	life expectancy ¹¹
Alabama	63,235	13.7	10.2	9.1	208	74.6
Alaska	10,991	16.4	5.0	5.2	—	76.7
Arizona	102,475	16.6	7.5	6.9	122	77.5
Arkansas	40,973	14.6	9.9	7.5	142	75.1
California	562,431	15.4	6.5	5.1	—	78.3
Colorado	70,750	14.9	6.2	6.5	113	78.4
Connecticut	41,807	11.9	8.4	5.4	321	78.4
Delaware	11,988	14.0	8.4	7.6	405	76.6
Florida	236,882	13.1	9.4	7.2	428	77.5
Georgia	148,619	15.9	7.2	7.8	256	75.3
Hawaii	18,982	14.8	7.4	6.9	224	79.8
Idaho	24,184	16.5	7.2	6.7	40	78.0
Illinois	180,583	14.1	8.0	7.1	260	76.7
Indiana	88,674	14.0	8.8	7.7	129	76.2
Iowa	40,610	13.6	9.2	5.2	166	78.5
Kansas	40,964	14.8	8.9	6.9	299	77.5
Kentucky	58,291	13.9	9.5	6.5	65	75.3
Louisiana	63,399	14.8	9.3	9.7	161	74.4
Maine	14,151	10.7	9.3	6.8	171	77.6
Maryland	77,478	13.8	7.8	7.9	185	76.3
Massachusetts	77,769	12.1	8.3	5.1	313	78.4
Michigan	127,476	12.6	8.5	7.9	225	76.5
Minnesota	73,559	14.2	7.2	5.2	209	79.1
Mississippi	46,069	15.8	9.8	11.0	87	73.7
Missouri	81,388	13.9	9.4	7.4	109	76.2
Montana	12,506	13.2	9.0	6.3	203	77.3
Nebraska	26,733	15.1	8.4	5.7	149	78.3
Nevada	40,085	16.1	7.4	5.8	306	75.9
New Hampshire	14,380	10.9	7.6	5.2	—	78.5
New Jersey	115,006	13.2	8.1	5.1	286	77.5
New Mexico	29,937	15.3	7.8	6.2	183	77.3
New York	250,091	13.0	7.7	6.0	509	77.9
North Carolina	127,841	14.4	8.4	8.6	249	75.8
North Dakota	8,622	13.6	9.2	6.3	157	78.7
Ohio	150,590	13.1	9.3	8.2	241	76.4
Oklahoma	54,018	15.1	9.9	8.1	129	75.3
Oregon	48,717	13.2	8.5	5.8	291	77.9
Pennsylvania	149,082	12.0	10.1	7.2	249	76.8
Rhode Island	12,379	11.6	9.1	5.9	430	78.2
South Carolina	62,271	14.4	9.0	8.9	122	74.9
South Dakota	11,917	15.2	9.1	6.5	77	78.0
Tennessee	84,345	14.0	9.4	9.0	230	75.0
Texas	399,612	17.0	6.7	6.4	215	76.7
Utah	53,499	21.0	5.4	4.4	72	78.7
Vermont	6,509	10.4	8.1	6.1	256	78.2
Virginia	107,817	14.1	7.5	7.2	251	76.9
Washington	86,848	13.6	7.2	5.0	318	78.2
West Virginia	20,928	11.5	11.4	8.2	99	75.0
Wisconsin	72,335	13.0	8.3	6.6	153	78.1
Wyoming	7,670	14.9	8.4	5.8	...	77.1
District						
District of Columbia	8,529	14.7	9.2	10.2	735	72.6
TOTAL/RATE	4,265,996⁴	14.2	8.1	6.4	246	77.0

Major causes of death per 100,000 population (2007): cardiovascular diseases 266.4, of which ischemic heart disease 133.9, cerebrovascular diseases 44.4, atherosclerosis 2.7; malignant neoplasms (cancers) 185.7; diseases of the respiratory system 77.0, of which pneumonia 17.4; accidents and adverse effects 38.8, of which motor-vehicle accidents 14.3; diabetes mellitus 23.5; kidney disease 15.3; suicide 11.0; chronic liver disease and cirrhosis 9.5; AIDS (2005) 4.2.

Adult population (ages 15–49) living with HIV (2007): 0.6% (world avg. 0.8%).

Morbidity rates of infectious diseases per 100,000 population (2006): chlamydia 345.1; gonorrhea 119.8; chicken pox 16.2; salmonellosis 15.3; AIDS 13.8; syphilis 12.4; Lyme disease 6.7; pertussis 5.2; shigellosis 5.2; hepatitis B (serum) 1.6; hepatitis A (infectious) 1.2.

Leading cause of death by age group (2005)

	number of deaths			total death rate per 100,000 population	percentage of all deaths
	total ⁴	male	female		
All ages ¹²	2,448,017	1,207,675	1,240,342	825.9	100.0 ⁴
1 to 4 years	4,756	2,765	1,991	29.4	0.19
Accidents	1,664	1,027	637	10.3	0.07
Congenital anomalies	522	264	258	3.2	0.02
Malignant neoplasms	377	217	160	2.3	0.02
Homicide	375	214	161	2.3	0.02
Diseases of the heart	151	81	70	0.9	0.01

Leading cause of death by age group (2005) (continued)

	number of deaths			total death rate per 100,000 population	percentage of all deaths
	total ⁴	male	female		
5 to 14 years	6,602	3,853	2,749	16.3	0.27
Accidents	2,415	1,493	922	6.0	0.10
Malignant neoplasms	1,000	557	443	2.5	0.04
Congenital anomalies	396	195	201	1.0	0.02
Homicide	341	204	137	0.8	0.01
Suicide	272	204	68	0.7	0.01
15 to 24 years	34,234	25,509	8,725	81.4	1.40
Accidents	15,753	11,827	3,926	37.4	0.64
Homicide	5,466	4,765	701	13.0	0.22
Suicide	4,212	3,498	714	10.0	0.17
Malignant neoplasms	1,717	1,035	682	4.1	0.07
Diseases of the heart	1,119	770	349	2.7	0.05
25 to 44 years	126,710	82,592	44,118	150.8	5.18
Accidents	30,916	22,691	8,225	36.8	1.26
Malignant neoplasms	18,167	8,143	10,024	21.6	0.74
Diseases of the heart	15,937	11,137	4,800	19.0	0.65
Suicide	11,540	9,129	2,411	13.7	0.47
Homicide	7,861	6,325	1,536	9.4	0.32
45 to 64 years	458,831	279,901	178,930	629.9	18.74
Malignant neoplasms	149,645	79,442	70,203	205.4	6.11
Diseases of the heart	103,311	72,381	30,930	141.8	4.22
Accidents	29,192	20,509	8,683	40.1	1.19
Diabetes mellitus	16,992	10,037	6,955	23.3	0.69
Lower respiratory diseases	16,724	8,623	8,101	23.0	0.68
65 and over	1,788,189	796,838	991,351	4,860.5	73.05
Diseases of the heart	530,926	238,119	292,807	1,443.1	21.69
Malignant neoplasms	388,322	200,978	187,344	1,055.5	15.86
Cerebrovascular diseases	123,881	45,788	78,093	336.7	5.06
Lower respiratory diseases	112,716	53,043	59,673	306.4	4.60
Alzheimer's disease	70,858	20,236	50,622	192.6	2.89

Social indicators

Educational attainment (2007). Percentage of population age 25 and over having: unknown/primary and incomplete secondary 14.3%; secondary 31.6%; some postsecondary 25.3%; 4-year higher degree 18.9%; advanced degree 9.9%. Number of earned degrees (2006): associate's degree 713,066; bachelor's degree 1,485,242; master's degree 594,065; doctor's degree 56,067; first-professional degrees (in fields such as medicine, theology, and law) 87,655.

Distribution of income (2007)

percentage of disposable family income by quintile				
1	2	3	4	5 (highest)
3.4	8.7	14.8	23.4	49.7

Quality of working life (2006). Average workweek (2007): 41.3 hours. Annual death rate per 100,000 workers: 3.4; leading causes of occupational deaths: transportation incidents 42%, assaults/violent acts 13%, falls 14%, struck by object 10%. Annual occupational injury rate per 100,000 workers: 4.4. Average duration of journey to work (2006): 25.0 minutes (private automobile 86.7%, of which drive alone 76.0%, carpool 10.7%; take public transportation 4.8%; walk 2.5%; work at home 4.0%; other 2.0%). Rate per 1,000 employed workers of discouraged workers (unemployed no longer seeking work): 3.1.

Access to services (2005). Proportion of occupied dwellings having access to: electricity 100.0%; safe public water supply 100.0%; public sewage collection 79.8%; septic tanks 20.2%.

Social participation (2007). Eligible voters participating in last presidential election (2008): 61.6%. Population age 16 and over volunteering for an organization 26.2%; median annual hours 52. Trade-union membership in total workforce 12.1%.

Social deviance (2007). Offense rate per 100,000 population for: murder 5.6; rape 30.0; robbery 147.6; aggravated assault 283.8; motor-vehicle theft 363.3; burglary and housebreaking 722.5; larceny-theft 2,177.8; drug-abuse violation (2005) 560.1; drunkenness (2003) 149.1. Estimated drug and substance users (population age 12 and over; 2005): cigarettes 24.9%; binge alcohol¹³ 22.7%; marijuana and hashish 6.0%. Rate per 100,000 population of suicide (2005): 10.7.

Crime rates per 100,000 population in metropolitan areas (2007)

	violent crime			
	total	murder and nonnegligent manslaughter	forcible rape	robbery
Chicago	...	15.6	...	546
Columbus	852	10.7	89.8	523
Dallas	1,069	16.1	41.2	583
Detroit	2,289	45.8	39.6	764
Houston	1,132	16.2	32.0	529
Indianapolis	1,234	14.3	63.3	507
Jacksonville	1,022	15.4	31.2	391
Los Angeles	718	10.2	25.9	348
New York	614	6.0	10.6	265
Philadelphia	1,475	27.3	66.6	715
Phoenix	724	13.8	33.0	321
San Antonio	556	9.3	48.2	186
San Diego	502	4.7	23.5	166
San Francisco	874	13.6	17.0	514
San Jose	402	3.5	23.2	114.3

Crime rates per 100,000 population in metropolitan areas (2007)

(continued)

	property crime			
	total	burglary	larceny, theft	motor-vehicle theft
Chicago	4,472	876	2,937	659
Columbus	6,996	1,952	4,198	846
Dallas	6,776	1,814	3,849	1,113
Detroit	6,772	2,064	2,430	2,278
Houston	5,684	1,339	3,449	897
Indianapolis	6,308	1,679	3,666	963
Jacksonville	5,696	1,394	3,698	604
Los Angeles	2,621	507	1,506	608
New York	1,819	254	1,403	161
Philadelphia	4,305	803	2,728	774
Phoenix	5,826	1,246	3,227	1,353
San Antonio	6,390	1,272	4,607	511
San Diego	3,502	609	1,845	1,049
San Francisco	4,696	692	3,199	804
San Jose	2,575	476	1,412	686

Leisure (2006). Favourite leisure activities (percentage of total population age 18 and over that undertook activity at least once in the previous year): dining out 48.6%, entertaining friends or relatives at home 40.2%, reading books 38.7%, barbecuing 33.9%, going to the beach 22.9%.

Material well-being (2005). Occupied dwellings with householder possessing: automobiles, trucks, or vans 91.5%, 1 car with or without trucks or vans 47.5%, 2 cars 23.9%, only trucks and vans 12.7%, no cars, trucks, or vans 8.5%, 3 or more cars 7.4%; telephone 97.1%; television receiver 98.2%; video 90.2%; washing machine 82.0%; clothes dryer 79.1%; air conditioner 89.5%; cable television 67.5%; personal computers 61.8%¹⁴; Internet connections 54.6%¹⁴; broadband Internet 19.9%¹⁴.

Households with computers and Internet access

States	computers (%) (2003)	Internet (%) (2007)
Alabama	53.9	49.8
Alaska	72.7	73.4
Arizona	64.3	62.5
Arkansas	50.0	51.2
California	66.3	66.1
Colorado	70.0	69.1
Connecticut	69.2	66.3
Delaware	64.3	65.7
Florida	61.0	64.8
Georgia	60.6	61.7
Hawaii	63.3	64.1
Idaho	69.2	57.9
Illinois	60.0	63.0
Indiana	59.6	58.1
Iowa	64.7	62.4
Kansas	63.8	62.8
Kentucky	58.1	54.9
Louisiana	52.3	53.9
Maine	67.8	65.1
Maryland	66.0	66.4
Massachusetts	64.1	66.4
Michigan	59.9	58.5
Minnesota	67.9	66.6
Mississippi	48.3	46.0
Missouri	60.7	56.1
Montana	59.5	56.9
Nebraska	66.1	63.8
Nevada	61.3	65.4
New Hampshire	71.5	74.9
New Jersey	65.5	68.4
New Mexico	53.9	54.8
New York	60.0	61.5
North Carolina	57.7	56.8
North Dakota	61.2	59.3
Ohio	58.8	58.6
Oklahoma	55.4	53.1
Oregon	67.0	68.2
Pennsylvania	60.2	60.1
Rhode Island	62.3	66.1
South Carolina	54.9	54.7
South Dakota	62.1	60.8
Tennessee	56.7	53.9
Texas	59.0	57.3
Utah	74.1	69.5
Vermont	65.5	70.2
Virginia	66.8	68.0
Washington	71.4	71.6
West Virginia	55.0	49.1
Wisconsin	63.8	65.0
Wyoming	65.4	61.4
District		
District of Columbia	59.5	58.9
U.S. RATE	61.8	61.7

Recreational expenditures (2006): U.S.\$791,100,000,000 (television and radio receivers, computers, and video equipment 19.2%; golfing, bowling, and other participatory activities 14.6%; sports supplies 10.0%; nondurable toys and sports equipment 9.0%; magazines, newspapers, and sheet music 5.7%; books and maps 5.5%; other 36%).

National economy

Budget (2009). Revenue: U.S.\$2,699,900,000,000 (individual income tax 46.6%, social-insurance taxes and contributions 35.1%, corporation income tax 12.6%, excise taxes 2.6%, other 3.1%). Expenditures: U.S.\$3,107,400,000,000 (social security and medicare 37.4%; defense 21.7%; health 9.6%; interest on debt 8.4%).

Total outstanding national debt (September 2009): U.S.\$11,898,000,000,000, of which debt held by the public U.S.\$7,552,000,000,000, intragovernment holdings U.S.\$4,346,000,000,000.

Gross national income (GNI; 2008): U.S.\$14,466,112,000,000 (U.S.\$47,580 per capita); purchasing power parity GNI (U.S.\$46,970 per capita).

Structure of gross domestic product and labour force

	2008		2007	
	in value U.S.\$'000,000,000	% of total value	labour force ¹⁵	% of labour force ¹⁵
Agriculture, forestry, fishing	157.7	1.1	2,095,000	1.4
Mining and quarrying	325.3	2.3	736,000	0.5
Manufacturing	1,637.7	11.5	16,302,000	10.7
Construction	581.5	4.1	11,856,000	7.7
Public utilities	306.0	2.1	1,193,000	0.8
Transp. and commun.	1,036.9	7.3	6,457,000	4.2
Trade, hotels, restaurants	2,100.5	14.7	30,519,000	19.9
Finance, real estate	2,848.4	20.0	26,108,000	17.0
Public administration, defense	1,840.0	12.9	6,746,000	4.4
Services	3,430.7	24.0	44,033,000	28.8
Other	—	—	7,078,000 ¹⁶	4.6 ¹⁶
TOTAL	14,264.7	100.0	153,128,000⁴	100.0

Gross domestic product

(in U.S.\$'000,000,000)

	2003	2004	2005	2006	2007
Gross domestic product	10,971.2	11,734.3	12,487.1	13,247.0	13,841.0
By type of expenditure					
Personal consumption expenditures	7,709.9	8,214.3	8,746.0	9,269.0	9,734.0
Durable goods	950.1	987.8	1,026.5	1,070.0	1,078.0
Nondurable goods	2,189.0	2,368.3	2,564.4	2,715.0	2,833.0
Services	4,570.8	4,858.2	5,154.9	5,484.0	5,823.0
Gross private domestic investment	1,670.4	1,928.1	2,105.0	2,213.0	2,125
Fixed investment	1,654.9	1,872.6	2,086.1	2,163.0	2,122
Changes in business inventories	15.4	55.4	18.9	50.0	3.0
Net exports of goods and services	-500.9	-624.0	-726.5	-763.0	-708
Exports	1,045.6	1,173.8	1,301.2	1,466.0	1,643
Imports	1,546.5	1,797.8	2,027.7	2,229.0	2,351
Government purchases of goods and services	2,091.9	2,215.9	2,362.9	2,528.0	2,690
Federal	754.8	827.6	877.7	927.0	976
State and local	1,337.1	1,388.3	1,485.2	1,601.0	1,714
By major type of product					
Goods output	3,536.7	3,783.0	3,967.3	4,143.0	4,266
Durable goods	1,599.1	1,705.7	1,800.0	1,834.0	1,872
Nondurable goods	1,937.6	2,077.4	2,167.3	2,309.0	2,395
Services	6,366.1	6,755.4	7,186.1	7,662.0	8,163
Structures	1,068.4	1,195.8	1,333.7	1,442.0	1,412
National income (incl. capital consumption adjustment)	9,660.9	10,275.9	10,903.9	11,656	12,221
By type of income					
Compensation of employees	6,321.1	6,687.6	7,125.3	7,441	7,852
Proprietors' income	810.2	889.6	938.7	1,007	1,043
Rental income of persons	131.7	134.2	72.9	55	65
Corporate profits	1,021.1	1,231.2	1,372.8	1,554	1,595
Net interest	543.0	523.9	558.7	599	603
By industry division (incl. capital consumption adjustment)					
Agriculture, forestry, fishing	114	142	119	122	161
Mining and construction	643	722	808	904	839
Manufacturing	1,369	1,420	1,497	1,601	1,616
Durable	786	824	868	916	927
Nondurable	584	596	628	686	689
Transportation	322	333	362	364	403
Communications	492	539	578	579	599
Public utilities	223	235	239	263	296
Wholesale and retail trade	1,416	1,485	1,562	2,002	1,686
Finance, insurance, real estate	2,250	2,424	2,575	2,998	2,861
Services	2,492	2,666	2,446	2,779	3,597
Government and government enterprise	1,415	1,483	1,552	1,636	1,741

Components of gross domestic product (2007)

States	gross domestic product by state (U.S.\$'000,- 000,000)	personal income (U.S.\$'000,- 000,000)	disposable personal income (U.S.\$'000,- 000,000)	per capita disposable personal income (U.S.\$)
Alabama	165.8	149.9	134.0	28,960
Alaska	44.5	27.3	24.6	36,031
Arizona	247.0	208.5	184.2	29,063
Arkansas	95.4	85.3	76.7	27,041
California	1,813.0	1,519.9	1,303.7	35,666
Colorado	236.3	199.4	172.8	35,545
Connecticut	216.3	192.6	158.4	45,217
Delaware	60.1	34.6	30.2	34,917
Florida	734.5	699.3	617.5	33,831
Georgia	396.5	319.0	279.5	29,288
Hawaii	61.5	50.1	44.1	34,365
Idaho	51.1	47.5	41.9	27,948
Illinois	609.6	525.9	458.8	35,697
Indiana	246.4	210.4	186.5	29,394
Iowa	129.0	104.0	92.7	31,020
Kansas	117.3	101.3	89.0	32,067
Kentucky	154.2	130.6	116.0	27,357
Louisiana	216.1	153.6	137.7	32,074
Maine	48.1	44.7	39.6	30,097
Maryland	268.7	262.1	223.3	39,750
Massachusetts	351.5	317.0	267.6	41,491
Michigan	382.0	345.9	308.3	30,611
Minnesota	255.0	212.9	184.3	35,454
Mississippi	88.5	83.3	75.9	26,008
Missouri	229.5	199.8	176.6	30,042
Montana	34.3	31.7	28.2	29,433
Nebraska	80.1	64.2	56.9	32,066
Nevada	127.2	101.7	89.2	34,753
New Hampshire	57.3	54.5	48.4	36,775
New Jersey	465.5	427.7	365.5	42,081
New Mexico	76.2	60.3	54.0	27,389
New York	1,103.0	900.5	748.7	38,800

Components of gross domestic product (2007) (continued)

States	gross domestic product by state (U.S.\$'000,- 000,000)	personal income (U.S.\$'000,- 000,000)	disposable personal income (U.S.\$'000,- 000,000)	per capita disposable personal income (U.S.\$)
North Carolina	399.4	305.0	266.6	29,423
North Dakota	27.7	23.0	20.8	32,487
Ohio	466.3	395.7	347.0	30,260
Oklahoma	139.3	126.3	112.6	31,118
Oregon	158.2	131.3	113.9	30,385
Pennsylvania	531.1	481.6	421.1	33,870
Rhode Island	46.9	42.0	36.9	34,894
South Carolina	152.8	136.9	121.6	27,580
South Dakota	33.9	28.4	25.8	32,451
Tennessee	243.9	205.5	186.2	30,248
Texas	1,142.0	884.6	793.2	33,181
Utah	105.7	79.6	69.3	26,203
Vermont	24.5	23.3	20.6	33,156
Virginia	383.0	320.5	275.5	35,721
Washington	311.3	265.6	236.5	36,557
West Virginia	57.7	53.1	47.9	26,408
Wisconsin	232.3	203.0	177.7	31,719
Wyoming	31.5	24.6	21.4	40,921
District				
District of Columbia	93.8	36.1	30.9	52,526
TOTAL/AVERAGE	13,743.0⁴	11,631.6	10,140.2⁴	33,619

Production. Agriculture, forestry, fishing (value of production in U.S.\$'000,000 except as noted; 2007): corn (maize) 52,090, soybeans 26,752, wheat 13,669, alfalfa hay 8,972, cotton 5,197, grapes 3,381, potatoes 3,198, lettuce 2,751, apples 2,398, almonds 2,325, rice 2,274, tomatoes 2,179, oranges 2,111, sorghum 1,951, strawberries 1,746, sugar beets 1,526¹⁷, tobacco 1,310, cottonseed 1,061, mushrooms 956, sugarcane 897¹⁷, barley 852, onions 840, broccoli 764, peanuts (groundnuts) 763, cherries 651, carrots 614, sunflowers 607, blueberries 589, peppers 588, walnuts 564¹⁷, pistachios 549, peaches 499, watermelons 476, cabbage 413, lemons 403, pecans 376, sweet potatoes 374, pears 346, cantaloupe 313, livestock (number of live animals; 2008) 96,669,000 cattle, 65,110,000 pigs, 9,500,000 horses, 6,100,000 sheep, 2,050,000,000 chickens; roundwood 444,003,000 cu m, of which fuelwood 11% (coniferous 312,700,000 cu m⁹, non-coniferous 159,162,000 cu m⁹); fisheries production 5,293,877 metric tons (from aquaculture 10%); aquatic plants production 2,272 (from aquaculture, none). Metals mining (metal content in metric tons unless otherwise noted; 2008): molybdenum 61,400 (world rank: 1); beryllium 155 (world rank: 1); copper 1,310,000 (world rank: 2); lead 440,000 (world rank: 3); gold 230,000 kg (world rank: 3); zinc 770,000 (world rank: 4); palladium 12,400 kg (world rank: 4); platinum 3,700 kg (world rank: 5); iron 54,000,000 (world rank: 7); silver 1,120,000 kg (world rank: 7). Nonmetals mining (metric tons; 2008): diatomite 653,000 (world rank: 1); bromine 235,000 (world rank: 1); boron 1,150,000¹⁷ (world rank: 2); perlite 449,000 (world rank: 2); kyanite 90,000 (world rank: 2); vermiculite 100,000 (world rank: 3); barite 615,000 (world rank: 3); silicon 166,000 (world rank: 5); feldspar 600,000 (world rank: 6). Quarrying (metric tons; 2008): gypsum 12,700,000 (world rank: 2); salt 46,000,000 (world rank: 2); phosphate rock 30,900,000 (world rank: 2); lime 19,800,000 (world rank: 2). Manufacturing (value added in U.S.\$'000,000; 2005): chemicals and chemical products 328,440, of which pharmaceuticals and medicine 124,586; transportation equipment 254,665, of which motor vehicle parts 81,600, motor vehicles 78,772, aerospace products and parts 71,221; food and food products 235,673; electronic products 226,319, of which navigational, measuring, medical, and scientific equipment 68,730, computers and related components 36,407, communications equipment 32,413; fabricated metal products 154,928; nonelectrical machinery 142,488; petroleum and coal 117,541; plastic and rubber products 96,348; beverages and tobacco products 80,716; base metals 77,179; paper and paper products 75,889; cement, bricks, and ceramics 64,545; printing and publishing 58,930; general electrical equipment 54,318; furniture 46,801; wood and wood products 44,763; textiles 32,395. Construction (completed; 2006): private U.S.\$937,047,000,000, of which residential U.S.\$641,-332,000,000, nonresidential U.S.\$295,715,000,000; public U.S.\$255,191,-000,000.

Energy consumption by sector and state (2007)

States	total	residential	commercial	industrial	transportation	per capita (in '000,000 Btu)
Alabama	2,132	406	281	942	504	461
Alaska	724	54	62	356	251	1,082
Arizona	1,578	430	369	232	547	248
Arkansas	1,149	229	162	464	295	406
California	8,492	1,535	1,614	1,956	3,387	233
Colorado	1,479	343	291	399	446	306
Connecticut	871	277	218	115	261	250
Delaware	302	67	58	101	76	350
Florida	4,602	1,340	1,089	559	1,614	253
Georgia	3,133	744	566	887	936	329
Hawaii	344	38	42	68	195	269
Idaho	530	122	84	187	137	354
Illinois	4,043	997	780	1,203	1,064	315
Indiana	2,904	552	360	1,346	647	458
Iowa	1,235	235	192	492	316	414
Kansas	1,136	226	203	426	282	409
Kentucky	2,023	373	261	892	498	478
Louisiana	3,766	356	292	2,404	714	861
Maine	456	107	76	147	127	346
Maryland	1,489	426	416	184	463	265
Massachusetts	1,515	443	384	196	492	234
Michigan	3,027	786	625	819	798	301
Minnesota	1,875	414	352	578	531	362
Mississippi	1,240	231	175	454	376	424
Missouri	1,964	524	407	429	607	334
Montana	462	79	68	186	128	483
Nebraska	693	156	136	224	178	392
Nevada	777	183	134	201	259	304
New Hampshire	314	92	70	45	107	240

Energy consumption by sector and state (2007) (continued)

States	total	residential	commercial	industrial	transportation	per capita (in '000,000 Btu)
New Jersey	2,744	616	639	452	1,037	317
New Mexico	712	114	125	252	220	362
New York	4,064	1,202	1,257	505	1,101	209
North Carolina	2,700	716	574	644	767	299
North Dakota	428	64	61	199	105	671
Ohio	4,049	956	708	1,348	1,038	353
Oklahoma	1,609	306	250	588	464	446
Oregon	1,108	268	209	284	347	297
Pennsylvania	4,006	967	719	1,289	1,032	323
Rhode Island	218	72	58	24	65	207
South Carolina	1,692	359	264	621	449	384
South Dakota	292	66	59	75	93	367
Tennessee	2,331	546	387	740	658	379
Texas	11,835	1,594	1,382	5,951	2,978	496
Utah	806	166	152	225	262	302
Vermont	162	48	31	29	54	261
Virginia	2,611	628	601	567	815	339
Washington	2,067	490	384	521	672	321
West Virginia	851	164	112	396	179	470
Wisconsin	1,846	419	357	624	447	330
Wyoming	496	46	60	263	127	949
District						
District of Columbia	187	37	125	4	22	319
TOTAL⁴	101,468	21,604	18,279	32,494	29,091	337

Energy consumption by source and by state (2007)

States	petroleum	natural gas ¹⁸	coal	hydroelectric power	nuclear electric power
Alabama	626	431	888	41	360
Alaska	324	372	13	13	0.0
Arizona	595	402	439	65	281
Arkansas	387	228	228	32	162
California	3,946	2,440	66	270	375
Colorado	525	516	389	17	0.0
Connecticut	399	184	40	4	172
Delaware	136	50	64	0.0	0.0
Florida	1,984	950	721	2	307
Georgia	1,100	454	935	22	341
Hawaii	306	3	19	0.9	0.0
Idaho	166	84	10	89	0.0
Illinois	1,418	979	1,090	1.5	1,004
Indiana	878	548	1,575	4	0.0
Iowa	442	262	464	10	47
Kansas	425	292	396	0.1	109
Kentucky	747	236	1,020	17	0.0
Louisiana	1,600	1,423	250	8	179
Maine	236	48	7	37	0.0
Maryland	557	209	328	16	151
Massachusetts	685	417	120	8	54
Michigan	987	848	800	13	331
Minnesota	706	397	366	7	137
Mississippi	471	375	185	0.0	98
Missouri	759	278	802	12	98
Montana	211	75	202	93	0.0
Nebraska	235	146	217	3	116
Nevada	293	264	83	20	0.0
New Hampshire	170	65	45	13	113
New Jersey	1,373	641	112	0.2	336
New Mexico	285	240	296	2.6	0.0
New York	1,633	1,219	258	250	445
North Carolina	971	245	828	30	420
North Dakota	143	63	420	13	0.0
Ohio	1,357	836	1,462	4	165
Oklahoma	578	691	373	30	0.0
Oregon	385	258	45	332	0.0
Pennsylvania	1,456	782	1,491	22	812
Rhode Island	92	91	19	0.1	0.0
South Carolina	577	180	444	15	558
South Dakota	121	54	33	29	0.0
Tennessee	827	230	672	49	301
Texas	5,887	3,641	1,609	16	430
Utah	306	232	391	5	0.0
Vermont	88	9	19	6	49
Virginia	1,017	333	458	12	286
Washington	847	280	96	779	85
West Virginia	289	123	983	12	0.0
Wisconsin	620	404	465	15	135
Wyoming	176	118	495	7	0.0
District					
District of Columbia	23	34	0.5	0.0	0.0
TOTAL	40,358⁴	23,678⁴	22,740⁴	2,446⁴	8,458⁴

Energy production (consumption): electricity (kwh-hr; 2006) 4,300,103,000,000 (4,318,523,000,000); hard coal (metric tons; 2006) 523,971,000 (499,724,000); lignite (metric tons; 2006) 543,931,000 (517,337,000); crude petroleum (barrels; 2006) 1,857,000,000 (5,802,000,000); petroleum products (metric tons; 2006) 815,278,000 (834,999,000); natural gas (cu m; 2006) 525,481,000,000 (610,698,000,000). Domestic production of energy by source (2005): coal 33.3%, natural gas 27.2%, crude petroleum 15.7%, nuclear power 11.8%, renewable energy 8.8%, other 3.2%.

Energy consumption by source (2007): petroleum and petroleum products 39.8%, natural gas 23.3%, coal 22.4%, nuclear electric power 8.3%, hydroelectric and thermal 3.2%, other renewable energy 3.0%; by end use: industrial 32.0%, residential and commercial 39.3%, transportation 28.7%.

Household income and expenditure (2007). Average household size 2.6; median annual income per household U.S.\$50,233, of which median Asian (including Hispanic) household U.S.\$65,876, median white (including Hispanic) household U.S.\$52,034, median non-Hispanic household¹⁷ U.S.\$52,423, median Hispanic⁷ household U.S.\$38,679, median black (including Hispanic) household U.S.\$34,091; sources of personal income: wages and salaries 79.8%, transfer payments 10.1%, self-employment 5.5%, other 4.6%; consumption expenditure: housing 20.2%, transportation 17.6%, insurance and

pension 10.7%, fuel and utilities 7.0%, food at home 7.0%, health 5.7%, recreation 5.7%, food away from home 5.4%, wearing apparel 3.8%, alcoholic beverages and tobacco products 1.6%, other 15.3%.

Household income level by selected characteristics (2007) ²⁰							
Characteristics	number of households ('000)	number ('000)				median income (\$)	
		under \$15,000	\$15,000–\$34,999	\$35,000–\$74,999	\$75,000 and over		
Total/Average	116,783	15,506	26,060	37,789	37,427	50,233	
Age of householder							
15 to 24 years	6,554	1,441	2,089	2,256	767	31,790	
25 to 34 years	19,225	1,941	4,263	7,306	5,715	51,016	
35 to 44 years	22,448	1,838	3,744	7,713	9,150	62,124	
45 to 54 years	24,536	2,201	3,768	7,921	10,647	65,476	
55 to 64 years	19,909	2,432	3,598	6,414	7,465	57,386	
65 years and over	24,113	5,653	8,599	6,179	3,684	28,305	
Size of household							
One person	32,167	9,500	10,723	8,774	3,169	25,703	
Two persons	38,737	3,131	8,345	13,873	13,385	54,841	
Three persons	18,522	1,341	3,091	6,357	7,733	64,403	
Four persons	15,865	823	2,121	4,949	7,972	75,263	
Five persons	7,332	438	1,101	2,371	3,419	70,977	
Six persons	2,694	171	425	954	1,143	64,827	
Seven or more persons	1,467	100	256	506	604	63,823	
Educational attainment of householder ¹⁷							
Total ²¹	109,349	14,000	24,925	35,889	34,535	50,004	
Less than 9th grade	5,701	1,998	2,015	1,333	355	20,901	
Some high school	9,127	2,597	3,174	2,592	784	25,912	
High school graduate	32,851	4,965	9,696	11,667	6,523	39,426	
Some college, no degree	19,321	2,128	4,475	7,045	5,673	49,691	
Associate degree	9,723	852	1,954	3,586	3,331	56,017	
Bachelor's degree	21,082	1,068	2,668	6,659	10,687	75,861	
Master's degree	8,128	275	693	2,348	4,812	88,422	
Professional degree	1,860	72	143	334	1,311	100,000	
Doctorate degree	1,556	45	107	345	1,059	100,000	

Financial aggregates							
	2003	2004	2005	2006	2007	2008	2009 ²²
Exchange rate, U.S.\$ per:							
€ ²³	1.63	1.83	1.82	1.84	2.00	1.85	1.63
SDR ²³	1.40	1.48	1.48	1.47	1.53	1.58	1.55
International reserves (U.S.\$) ²⁴							
Total (excl. gold; '000,000,000)	74.89	75.89	54.08	54.85	59.52	66.61	71.89
SDRs ('000,000,000)	12.64	13.63	8.21	8.87	9.48	9.34	9.44
Reserve pos. in IMF ('000,000,000)	22.53	19.54	8.04	5.04	4.24	7.68	12.57
Foreign exchange ('000,000,000)	39.72	42.72	37.84	40.94	45.80	49.58	49.88
Gold ('000,000 fine troy oz)	261.55	261.59	261.55	261.50	261.50	261.50	261.50
% world reserves	28.60	29.14	29.76	30.14	30.67	27.39	...
Interest and prices							
Central bank discount (%) ²⁴	2.00	3.15	5.16	6.25	4.83	0.86	...
Govt. bond yield (%) ²³	4.02	4.27	4.29	4.79	4.63	3.67	...
Industrial share prices ²³ (2005 = 100)	85.3	97.8	100.0	108.2	124.9	106.7	...
Balance of payments (U.S.\$'000,000,000)							
Balance of visible trade	-545.76	-668.38	-787.06	-843.54	-826.91	-836.27	...
Imports, f.o.b.	-1,264.90	-1,478.03	-1,683.22	-1,863.10	-1,969.39	-2,117.28	...
Exports, f.o.b.	719.14	809.65	896.16	1,019.56	1,142.47	1,281.01	...
Balance of invisibles	+24.24	+37.25	+38.37	+39.99	+120.84	+251.04	...
Balance of payments, current account	-521.52	-631.13	-748.69	-803.55	-706.07	-585.23	...

Average employee earnings				
	average hourly earnings in U.S.\$		average weekly earnings in U.S.\$	
	2005	2006	2005	2006
Manufacturing				
Durable goods	17.33	17.67	712.95	731.81
Lumber and wood products	13.16	13.40	526.65	533.44
Furniture and fixtures	13.45	13.79	527.35	535.35
Nonmetallic mineral products	16.61	16.59	700.78	713.34
Primary metal industries	18.94	19.35	815.78	842.94
Fabricated metal products	15.80	16.17	647.34	668.84
Machinery, except electrical	17.03	17.20	716.55	728.99
Electrical equipment and appliances	15.24	15.53	618.97	635.87
Transportation equipment	22.10	22.41	938.03	957.43
Computer and electronic products	18.39	18.96	735.59	767.86
Miscellaneous manufacturing	14.08	14.36	545.21	556.16
Nondurable goods	15.27	15.32	608.95	621.78
Food and kindred products	13.04	13.13	508.55	526.02
Beverage and tobacco manufactures	18.76	18.19	751.54	741.31
Textile mill products	12.38	12.55	498.47	509.41
Apparel and other textile products	10.24	10.61	366.17	387.27
Paper and allied products	17.99	18.01	764.04	772.26
Printing and publishing	15.74	15.80	604.73	618.81
Chemicals and allied products	19.67	19.60	831.76	833.59
Petroleum and coal products	24.47	24.08	1,114.51	1,084.03
Rubber and miscellaneous plastics products	14.80	14.96	591.58	607.82
Leather and leather products	11.50	11.44	441.96	445.50
Nonmanufacturing				
Mining	18.72	19.90	853.71	908.01
Utilities	26.68	27.42	1,095.90	1,136.08
Construction	19.46	20.02	750.22	781.04
Transportation and warehousing	16.70	17.28	618.58	637.14
Wholesale trade	18.16	18.91	685.00	718.30

Average employee earnings (continued)

	average hourly earnings in U.S.\$		average weekly earnings in U.S.\$	
	2005	2006	2005	2006
Retail trade	12.36	12.58	377.58	383.16
Finance, insurance, and real estate	17.94	18.80	645.10	672.40
Leisure and hospitality services	9.38	9.75	241.36	250.11
Education and health services	16.71	17.38	544.59	564.95
Professional and business services	18.08	19.12	618.87	662.23
Information services	22.06	23.23	805.00	850.81
Other services	14.34	14.77	443.37	456.60

Median household income²⁵

(in current 2007 U.S.\$)

States	2002	2003	2004	2005	2006	2007
Alabama	37,603	37,225	38,111	36,879	38,783	40,554
Alaska	52,774	51,837	54,627	56,234	59,393	64,333
Arizona	39,734	41,166	42,590	44,282	47,265	49,889
Arkansas	32,387	32,002	33,948	34,999	36,599	38,134
California	47,437	49,300	49,894	53,629	56,645	59,948
Colorado	48,294	49,940	51,022	50,652	52,015	55,212
Connecticut	53,387	54,965	55,970	60,941	63,422	65,967
Delaware	49,650	49,019	50,152	52,499	52,833	54,610
Florida	38,024	38,972	40,171	42,433	45,495	47,804
Georgia	42,939	42,438	43,217	45,604	46,832	49,136
Hawaii	47,303	51,834	53,123	58,112	61,160	63,746
Idaho	37,715	42,372	42,519	41,443	42,865	46,253
Illinois	42,710	45,153	45,787	50,260	52,006	54,124
Indiana	41,047	42,425	43,003	43,995	45,394	47,448
Iowa	41,049	41,384	43,042	43,609	44,491	47,292
Kansas	42,619	44,232	43,725	42,920	45,478	47,451
Kentucky	36,762	36,936	37,396	37,369	39,372	40,267
Louisiana	34,008	33,507	35,523	36,729	39,337	40,926
Maine	36,853	37,113	39,395	42,801	43,439	45,888
Maryland	56,407	52,314	56,763	61,592	66,144	68,080
Massachusetts	49,855	50,955	52,354	57,184	59,963	62,365
Michigan	42,715	45,022	44,476	46,039	47,182	47,950
Minnesota	54,622	52,823	55,914	52,024	54,023	55,802
Mississippi	30,882	32,728	33,659	32,938	34,473	36,338
Missouri	42,776	43,762	43,988	41,974	42,841	45,114
Montana	34,835	34,108	35,201	39,301	40,627	43,531
Nebraska	42,796	43,974	44,623	43,849	45,474	47,085
Nevada	44,958	45,184	46,984	49,169	52,998	55,062
New Hampshire	55,321	55,567	57,352	56,768	59,683	62,369
New Jersey	54,568	56,045	56,772	61,672	64,470	67,035
New Mexico	35,457	35,105	37,587	37,492	40,629	41,452
New York	41,966	42,788	44,228	49,480	51,384	53,514
North Carolina	36,515	37,279	39,000	40,729	42,625	44,670
North Dakota	36,200	40,410	39,594	41,030	41,919	43,753
Ohio	42,684	43,520	44,160	43,493	44,532	46,597
Oklahoma	36,458	35,902	38,281	37,063	38,770	41,567
Oregon	41,802	41,638	42,617	42,944	46,230	48,730
Pennsylvania	42,498	42,933	44,286	44,537	46,259	48,576
Rhode Island	42,417	44,711	46,199	51,458	51,814	53,568
South Carolina	37,812	38,479	39,326	39,316	41,100	43,329
South Dakota	37,873	39,522	40,518	40,310	42,791	43,424
Tennessee	37,030	37,523	38,550	38,874	40,315	42,367
Texas	40,149	39,271	41,275	42,139	44,922	47,548
Utah	47,861	49,275	50,614	47,934	51,309	55,109
Vermont	42,999	43,261	45,692	45,686	47,665	49,907
Virginia	49,631	54,783	53,275	54,240	56,277	59,562
Washington	45,183	47,508	48,688	49,262	52,583	55,591
West Virginia	29,359	32,763	32,589	33,452	35,059	37,060
Wisconsin	45,903	46,269	47,220	47,105	48,772	50,578
Wyoming	39,763	42,555	43,641	46,039	47,423	51,731
District						
District of Columbia	39,070	45,044	46,133	47,221	51,847	54,317
U.S. AVERAGE	42,409	43,318	44,473	46,202	48,451	50,740

Average annual expenditure of "consumer units" (households, plus individuals sharing households or budgets; 2006): total U.S.\$48,398, of which housing U.S.\$16,366, transportation U.S.\$8,508, food U.S.\$6,111, pensions and social security U.S.\$5,270, health care U.S.\$2,766, clothing U.S.\$1,874, other U.S.\$7,503.

Home ownership rates

States	percent		States	percent	
	2000	2007		2000	2007
Alabama	73.2	73.3	Nevada	64.0	63.3
Alaska	66.4	66.6	New Hampshire	69.2	73.8
Arizona	68.0	70.4	New Jersey	66.2	68.3
Arkansas	68.9	69.5	New Mexico	73.7	71.5
California	57.1	58.3	New York	53.4	55.9
Colorado	68.3	70.2	North Carolina	71.1	70.3
Connecticut	70.0	70.3	North Dakota	70.7	66.0
Delaware	72.0	76.8	Ohio	71.3	71.4
Florida	68.4	71.8	Oklahoma	72.7	70.3
Georgia	69.8	67.5	Oregon	65.3	65.7
Hawaii	55.2	60.1	Pennsylvania	74.7	72.9
Idaho	70.5	74.5	Rhode Island	61.5	64.9
Illinois	67.9	69.4	South Carolina	76.5	74.1
Indiana	74.9	73.8	South Dakota	71.2	70.4
Iowa	75.2	73.7	Tennessee	70.9	70.2
Kansas	69.3	69.4	Texas	63.8	66.0
Kentucky	73.4	72.9	Utah	72.7	74.9
Louisiana	68.1	71.5	Vermont	68.7	73.7
Maine	76.5	74.3	Virginia	73.9	71.5
Maryland	69.9	71.7	Washington	63.6	66.8
Massachusetts	59.9	64.3	West Virginia	75.9	77.6
Michigan	77.2	76.4	Wisconsin	71.8	70.5
Minnesota	76.1	73.5	Wyoming	71.0	73.2
Mississippi	75.2	74.0	District		
Missouri	74.2	70.4	District of Columbia	41.9	47.2
Montana	70.2	67.3	U.S. RATE	67.4	68.1
Nebraska	70.2	68.2			

Selected household characteristics (2007). Total number of households 116,783,000, of which (family households by race) white including Hispanic 82.5%, black including Hispanic 12.8%, other 4.7%—Hispanic of any race 11.4%; (by tenure) owned 79,330,000 (67.9%), rented 35,845,000 (30.7%), other 1,608,000 (1.4%); family households 77,873,000, of which married couple 75.0%, female householder 18.5%, male householder 6.5%; nonfamily households 38,910,000, of which female living alone 47.0%, male living alone 35.6%, other 17.4%.

Population economically active (December 2009): total 153,059,000 (civilian population only); activity rate of total population 49.6% (participation rates: age 16–64, 64.6%; female [2007] 46.5%; unemployed 10.0%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	92.1	94.2	96.7	100.0	103.2	106.2	110.2
Hourly earnings index ²⁶	92.4	95.1	97.5	100.0	101.5	104.3	107.2

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 119,223; remittances (2008) 3,049; foreign direct investment (FDI; 2005–07 avg.) 191,438. Disbursements for (U.S.\$'000,000): tourism (2007) 81,092; remittances (2008) 47,182; FDI (2005–07 avg.) 183,606. Number of foreign visitors (2007) 56,716,277 (17,735,000 from Canada, 15,089,000 from Mexico, 11,406,000 from Europe); number of nationals traveling abroad (2007) 64,052,000 (19,453,000 to Mexico, 13,371,000 to Canada, 12,304,000 to Europe).

Land use as % of total land area (2007): in temporary crops 18.6%, in permanent crops 0.3%, in pasture 26.0%, forest area 33.1%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000,000	-532.4	-650.9	-766.4	-818.1	-791.0	-800.0
% of total	26.9%	28.4%	29.8%	28.3%	25.4%	23.5%

Imports (2008): U.S.\$2,100,141,200,000 (crude and refined petroleum 21.1%; motor vehicles 9.1%; chemicals and chemical products 8.4%; telecommunications equipment 6.3%; electrical machinery 5.4%; computers and office equipment 4.6%; wearing apparel 3.8%; industrial machinery 3.2%; food and beverages 3.2%). **Major import sources:** China 16.1%; Canada 16.0%; Mexico 10.3%; Japan 6.6%; Germany 4.6%; United Kingdom 2.8%; Saudi Arabia 2.6%; Venezuela 2.4%; South Korea 2.3%; France 2.1%; Nigeria 1.8%; Taiwan 1.7%; Italy 1.7%; Ireland 1.5%; Malaysia 1.5%.

Exports (2008): U.S.\$1,300,135,700,000 (chemicals and chemical products 13.8%; motor vehicles and parts 8.2%; electrical machinery 8.1%; agricultural commodities 6.6%; other transportation equipment 6.0%; mineral fuels 5.9%; crude materials [inedible] 5.9%; power-generating machinery 4.5%; general industrial machinery 4.5%; specialized industrial machinery 4.3%; scientific and precision equipment 3.9%; computers and office equipment 3.5%; telecommunications equipment 3.2%). **Major export destinations:** Canada 20.1%; Mexico 11.7%; China 5.5%; Japan 5.1%; Germany 4.2%; United Kingdom 4.1%; Netherlands 3.1%; South Korea 2.7%; Brazil 2.5%; France 2.2%; Singapore 2.2%; Taiwan 1.9%; Australia 1.7%; Hong Kong 1.7%; Switzerland 1.7%; Belgium 1.5%.

Direction of trade (2007)

	imports		exports	
	U.S.\$'000,000	%	U.S.\$'000,000	%
Africa	89,141	4.4	17,795	1.5
Nigeria	33,741	1.7	2,787	0.2
South Africa	9,291	0.5	5,518	0.4
Americas	672,132	33.3	492,147	42.3
Brazil	27,193	1.3	24,628	2.1
Canada	317,604	15.7	248,437	21.3
Caribbean countries	19,546	1.0	18,392	1.6
Central America	15,864	0.8	20,296	1.8
Mexico	212,889	10.6	136,541	11.7
Venezuela	41,011	2.0	10,200	0.9
Asia	824,250	40.9	342,978	29.5
China	340,118	16.9	65,238	5.6
Taiwan	39,853	2.0	26,359	2.3
Japan	149,423	7.4	62,665	5.4
Saudi Arabia	37,165	1.8	10,399	0.9
Singapore	18,692	0.9	26,285	2.3
South Korea	49,319	2.4	34,703	3.0
Europe	419,147	20.8	286,860	24.7
France	42,498	2.1	27,820	2.4
Germany	96,640	4.8	49,652	4.3
Italy	36,471	1.8	14,174	1.2
Netherlands	19,140	0.9	32,986	2.8
United Kingdom	58,096	2.9	50,296	4.3
Oceania	12,678	0.6	22,328	1.9
Australia	8,971	0.4	19,207	1.7
TOTAL	2,017,358 ⁴	100.0	1,162,533 ⁴	100.0 ⁴

Transport and communications

Transport. Railroads (2006): route length 94,942 mi, 151,947 km, of which Amtrak operates 21,708 mi, 34,733 km; (2004) passenger-mi 25,833,000,000, passenger-km 41,574,000,000; short ton-mi cargo 1,772,000,000,000, metric ton-km cargo 2,835,000,000,000. Roads (2008): total length 4,058,347 mi, 6,531,276 km (paved 67%). Vehicles (2007): passenger cars 135,933,000; trucks and buses 111,331,000. Merchant marine (2006)²⁷: vessels (1,000 gross tons and over) 625; total deadweight tonnage 10,172,000. Navigable channels (2004) 26,000 mi, 41,843 km; oil pipeline length (2005) 131,000 mi, 210,824 km; gas pipeline²⁸ (2004) 1,462,300 mi, 2,353,300 km. Air transport (2007): passenger-mi 829,033,000,000, passenger-km 1,334,199,200,000; short ton-mi cargo 29,524,000,000, metric ton-km cargo 43,104,300,000. Certified route

passenger/cargo air carriers (2005) 80; operating revenue (U.S.\$'000,000; 2007) 173,104; operating expenses (U.S.\$'000,000; 2007) 163,894.

Intercity passenger and freight traffic by mode of transportation (2001)

	cargo traffic (¹ 000,000,000 ton-mi)	% of nat'l total	passenger traffic (¹ 000,000,000 passenger-mi)	% of nat'l total
Rail	1,558	41.7	15	0.6
Road	1,051	28.2	1,980	79.2
Inland water	494	13.2	—	—
Air	15	0.4	504	20.2
Petroleum pipeline	616	16.5	—	—
TOTAL	3,734	100.0	2,499	100.0

Communications

Medium	date	units number in '000s	per 1,000 persons	Medium	date	units number in '000s	per 1,000 persons
Televisions	2003	260,000	893	PCs	2005	223,810	755
Telephones				Dailies	2007	53,878 ²⁹	225 ²⁹
Cellular	2008	270,500 ³⁰	868 ³⁰	Internet users	2008	230,630	740
Landline	2008	150,000	481	Broadband	2008	79,014 ³⁰	254 ³⁰

Other communications media (2002)

	titles		titles
Print			
Books (new), of which	120,106	Engineering	265
Agriculture	888	Fine and applied arts	145
Art	4,483	General interest	181
Biography	5,052	History	151
Business	4,571	Home economics	90
Education	3,658	Industrial arts	106
Fiction	15,133	Journalism and commun.	90
General works	1,470	Labour and industrial relations	70
History	6,827	Law	273
Home economics	2,161	Library and information	
Juvenile	9,545	sciences	118
Language	2,420	Literature and language	158
Law	2,206	Mathematics and science	238
Literature	3,946	Medicine	182
Medicine	5,949	Philosophy and religion	130
Music	1,615	Physical education and recreation	151
Philosophy, psychology	6,012	Political science	136
Poetry, drama	2,812	Psychology	138
Religion	6,664	Sociology and anthropology	149
Science	7,043	Zoology	94
Sociology, economics	13,829		
Sports, recreation	3,569	Cinema	
Technology	7,926	Feature films	478
Travel	2,327		
Periodicals, of which	3,731		(pieces of mail)
Agriculture	153		
Business and economics	262	Post¹⁷	
Chemistry and physics	170	Mail	213,138,000,000
Children's periodicals	78	Domestic	212,345,000,000
Education	203	International	793,000,000

Education and health

Literacy (2003): percentage of population age 16 and over: "illiterate" (able to perform no more than the most simple literacy skills—14% of population [or 30,000,000 people]); "basically literate" (able to perform simple and everyday literacy activities—29% of population [or 63,000,000 people]); "intermediately and proficiently literate" (able to perform moderately challenging to complex literacy activities—57% of population [or 123,000,000 people]). An additional 6,500,000 people were not interviewed for this 2003 survey because they did not speak English or had cognitive or mental disabilities.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	1,721,244	24,319,033	14.1	92
Secondary/Voc. (age 12–17)	1,679,570	24,552,317	14.6	88
Tertiary	1,290,426	17,487,475	13.6	82 (age 18–22)

High school and college graduates (2007)

States	Percent age 25 and over	
	high school	college
Alabama	80.4	21.4
Alaska	90.5	26.0
Arizona	83.5	25.3
Arkansas	81.1	19.3
California	80.2	29.5
Colorado	88.9	35.0
Connecticut	88.0	34.7
Delaware	87.4	26.1
Florida	84.9	25.8
Georgia	82.9	27.1
Hawaii	89.4	29.2
Idaho	88.4	24.5
Illinois	85.7	29.5
Indiana	85.8	22.1
Iowa	89.6	24.3
Kansas	89.1	28.8
Kentucky	80.1	20.0
Louisiana	79.9	20.4
Maine	89.4	26.7
Maryland	87.4	35.2
Massachusetts	88.4	37.9
Michigan	87.4	24.7
Minnesota	91.0	31.0
Mississippi	78.5	18.9
Missouri	85.6	24.5

High school and college graduates (2006) (continued)

States	Percent age 25 and over	
	high school	college
Montana	90.0	27.0
Nebraska	89.6	27.5
Nevada	83.7	21.8
New Hampshire	90.5	32.5
New Jersey	87.0	33.9
New Mexico	82.3	24.8
New York	84.1	31.7
North Carolina	83.0	25.6
North Dakota	89.0	25.7
Ohio	87.1	24.1
Oklahoma	84.8	22.8
Oregon	88.0	28.3
Pennsylvania	86.8	25.8
Rhode Island	83.0	29.3
South Carolina	82.1	23.5
South Dakota	88.2	25.0
Tennessee	81.4	21.8
Texas	79.1	25.2
Utah	90.2	28.7
Vermont	90.3	33.6
Virginia	85.9	33.6
Washington	89.3	30.3
West Virginia	81.2	17.3
Wisconsin	89.0	25.4
Wyoming	91.2	23.4
District		
District of Columbia	85.7	47.5
U.S. RATE	84.5	27.5

Food (2005): daily per capita caloric intake 3,754 (vegetable products 72.2%, animal products 27.8%); 143% of FAO recommended minimum requirement. Per capita consumption of major food groups (kilograms annually; 2005): milk 256.4; fresh vegetables 125.5; cereal products 177.2; fresh fruits 122.7; red meat 62.7; potatoes 54.7; poultry products 55.8; fats and oil 31.6; sugar 30.2; fish and shellfish 23.4; undernourished population (2002–04) less than 2.5% of total population.

Health (2006): doctors of medicine 921,900³¹ (1 per 329 persons), of which office-based practice 560,400—male 72.2%; female 27.8% (including specialties in internal medicine 16.9%, general and family practice 10.1%, pediatrics 8.1%, obstetrics and gynecology 4.6%, psychiatry 4.5%, anesthesiology 4.5%, general surgery 4.1%, emergency medicine 3.3%, diagnostic radiology 2.7%, orthopedic surgery 2.6%, cardiovascular diseases 2.4%, pathology 2.1%, ophthalmology 2.0%); doctors of osteopathy (2008) 64,000; nurses (2006) 2,417,150 (1 per 123 persons); dentists (2007) 184,000 (1 per 1,639 persons); hospital beds (2006) 947,000 (1 per 315 persons), of which nonfederal 95.3% (community hospitals 84.7%, psychiatric 8.9%, long-term general and special 1.7%), federal 4.9%; infant mortality rate per 1,000 live births (2008) 6.5.

Active physicians and nurses (2006)

States	physicians		nurses	
	number	per 100,000 population	number	per 100,000 population
Alabama	9,893	215	40,010	870
Alaska	1,547	231	5,260	785
Arizona	12,797	208	31,890	517
Arkansas	5,703	203	21,020	748
California	95,676	262	234,260	643
Colorado	12,296	259	34,520	726
Connecticut	12,901	368	34,710	990
Delaware	2,133	250	7,830	917
Florida	43,884	243	146,200	809
Georgia	20,350	217	60,850	650
Hawaii	3,996	311	9,610	748
Idaho	2,479	169	9,100	621
Illinois	35,311	275	103,100	803
Indiana	13,567	215	52,910	838
Iowa	5,567	187	31,040	1,041
Kansas	6,104	221	23,590	853
Kentucky	9,671	230	38,120	906
Louisiana	11,429	267	37,940	885
Maine	3,569	270	13,690	1,036
Maryland	23,331	415	47,560	847
Massachusetts	29,756	462	76,350	1,186
Michigan	24,742	245	84,880	841
Minnesota	14,813	287	49,580	960
Mississippi	5,149	177	25,100	862
Missouri	14,118	242	55,470	949
Montana	2,086	221	7,290	772
Nebraska	4,273	242	16,840	952
Nevada	4,611	185	14,050	563
New Hampshire	3,463	263	12,440	946
New Jersey	27,091	311	80,330	921
New Mexico	4,681	239	11,680	598
New York	75,743	392	164,970	854
North Carolina	22,406	253	74,400	840
North Dakota	1,544	243	6,900	1,085
Ohio	30,321	264	111,840	975
Oklahoma	6,164	172	24,720	691
Oregon	10,004	270	28,090	759
Pennsylvania	36,956	297	126,120	1,014
Rhode Island	3,911	366	10,550	988
South Carolina	9,887	229	31,810	736
South Dakota	1,719	220	9,420	1,205
Tennessee	15,925	264	52,780	874
Texas	49,740	212	156,590	666
Utah	5,401	212	16,510	647
Vermont	2,263	363	5,870	941
Virginia	20,631	270	55,300	724
Washington	16,965	265	48,190	753
West Virginia	4,166	229	15,380	846
Wisconsin	14,257	257	48,460	872
Wyoming	950	184	4,010	779
District				
District of Columbia	4,646	799	7,930	1,364
U.S. TOTAL	800,586 ³²	267	2,417,150 ⁴	807

Infant mortality rates by race (2005)

States	all races	white	black
Alabama	9.4	7.2	14.7
Alaska	5.9	4.7	...
Arizona	6.9	6.6	12.6
Arkansas	7.9	6.4	14.9
California	5.3	5.0	13.6
Colorado	6.4	6.0	16.3
Connecticut	5.8	4.9	13.5
Delaware	9.0	6.0	18.9
Florida	7.2	5.7	12.0
Georgia	8.2	5.9	12.6
Hawaii	6.5	6.3	...
Idaho	6.1	6.1	...
Illinois	7.4	5.7	16.4
Indiana	8.0	7.0	17.0
Iowa	5.3	5.1	13.9
Kansas	7.4	6.6	17.6
Kentucky	6.6	6.0	13.2
Louisiana	10.1	7.0	14.9
Maine	6.9	6.9	...
Maryland	7.3	5.1	11.6
Massachusetts	5.2	4.8	8.2
Michigan	7.9	5.8	18.3
Minnesota	5.1	4.5	10.6
Mississippi	11.4	6.6	17.2
Missouri	7.5	6.4	14.6
Montana	7.0	6.7	...
Nebraska	5.6	5.2	...
Nevada	5.8	5.2	13.7
New Hampshire	5.3	5.0	...
New Jersey	5.2	4.0	11.0
New Mexico	6.1	5.6	...
New York	5.8	5.0	9.3
North Carolina	8.8	6.5	16.4
North Dakota	6.0	5.8	...
Ohio	8.3	6.7	16.9
Oklahoma	8.1	7.3	15.4
Oregon	5.9	5.9	...
Pennsylvania	7.3	6.2	14.1
Rhode Island	6.5	5.8	...
South Carolina	9.4	7.1	13.8
South Dakota	7.2	6.0	...
Tennessee	8.9	7.4	14.0
Texas	6.6	5.7	14.1
Utah	4.5	4.4	...
Vermont	6.5	6.2	...
Virginia	7.5	5.8	14.1
Washington	5.1	4.8	10.9
West Virginia	8.1	7.9	...
Wisconsin	6.6	5.4	17.7
Wyoming	6.8	6.9	...
District			
District of Columbia	14.1	8.8	17.0
U.S. RATE	6.9	5.7	13.7

Military

Total active duty personnel (November 2009): 1,417,747 (army 38.7%, navy 23.4%, air force 23.5%, marines 14.4%, coast guard [November 2008] 2.6%). **Total reserve duty personnel**¹³³ (November 2008): 979,378 (army 55.9%, navy 12.9%, air force 19.5%, marines 10.6%, coast guard 1.1%). **Military expenditure as percentage of GDP** (2008): 4.2%; per capita expenditure U.S.\$1,994. **Major overseas deployment** (December 2008): 283,589, of which in support of Operation Iraqi Freedom c. 63%, in support of Operation Enduring Freedom (in Afghanistan) c. 11%, remainder c. 26%. **Foreign military sales deliveries** (September 2004–September 2007): U.S.\$35,611,000,000, of which to Israel 11.5%, to Egypt 11.1%, to Taiwan 9.2%, to Saudi Arabia 8.6%, to Poland 5.6%, to Japan 5.2%, to South Korea 5.1%, to Australia 4.2%.

¹Excludes 5 nonvoting delegates from the District of Columbia, the U.S. Virgin Islands, American Samoa, the Northern Mariana Islands, and Guam and a nonvoting resident commissioner from Puerto Rico. ²Excluding military abroad. ³Total area (excluding 42,225 sq mi [109,362 sq km] of coastal water and 75,372 sq mi [195,213 sq km] of territorial water) equals 3,676,486 sq mi (9,522,055 sq km), of which land area equals 3,537,438 sq mi (9,161,923 sq km), inland water area equals 78,797 sq mi (204,083 sq km), and Great Lakes water area equals 60,251 sq mi (156,049 sq km). ⁴Detail does not add to total given because of rounding. ⁵Includes 423,000 military personnel and families living abroad. ⁶Based on land area only. ⁷Persons of Hispanic origin may be of any race. ⁸Net change in population does not include a usual small residual population that is not accounted for under births less deaths in conjunction with net domestic/international migration. ⁹2005. ¹⁰2002. ¹¹2000. ¹²Includes deaths with age not known. ¹³Drinking 5 or more drinks on the same occasion on at least one day in the past 30 days per survey. ¹⁴2003. ¹⁵Excludes military personnel overseas. ¹⁶Unemployed. ¹⁷2006. ¹⁸Includes supplemental gaseous fuels. ¹⁹Less than 0.7 trillion Btu. ²⁰Gross income from all sources, including transfer payments to individuals. Detail may not add to total given because of incomplete survey results. ²¹Householder 25 years old or older. ²²July 1. ²³Period average. ²⁴End of year, except 2009. ²⁵In 2007 current dollars in conjunction with annually revised U.S. Bureau of Labor Statistics experimental Consumer Price Index (or CPI-U-RS deflator). ²⁶Manufacturing only. ²⁷Excluding foreign-flagged U.S.-domiciled vessels. ²⁸Excludes service pipelines. ²⁹Circulation of daily newspapers. ³⁰Subscribers. ³¹Includes Puerto Rico and other U.S. dependencies. ³²Excludes doctors of osteopathy, physicians with unknown addresses, and inactive physicians. ³³Includes national guard.

Internet resources for further information:

- U.S. Census Bureau
<http://www.census.gov>
- Statistical Abstract of the United States
<http://www.census.gov/compendia/statab/2009edition.html>

Uruguay

Official name: República Oriental del Uruguay (Oriental Republic of Uruguay).

Form of government: republic with two legislative houses (Senate [31¹]; Chamber of Representatives [99]).

Head of state and government: President.

Capital: Montevideo.

Official language: Spanish.

Official religion: none.

Monetary unit: peso uruguayo (UYU); valuation (Sept. 1, 2009) 1 U.S.\$ = UYU 22.55; 1 £ = UYU 36.59.



Area and population

area		population		area		population	
Departments	sq km	2009 estimate	Departments	sq km	2009 estimate		
Artigas	11,928	79,280	Río Negro	9,282	56,220		
Canelones	4,536	520,240	Rivera	9,370	111,120		
Cerro Largo	13,648	90,370	Rocha	10,551	70,430		
Colonia	6,106	120,850	Salto	14,163	127,990		
Durazno	11,643	61,730	San José	4,992	109,670		
Flores	5,144	25,690	Soriano	9,008	87,970		
Florida	10,417	70,520	Tacuarembó	15,438	96,040		
Lavalleja	10,016	61,950	Treinta y Tres	9,529	49,580		
Maldonado	4,793	150,780	TOTAL LAND AREA	175,016			
Montevideo	530	1,338,410	OTHER AREAS ²	2,863			
Paysandú	13,922	116,110	TOTAL	177,879	3,344,940 ³		

Demography

Population (2009): 3,361,000⁴.

Density (2009): persons per sq mi 48.9, persons per sq km 18.9.

Urban-rural (2007): urban 93.7%; rural 6.3%.

Sex distribution (2007): male 48.30%; female 51.70%.

Age breakdown (2007): under 15, 23.4%; 15–29, 22.8%; 30–44, 19.6%; 45–59, 16.5%; 60–74, 11.5%; 75–84, 4.7%; 85 and over, 1.5%.

Population projection: (2020) 3,493,000; (2030) 3,588,000.

Ethnic composition (2006): white (mostly Spanish, Italian, or mixed Spanish-Italian) 87.4%; black/part-black 8.4%; Amerindian/part-Amerindian 3.0%; other/unknown 1.2%.

Religious affiliation (2004): Roman Catholic c. 54%; Protestant c. 11%; Mormon c. 3%; Jewish 0.8%; nonreligious/atheist c. 26%; other 5.2%.

Major cities (2004): Montevideo 1,269,552; Salto 99,072; Paysandú 73,272; Las Piedras 69,222; Rivera 64,426.

Vital statistics

Birth rate per 1,000 population (2008): 14.6 (world avg. 20.3); (2002) within marriage 42.9%, outside of marriage 57.1%.

Death rate per 1,000 population (2008): 9.4 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 2.02.

Marriage/divorce rates per 1,000 population: (2007) 3.8/(2004) 4.3.

Life expectancy at birth (2008): male 72.4 years; female 79.7 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 327.1, of which ischemic heart disease 117.4, cerebrovascular disease 111.3; malignant neoplasms (cancers) 236.3; respiratory diseases 50.6.

National economy

Budget (2006). Revenue: UYU 111,321,000,000 (taxes on goods and services 59.1%; corporate taxes 12.3%; property taxes 7.1%; nontax revenue 6.7%; individual income taxes 5.6%). Expenditures: UYU 117,225,000,000 (social security and welfare 27.6%; government transfers including debt servicing 20.7%; public administration 13.9%; education 12.3%; health 7.4%; defense 4.4%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): cow's milk 1,650,000, rice 1,200,000, soybeans 800,000, wheat 620,000, beef 570,000, barley 435,000, citrus fruits 281,500, grapes 130,000, sunflower seeds 60,000, wool 50,000, sheep meat 32,000, honey 13,200; livestock (number of live animals) 12,000,000 cattle, 11,000,000 sheep; roundwood 7,173,000 cu m, of which fuelwood 29%; fisheries production 108,750 (from aquaculture, negligible). Mining and quarrying (2007): limestone 1,200,000; clays 82,200; gold 2,820 kg. Manufacturing (value added in UYU '000,000; 2005): food and beverages 17,390; refined petroleum 5,945; textiles/hides/leather goods 4,633; chemicals and chemical products 4,458; printing and publishing 1,918; rubber and plastic products 1,647. Energy production (consumption): electricity (kW-hr; 2006) 5,618,000,000 (8,437,000,000); coal (metric tons; 2006) none (2,000); crude petroleum (barrels; 2006) none (13,900,000); petroleum products (metric tons; 2006) 1,758,000 (1,889,000); natural gas (cu m; 2006) none (110,000,000).

Household income and expenditure. Avg. household size (2007) 2.9; avg. annual income per household (2007) UYU 235,746 (U.S.\$10,044); expenditure (2005–06)⁵: housing 26.0%, food and nonalcoholic beverages 19.5%, health 12.1%, transportation 10.9%, recreation and culture 6.5%.

Population economically active (2006): total 1,580,400; activity rate 47.7% (participation rates: ages 14–64, 72.7%; female 43.5%; unemployed [2007] 9.2%).

Price and earnings indexes (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	73.3	87.5	95.5	100.0	106.4	115.0	124.1
Annual earnings index	77.3	82.3	91.2	100.0	111.0	125.8	...

Gross national income (GNI; 2008): U.S.\$27,536,000,000 (U.S.\$8,260 per capita); purchasing power parity GNI (U.S.\$12,540 per capita).

Structure of gross domestic product and labour force

	2007		2006	
	in value UYU '000,000	% of total value	labour force ⁶	% of labour force ⁶
Agriculture	54,947	10.1	157,200	10.0
Mining	1,491	0.3		
Manufacturing	123,411	22.8		
Public utilities	26,084	4.8	209,600	13.3
Construction	22,362	4.1		
Transp. and commun.	49,616	9.2	75,800	4.8
Trade, hotels	73,094	13.5	308,200	19.5
Finance, real estate	101,051	18.7	101,700	6.4
Pub. admin., defense	45,579	8.4	104,500	6.6
Services	47,815	8.8	364,100	23.0
Other	-3,582 ⁷	-0.77	168,700 ⁸	10.7 ⁸
TOTAL	541,868	100.0	1,580,400	100.0

Public debt (external, outstanding; 2007): U.S.\$9,616,000,000.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 809; remittances (2008) 104; foreign direct investment (FDI; 2005–07 avg.) 1,042; official development assistance (2007) 34. Disbursements for (U.S.\$'000,000): tourism (2007) 239; remittances (2008) 5; FDI (2005–07 avg.) 13.

Land use as % of total land area (2007): in temporary crops 7.7%, in permanent crops 0.2%, in pasture 76.0%, forest area 8.8%.

Foreign trade⁹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+16	-183	-474	-823	-1,241	-2,523
% of total	0.4%	3.0%	6.5%	9.4%	12.2%	16.4%

Imports (2006): U.S.\$4,775,000,000 (crude and refined petroleum 27.5%; machinery and appliances 16.0%; chemicals and chemical products 12.7%; food, beverages, and tobacco products 8.7%; transport equipment 7.4%). **Major import sources:** Argentina 22.6%; Brazil 22.6%; Venezuela 12.6%; China 7.3%; United States 6.8%.

Exports (2006): U.S.\$3,952,000,000 (beef 23.7%; hides and leather goods 8.6%; dairy products, eggs, and honey 6.9%; textiles and wearing apparel 6.8%; rice 5.5%; plastics and rubber products 5.1%). **Major export destinations:** Brazil 14.7%; United States 13.2%; Argentina 7.6%; Russia 5.7%; Germany 4.2%; Chile 4.2%.

Transport and communications

Transport. Railroads (2006): route length 2,073 km¹⁰; passenger-km (2004) 11,000,000; metric ton-km cargo (2005) 331,000,000. Roads (2007): length 16,398 km (paved 22%). Vehicles (2006): passenger cars 553,204; trucks and buses 91,007. Air transport (2008)¹¹: passenger-km 809,094,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	838	252	PCs	2005	450	135
Telephones				Dailies	2007	135 ¹²	51 ¹²
Cellular	2008	3,308 ¹³	1,047 ¹³	Internet users	2008	1,340	400
Landline	2008	959	286	Broadband	2008	245 ¹³	73 ¹³

Education and health

Educational attainment (2006). Percentage of population age 25 and over having: no formal schooling 1.9%; incomplete primary education 15.1%; complete primary 25.8%; incomplete secondary 20.8%; complete secondary 17.6%; incomplete higher 7.2%; complete higher 11.6%. **Literacy** (2003): population age 15 and over literate 98.0%; males 97.6%; females 98.4%.

Education (2005–06)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	18,600	365,388	19.6	100
Secondary/Voc. (age 12–17)	20,964	323,027	15.4	...
Tertiary	14,375	113,368	7.9	46 (age 18–22)

Health: physicians (2006) 13,603 (1 per 245 persons); hospital beds (2003) 6,661 (1 per 499 persons); infant mortality rate per 1,000 live births (2007) 12.0; undernourished population (2002–04) less than 2.5% of total population.

Military

Total active duty personnel (November 2008): 25,382 (army 66.6%, navy/coast guard 21.6%, air force 11.8%). **Military expenditure as percentage of GDP** (2007): 1.3%; per capita expenditure U.S.\$91.

¹Includes the vice president, who serves as ex officio presiding officer. ²Includes the Uruguayan part of the Uruguay River, with islands (633 sq km), Río Negro reservoirs (1,199 sq km), and the Uruguayan part of Laguna Merín (1,031 sq km); excludes the Uruguayan part of the Río de la Plata (15,240 sq km) and a contested area with Brazil (237 sq km). ³Official estimate. ⁴Estimate of United Nations *World Population Prospects: The 2008 Revision*. ⁵Average for 3-member households only. ⁶Excludes military conscripts. ⁷Import revenue less imputed bank service charges. ⁸Includes 167,000 unemployed. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Of which 1,641 km were operational in 2006. ¹¹PLUNA only. ¹²Circulation of daily newspapers. ¹³Subscribers.

Internet resources for further information:

- Instituto Nacional de Estadística—Uruguay <http://www.ine.gub.uy>
- Banco Central del Uruguay <http://www.bcu.gub.uy>

Vanuatu

Official name: Ripablik blong Vanuatu (Bislama); République de Vanuatu (French); Republic of Vanuatu (English).

Form of government: republic with a single legislative house (Parliament [52]).

Chief of state: President.

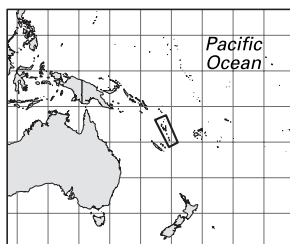
Head of government: Prime Minister.

Capital: Port-Vila.

Official languages: Bislama; French; English.

Official religion: none.

Monetary unit: vatu (Vt); valuation (Sept. 1, 2009) 1 U.S.\$ = Vt 101.16; 1 £ = Vt 164.14.



Area and population

Provinces	Capitals	area		population
		sq mi	sq km	2009 estimate ¹
Malampa	Lakatoro	1,073	2,779	38,161
Penama	Longana	463	1,198	31,852
Sanma	Luganville	1,640	4,248	47,872
Shefa	Port-Vila	562	1,455	83,663
Tafea	Isangel	628	1,627	33,301
Torba	Sola	341	882	8,455
TOTAL		4,707	12,190²	243,304

Demography

Population (2009): 240,000.

Density (2009): persons per sq mi 51.0, persons per sq km 19.7.

Urban-rural (2009): urban 24.3%; rural 75.7%.

Sex distribution (2009): male 51.27%; female 48.73%.

Age breakdown (2005): under 15, 40.1%; 15–29, 27.7%; 30–44, 17.5%; 45–59, 9.7%; 60–74, 4.1%; 75 and over, 0.9%.

Population projection (2020) 307,000; (2030) 369,000.

Doubling time: 27 years.

Ethnic composition (1999): Ni-Vanuatu (Melanesian) 98.7%; European and other Pacific Islanders 1.3%.

Religious affiliation (2005): Protestant c. 70%, of which Presbyterian c. 32%, Anglican c. 13%, Adventist c. 11%; Roman Catholic c. 13%; traditional beliefs (John Frum cargo cult) c. 5%; other c. 12%.

Major towns (2009): Port-Vila (on Efate) 45,694¹; Luganville (on Espiritu Santo) 13,484¹; Norsup (on Malakula; 2006) 3,000; Isangel (on Tanna; 2006) 1,500.

Vital statistics

Birth rate per 1,000 population (2008): 31.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 5.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 25.6 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2008): 4.40.

Marriage/divorce rates per 1,000 population: n.a./n.a.

Life expectancy at birth (2008): male 65.6 years; female 69.0 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 194.5; infectious and parasitic diseases 112.6; diseases of the respiratory system 65.3; malignant neoplasms (cancers) 50.3; diseases of the digestive system 26.1.

National economy

Budget (2008). Revenue: Vt 16,997,000,000 (tax revenue 69.5%, of which VAT 26.9%, import duties 22.5%; grants 23.4%; nontax revenue 7.1%). Expenditures: Vt 15,121,000,000 (current expenditure 77.6%; development expenditure 22.4%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): coconuts 322,000, roots and tubers 43,000, copra 21,644, bananas 14,500, peanuts (groundnuts) 2,550, cacao beans 1,400, kava (2004) 825; livestock (number of live animals) 174,137 cattle, 88,694 pigs, 8,792 goats, 368,251 chickens; roundwood 119,000 cu m, of which fuelwood 76%; fisheries production 85,387 (from aquaculture, negligible). Mining and quarrying: small quantities of coral-reef limestone, crushed stone, sand, and gravel. Manufacturing (value added in Vt '000,000; 1995): food, beverages, and tobacco 645; wood products 423; fabricated metal products 377; paper products 125; chemical, rubber, plastic, and nonmetallic products 84; textiles, clothing, and leather 54. Energy production (consumption): electricity (kW-hr; 2008) 55,000,000 (55,000,000); coal, none (none); crude petroleum, none (none); petroleum products (metric tons; 2006) none (30,000); natural gas, none (none).

Land use as % of total land area (2007): in temporary crops 1.6%, in permanent crops 7.0%, in pasture 3.4%, forest area 36.1%.

Population economically active (2006): total 112,000³; activity rate of total population 50.7%³ (participation rates: ages 15–64, 84.3%³; female 46.4%³; unemployed, n.a.).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	94.6	97.4	98.8	100.0	102.0	106.1	111.2

Gross national income (GNI; 2008): U.S.\$539,000,000 (U.S.\$2,330 per capita); purchasing power parity GNI (U.S.\$3,940 per capita).

Structure of gross domestic product and labour force

	2007		1999	
	in value Vt '000,000	% of total value	labour force	% of labour force
Agriculture	7,480	14.4	58,690 ⁴	76.8 ⁴
Mining	...	...	3	—
Manufacturing	1,605	3.1	810	1.1
Construction	1,941	3.7	1,494	2.0
Public utilities	1,037	2.0	107	0.1
Transportation and communications	6,677	12.8	1,570	2.1
Trade, restaurants	19,538	37.6	4,070	5.3
Finance, real estate	7,984	15.4	738	1.0
Pub. admin., defense	7,601	14.6	2,513	3.3
Services	1,087	2.1	5,117	6.7
Other	-2,970 ⁵	-5.7 ⁵	1,258 ⁶	1.6 ⁶
TOTAL	51,980	100.0	76,370	100.0

Public debt (external, outstanding; 2007): U.S.\$71,600,000.

Household income and expenditure (2006). Average household size (2009) 5.3; income per household Vt 728,532 (U.S.\$6,585); sources of income: wages and salaries 35.1%, own-account production⁷ 27.7%, agriculture, fishing, and handicrafts 26.2%; expenditure: own-account production⁷ 31.3%, food 22.8%, tobacco and alcohol 10.4%, housing and energy 8.6%, household furnishings 6.1%, transportation 5.5%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 119; remittances (2008) 7; foreign direct investment (FDI; 2005–07 avg.) 30; official development assistance (2007) 57. Disbursements for (U.S.\$'000,000): tourism (2007) 11; remittances (2008) 3; FDI (2005–07 avg.) 1.

Foreign trade⁸

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
Vt '000,000	-9,451	-10,131	-12,190	-15,590	-17,550	-24,774
% of total	59.2%	54.8%	59.6%	78.3%	74.3%	74.5%

Imports (2008): Vt 29,023,000,000 (machinery and transport equipment 30.7%, mineral fuels 16.6%, food and live animals 15.3%, chemicals and chemical products 7.0%). **Major import sources** (2007): Australia 31.1%; New Zealand 16.8%; Singapore 12.4%; Fiji 9.1%; China 6.6%.

Exports (2008): Vt 4,249,000,000 (domestic exports 84.4%, of which copra 25.3%, coconut oil 17.1%, kava 11.5%, beef 9.1%, cocoa 5.6%; reexports 15.6%). **Major export destinations** (2007): Philippines 14.0%; New Caledonia 9.7%; Fiji 6.7%; Japan 5.4%; Singapore 5.4%; unspecified 26.8%.

Transport and communications

Transport. Railroads: none. Roads (2000): total length 665 mi, 1,070 km (paved 24%). Vehicles (2001): passenger cars 2,600; trucks and buses 4,400. Air transport (2008)⁹: passenger-km 457,518,000; metric ton-km cargo 1,714,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	2.7	13	PCs	2005	3.0	14
Telephones				Dailies	2007	3.0 ¹⁰	13 ¹⁰
Cellular	2008	36 ¹¹	154 ¹¹	Internet users	2008	17	73
Landline	2008	10	44	Broadband	2007	0.1 ¹¹	0.4 ¹¹

Education and health

Educational attainment (1999). Percentage of population age 15 and over having: no formal schooling 18.0%; incomplete primary education 20.6%; completed primary 35.5%; some secondary 12.2%; completed secondary 8.5%; higher 5.2%, of which university 1.3%. **Literacy** (2007): total population age 15 and over literate 74%.

Education (2003–04)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	1,947	37,060 ¹²	20.0	88 ¹²
Secondary/Voc. (age 12–18)	883 ¹³	13,837	13.9 ¹³	38
Tertiary	36 ¹³	955	24.9 ¹³	5 (age 19–23)

Health: physicians (2008) 26 (1 per 9,000 persons); hospital beds (2005) 885 (1 per 244 persons); infant mortality rate per 1,000 live births (2005) 55.2; undernourished population (2002–04) 20,000 (11% of total population based on the consumption of a minimum daily requirement of 1,790 calories).

Military

Total active duty personnel (2008): none; Australia and New Zealand assist paramilitary forces through defense assistance programs.

¹Tabulation of May to August 2009 pre-census exercise. November 2009 census results were not available at end of year. ²Detail does not add to total given because of rounding. ³ILO estimate. ⁴Mostly not stated, which are significantly subsistence workers. ⁵Less imputed bank service charges. ⁶Unemployed. ⁷Production of goods and services that are retained by their producers for their own final consumption. ⁸Imports c.i.f.; exports f.o.b. ⁹Air Vanuatu only. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2005–06. ¹³2001–02.

Internet resources for further information:

- **Vanuatu National Statistics Office**
<http://www.spc.int/prism/country/vu/stats>
- **Reserve Bank of Vanuatu**
<http://www.rbv.gov.vu>

Venezuela

Official name: República Bolivariana de Venezuela (Bolivarian Republic of Venezuela).

Form of government: federal multiparty republic with a unicameral legislature (National Assembly [1671]).

Head of state and government: President.

Capital: Caracas.

Official language: Spanish².

Official religion: none.

Monetary unit: bolívar³ (plural bolívares; VEF); valuation (Sept. 1, 2009)

1 U.S.\$ = VEF 2.15; 1 £ = VEF 3.504.



Area and population

area			population		
2009			2009		
States	sq km	estimate ⁵	States	sq km	estimate ⁵
Amazonas	180,145	149,800	Nueva Esparta	1,150	450,100
Anzoátegui	43,300	1,526,400	Portuguesa	15,200	907,700
Apure	76,500	497,100	Sucre	11,800	945,600
Aragua	7,014	1,712,600	Táchira	11,100	1,220,500
Barinas	35,200	789,000	Trujillo	7,400	738,400
Bolívar	238,000	1,592,100	Vargas	1,497	337,800
Carabobo	4,650	2,296,900	Yaracuy	7,100	622,000
Cojedes	14,800	312,300	Zulia	63,100	3,754,200
Delta Amacuro	40,200	159,800			
Falcón	24,800	933,800	Other federal entities		
Guárico	64,986	773,900	Dependencias		
Lara	19,800	1,852,900	Federales	120	1,820
Mérida	11,300	876,000	Distrito Capital	433	2,097,400
Miranda	7,950	2,945,500			
Monagas	28,900	890,700	TOTAL	916,445	28,384,100⁶

Demography

Population (2009): 28,583,000.

Density (2009): persons per sq mi 80.8, persons per sq km 31.2.

Urban-rural (2005): urban 93.4%; rural 6.6%.

Sex distribution (2007): male 50.19%; female 49.81%.

Age breakdown (2006): under 15, 32.1%; 15–29, 26.9%; 30–44, 20.5%; 45–59, 13.2%; 60–74, 5.5%; 75–84, 1.5%; 85 and over, 0.3%.

Population projection: (2020) 33,412,000; (2030) 37,145,000.

Ethnic composition (2000): mestizo 63.7%; local white 20.0%; local black 10.0%; other white 3.3%; Amerindian 1.3%; other 1.7%.

Religious affiliation (2005): Roman Catholic 84.5%; Protestant 4.0%; nonreligious/other 11.5%.

Major cities/urban agglomerations (2001/2007): Caracas 1,836,286 (2,985,000); Maracaibo 1,571,885 (2,072,000); Valencia 1,199,510 (1,770,000); Barquisimeto 862,519 (1,116,000); Ciudad Guayana 635,978.

Vital statistics

Birth rate per 1,000 population (2007): 21.5 (world avg. 20.3).

Death rate per 1,000 population (2007): 5.1 (world avg. 8.5).

Total fertility rate (avg. births per childbearing woman; 2007): 2.58.

Marriage/divorce rates per 1,000 population (2007): 3.4/1.1.

Life expectancy at birth (2007): male 70.7 years; female 76.6 years.

Major causes of death per 100,000 population (2002): cardiovascular diseases 137.4, of which ischemic heart disease 71.2; malignant neoplasms (cancers) 67.8; violence/suicide 43.3; accidents 40.6; infectious and parasitic diseases 31.7.

National economy

Budget (2006). Revenue: VEB 117,326,000,000,000 (petroleum income 52.9%, of which royalties 37.5%, taxes 13.0%; nonpetroleum income 47.1%, of which VAT 22.4%). Expenditures: VEB 117,255,000,000,000 (current expenditure 75.0%; development expenditure 22.8%; other 2.2%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 9,300,000, corn (maize) 2,104,000, rice 800,000, bananas 523,000, sorghum 498,000, cassava 490,000, oranges 378,000, pineapples 360,000, coffee 75,000; livestock (number of live animals) 16,700,000 cattle, 120,000,000 chickens; roundwood 6,061,100 cu m, of which fuelwood 65%; fisheries production 477,210 (from aquaculture 5%). Mining and quarrying (2008): iron ore (metal content) 15,200,000; bauxite 5,500,000; phosphate rock (gross weight) 400,000; gold 10,100 kg; gem diamonds 45,000 carats. Manufacturing (value added in VEB '000,000,000; 2004): food products 8,122; iron and steel 3,022; refined petroleum 2,890; soaps, paints, and pharmaceuticals 1,835; base chemicals 1,582; printing and publishing 1,580; fabricated metals 1,465; non-ferrous base metals 1,377. Energy production (consumption): electricity (kW-hr; 2006) 110,357,000,000 (109,815,000,000); coal (metric tons; 2006) 7,338,000 (52,000); crude petroleum (barrels; 2008) 874,000,000 ([2006] 371,000,000); petroleum products (metric tons; 2006) 58,031,000 (26,320,000); natural gas (cu m; 2006) 24,530,000,000 (24,530,000,000).

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 817; remittances (2008) 130; foreign direct investment (FDI; 2005–07 avg.) 882; official development assistance (2007) 71. Disbursements for (U.S.\$'000,000): tourism (2007) 1,394; remittances (2008) 771; FDI (2005–07 avg.) 1,827.

Household income and expenditure. Average household size (2005) 4.5; average annual household income (2006) VEB 13,848,000 (U.S.\$6,450); expenditure (2002): food and nonalcoholic beverages 27.3%, housing and energy 13.5%, transport 10.5%, expenditures in cafés and hotels 9.0%.

Gross national income (GNI; 2008): U.S.\$257,794,000,000 (U.S.\$9,230 per capita); purchasing power parity GNI (U.S.\$12,830 per capita).

Structure of gross domestic product and labour force

	2006			
	in value VEB '000,000,000 ⁸	% of total value ⁹	labour force	% of labour force
Agriculture	...	...	1,016,000	8.2
Petroleum and natural gas	7,408 ⁹	14.4 ⁹		
Mining	329	0.6	77,900	0.6
Manufacturing	8,505 ¹⁰	16.6 ¹⁰	1,350,900	10.9
Construction	3,366	6.6	1,057,600	8.5
Public utilities	1,178	2.3	50,400	0.4
Transp. and commun.	3,757	7.3	913,600	7.4
Trade, hotels	5,295	10.3	2,620,000	21.2
Finance, real estate	7,183	14.0	551,000	4.5
Pub. admin., defense	5,795	11.3		
Services	2,668	5.2	3,452,600	27.9
Other	5,854	11.4	1,289,700 ¹¹	10.4 ¹¹
TOTAL	51,338	100.0	12,379,700	100.0

Public debt (external, outstanding; 2007): U.S.\$27,494,000,000.

Population economically active (2006): total 12,379,700; activity rate 45.9% (participation rates: ages 15–64, 68.7%; female 38.6%; unemployed [July 2006–June 2007] 9.4%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	54.0	70.8	86.2	100.0	113.7	134.9	175.9

Land use as % of total land area (2007): in temporary crops 3.0%, in permanent crops 0.8%, in pasture 20.4%, forest area 53.4%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	+16,617	+24,051	+33,639	+30,826	+23,702	+45,656
% of total	49.9%	45.0%	43.5%	33.5%	20.7%	31.6%

Imports (2006): U.S.\$30,559,000,000 (machinery and apparatus 26.6%, road vehicles 12.1%, chemicals and chemical products 11.0%, food 5.9%, unspecified 20.1%). **Major import sources:** U.S. 30.6%; Colombia 10.2%; Brazil 10.1%; Mexico 5.9%; China 4.9%.

Exports (2006): U.S.\$61,385,000,000 (crude petroleum 91.6%; iron and steel 2.8%; aluminum 1.7%; organic chemicals 0.6%). **Major export destinations:** U.S. 46.2%; Netherlands Antilles 13.5%; China 3.2%.

Transport and communications

Transport. Railroads: route length (2005) 768 km; metric ton-km cargo (2004) 22,000,000. Roads (2004): total length 96,200 km (paved 34%). Vehicles (2007): passenger cars 2,952,129; trucks and buses 1,091,883. Air transport (2005): passenger-km 2,578,700,000; metric ton-km cargo 2,100,000.

Communications

Medium	date	units		Medium	date	units	
		number in '000s	per 1,000 persons			number in '000s	per 1,000 persons
Televisions	2004	5,000	201	PCs	2005	2,475	98
Telephones				Dailies	2007	2,480 ¹²	139 ¹²
Cellular	2008	27,084 ¹³	963 ¹³	Internet users	2008	7,167	255
Landline	2008	6,304	224	Broadband	2008	1,330 ¹³	47 ¹³

Education and health

Educational attainment (2003). Percentage of head-of-household population¹⁴ having: no formal schooling 10.2%; primary education or less 38.5%; some secondary 36.9%; completed secondary/higher 14.4%. **Literacy** (2003): 93.0%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	184,409 ¹⁵	3,521,139	18.7 ¹⁵	92
Secondary/Voc. (age 12–16)	187,737 ¹⁵	2,174,619	10.8 ¹⁵	68
Tertiary ¹⁶	108,594	1,381,126	12.7	52 (age 17–21)

Health (2003): physicians 35,756 (1 per 722 persons); hospital beds 74,866 (1 per 345 persons); infant mortality rate (2006) 23.0; undernourished population (2003–05) 3,200,000 (12% of total population based on the consumption of a minimum daily requirement of 1,830 calories).

Military

Total active duty personnel (November 2008): 115,000 (army 54.8%, navy 15.2%, air force 10.0%, national guard 20.0%). **Military expenditure as percentage of GDP** (2007): 1.2%; per capita expenditure U.S.\$101.

¹Includes 3 seats reserved for indigenous residents. ²Indigenous Indian languages are also official. ³The bolívar was redenominated on Jan. 1, 2008; as of this date 1,000 (old) bolívares (VEB) = 1 (new) bolívar or “bolívar fuerte” (VEF). ⁴The black market rate of the “bolívar fuerte” (VEF) in July 2009 was about 1 U.S.\$ = VEF 6.65. ⁵Official projection based on 2001 census. ⁶Reported total; summed total is 28,384,320. ⁷At official exchange rate; excludes top 2.4% of all households by income. ⁸At prices of 1997. ⁹Includes refined petroleum. ¹⁰Excludes refined petroleum. ¹¹Includes 1,154,900 unemployed. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Data based on survey of 5,528,902 heads of households. ¹⁵2004–05. ¹⁶2005–06.

Internet resources for further information:

- Banco Central de Venezuela <http://www.bcv.org.ve/EnglishVersion>
- Instituto Nacional de Estadística <http://www.ine.gov.ve>

Vietnam

Official name: Cong Hoa Xa Hoi Chu Nghia Viet Nam (Socialist Republic of Vietnam).

Form of government: socialist republic with one legislative house (National Assembly [493]).

Head of state: President.

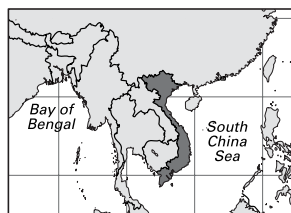
Head of government: Prime Minister.

Capital: Hanoi.

Official language: Vietnamese.

Official religion: none.

Monetary unit: dong (VND); valuation (Sept. 1, 2009) 1 U.S.\$ = VND 17,820; 1 £ = VND 28,915.



Area and population		area		population
Economic regions ¹	Principal cities	sq mi	sq km	2009 census ²
Central Highlands	Buon Ma Thuot	21,104	54,660	5,107,437
Mekong River Delta	Long Xuyen	15,678	40,605	17,178,871
North Central Coast	Hue	19,904	51,552	10,073,336
North East	Thai Nguyen	24,720	64,025	9,480,044
North West	Hoa Binh	14,492	37,534	2,728,786
Red River Delta	Hanoi	5,738	14,862	18,433,563
South Central Coast	Da Nang	12,806	33,166	7,028,570
South East	Ho Chi Minh City	13,440	34,808	15,758,966
TOTAL		127,882	331,212	85,789,573

Demography

Population (2009): 88,577,000³.

Density (2009): persons per sq mi 692.6, persons per sq km 267.4.

Urban-rural (2009): urban 29.6%; rural 70.4%.

Sex distribution (2009): male 49.52%; female 50.48%.

Age breakdown (2008): under 15, 26.6%; 15–29, 29.8%; 30–44, 22.2%; 45–59, 13.8%; 60–74, 5.3%; 75–84, 1.9%; 85 and over, 0.4%.

Population projection: (2020) 98,011,000; (2030) 105,447,000.

Ethnic composition (1999): Vietnamese 86.2%; Tho (Tay) 1.9%; Montagnards 1.7%; Thai 1.7%; Muong 1.5%; Khmer 1.4%; Nung 1.1%; Miao (Hmong) 1.0%; Dao 0.8%; other 2.7%.

Religious affiliation (2005): Buddhist c. 48%; New-Religionist (mostly Cao Dai and Hoa Hao) c. 11%; traditional beliefs c. 10%; Roman Catholic c. 7%; Protestant c. 1%; nonreligious/atheist c. 20%; other c. 3%.

Major cities (2004): Ho Chi Minh City 3,452,100 (5,723,000⁴); Hanoi 1,420,400 (4,723,000⁴); Haiphong 591,100 (2,129,000⁴); Da Nang 459,400.

Vital statistics

Birth rate per 1,000 population (2008): 18.1 (world avg. 20.3).

Death rate per 1,000 population (2008): 6.0 (world avg. 8.5).

Marriage/divorce rates per 1,000 population (2002): 12.1/0.5.

Total fertility rate (avg. births per childbearing woman; 2008): 2.02.

Life expectancy at birth (2008): male 69.0 years; female 74.2 years.

Adult population (ages 15–49) *living with HIV* (2007): 0.5% (world avg. 0.8%).

Major causes of death per 100,000 population (2002): diseases of the circulatory system 200.7; infectious and parasitic diseases 93.6; malignant neoplasms (cancers) 80.4; diseases of the respiratory system 64.3.

National economy

Budget (2008). Revenue: VND 323,000,000,000,000 (tax revenue 89.0%, of which oil related 20.3%, non-oil related 68.7%; nontax revenue 9.9%; grants 1.1%). Expenditures: VND 364,000,000,000,000 (current expenditure 72.6%; capital expenditure 27.4%).

Public debt (external, outstanding; 2007): U.S.\$19,372,000,000.

Gross national income (GNI; 2008): U.S.\$77,031,000,000 (U.S.\$890 per capita); purchasing power parity GNI (U.S.\$2,700 per capita).

Structure of gross domestic product and labour force				
	2007		2008	
	in value VND '000,000,000	% of total value	labour force ⁵	% of labour force ⁵
Agriculture, fishing	232,188	20.3	23,634,700	52.6
Mining	111,665	9.8	431,200	1.0
Public utilities	39,862	3.5	224,600	0.5
Manufacturing	244,537	21.4	6,306,200	14.0
Construction	79,617	7.0	2,394,000	5.3
Transp. and commun.	50,769	4.4	1,221,700	2.7
Trade, restaurants	201,239	17.6	6,202,800	13.8
Finance, real estate	64,261	5.6	471,600	1.1
Pub. admin., defense	31,335	2.7	866,900	1.9
Services, other	88,542	7.7	3,162,100	7.1
TOTAL	1,144,015	100.0	44,915,800	100.0

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): rice 35,566,800, sugarcane 16,000,000, cassava 8,900,000, corn (maize) 4,312,500, sweet potatoes 1,450,000, bananas 1,355,000, coffee 1,060,000, coconuts 962,000, cashews 961,000, oranges 601,000, natural rubber 550,000, groundnuts (peanuts) 490,000, pineapples 470,000, tea 153,000, black pepper 82,000, cinnamon 9,500; livestock (number of live animals) 26,500,000 pigs, 6,840,000 cattle, 2,921,100 buffalo, 62,800,000 ducks; roundwood 34,167,000 cu m, of which fuelwood 88%; fisheries production 4,277,900 (from aquaculture 50%); aquatic plants production 38,000 (from aquaculture 100%). Mining and quarrying (2007): phosphate rock 1,360,000⁶; kaolin 650,000; barite 120,000; tin 3,500⁷. Manufacturing (value of production in VND '000,000–0,000,000; 2004): food and beverages 156.1; cement, bricks, and pottery 46.2;

paints, soaps, and pharmaceuticals 43.9; transport equipment (excluding motor vehicles) 38.6; fabricated metal products 35.0; leather products/footwear 33.5; wearing apparel 32.6. Energy production (consumption): electricity (kW-hr; 2007) 66,900,000,000 ([2006] 56,494,000,000); hard coal (metric tons; 2007) 41,200,000 ([2006] 15,700,000); crude petroleum (barrels; 2008) 100,800,000 ([2006] negligible); petroleum products (metric tons; 2006) 483,000,000 (11,743,000); natural gas (cu m; 2007) 6,834,000,000 ([2006] 5,953,000,000).

Population economically active (2004): total 43,242,000; activity rate of total population 52.9% (participation rates: ages 15–64, 77.7%; female 49.0%; unemployed [2008] 4.7%).

Price index (2005 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	83.0	85.7	92.4	100.0	107.4	116.3	143.2

Household income and expenditure (2004). Average household size 4.4; average annual income per household (1997–98)⁸ VND 15,494,000 (U.S.\$1,165); sources of income: wages and salaries 32.7%, self-employment 27.0%, agriculture 22.6%; expenditure: food, beverages, and tobacco 53.5%, transportation and communications 10.8%, household furnishings 9.1%, health 7.0%, education 6.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2006) 3,200; remittances (2008) 7,200; foreign direct investment (FDI; 2005–07 avg.) 3,707; official development assistance (2007) 2,497. Disbursements for (U.S.\$'000,000): tourism, n.a.; FDI (2005–07 avg.) 100.

Land use as % of total land area (2007): in temporary crops 20.5%, in permanent crops 9.9%, in pasture 2.1%, forest area 43.3%.

Foreign trade⁹

Balance of trade (current prices)						
	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	–5,107	–5,484	–4,536	–5,065	–12,567	–18,355
% of total	11.2%	9.4%	6.5%	6.0%	11.5%	13.1%

Imports (2006): U.S.\$44,891,000,000 (machinery equipment and apparatus 21.3%; chemicals and chemical products 14.0%; refined petroleum 13.9%; textile yarn, fabrics, made-up articles 8.9%; iron and steel 7.7%). **Major import sources:** China 16.5%; Singapore 14.0%; Taiwan 10.7%; Japan 10.5%; South Korea 8.7%; Thailand 6.8%.

Exports (2006): U.S.\$39,826,000,000 (crude petroleum 20.9%; garments/accessories 14.0%; footwear 9.2%; furniture/parts 4.5%; electrical machinery 3.7%; crustaceans 3.3%; rice 3.2%; coffee 3.1%; natural rubber 2.9%). **Major export destinations** (2007): U.S. 20.8%; Japan 12.5%; Australia 7.8%; China 7.5%; Singapore 4.6%.

Transport and communications

Transport. Railroads (2005): route length 2,600 km; (2007) passenger-km 4,659,000,000; (2007) metric ton-km cargo 3,883,000,000. Roads (2007): total length 160,089 km (paved 48%). Vehicles (2007): passenger cars 1,146,312; trucks and buses, n.a. Air transport (2008): passenger-km 15,768,000,000; metric ton-km cargo 295,764,000.

Communications				units			
Medium	date	number in '000s	per 1,000 persons	Medium	date	number in '000s	per 1,000 persons
Televisions	2003	15,938	197	PCs	2007	8,306	96
Telephones				Dailies	2007	2,820 ¹⁰	33 ¹⁰
Cellular	2008	70,000 ¹¹	799 ¹¹	Internet users	2008	20,834	238
Landline	2008	29,591	338	Broadband	2008	2,049 ¹¹	23 ¹¹

Education and health

Educational attainment (1999). Percentage of population age 18 and over having: no formal education 9.0%; primary education 29.2%; lower secondary 32.5%; upper secondary 24.9%; incomplete/complete higher 4.3%; advanced degree 0.1%. **Literacy** (2003): percentage of population age 15 and over literate 94.0%; males 95.8%; females 92.3%.

Education (2005–06)				
	teachers	students	student/teacher ratio	enrollment rate (%)
Primary (age 6–10)	353,608	7,317,813	20.7	93 ¹²
Secondary/Voc. (age 11–17)	438,624	9,975,113	22.7	62 ¹²
Tertiary	47,646 ¹³	1,354,543 ¹³	28.4 ¹³	10 ¹² (age 18–22)

Health (2007): physicians 54,798 (1 per 1,579 persons); hospital beds 210,800 (1 per 410 persons); infant mortality rate (2008) 23.0; undernourished population (2002–04) 13,000,000 (16% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 455,000 (army 90.5%, navy 2.9%, air force 6.6%). **Military expenditure as percentage of GDP** (2007): 5.3%; per capita expenditure U.S.\$43.

¹Eight economic regions are divided into 58 provinces and 5 municipalities. ²Preliminary results. ³Estimate of U.S. Bureau of the Census International Data Base (June 2009 Update). ⁴2007 Urban agglomeration. ⁵Employed only; ages 15 and over. ⁶Gross weight. ⁷Metal content. ⁸Based on a survey of about 6,000 urban and rural households. ⁹Imports c.i.f.; exports f.o.b. ¹⁰Circulation of daily newspapers. ¹¹Subscribers. ¹²2000–01. ¹³2004–05.

Internet resource for further information:

• General Statistics Office of Vietnam <http://www.gso.gov.vn>

Virgin Islands (U.S.)

Official name: United States Virgin Islands.

Political status: organized unincorporated territory of the United States with one legislative house (Senate [15]).
Chief of state: President of the United States.

Head of government: Governor.

Capital: Charlotte Amalie.

Official language: English.

Official religion: none.

Monetary unit: U.S. dollar (U.S.\$); valuation (Sept. 1, 2009)
1 £ = U.S.\$1.62.



Area and population		area		population
Islands ¹	Principal towns	sq mi	sq km	2008 estimate
St. Croix	Christiansted	84	218	56,576
St. John	Cruz Bay ²	20	52	4,461
St. Thomas	Charlotte Amalie	32	83	54,394
TOTAL		136	353	115,431

Demography

Population (2009): 115,000.

Density (2009): persons per sq mi 845.6, persons per sq km 325.8.

Urban-rural (2006): urban 94.4%; rural 5.6%.

Sex distribution (2006): male 47.71%; female 52.29%.

Age breakdown (2006): under 15, 22.4%; 15–29, 18.8%; 30–44, 20.0%; 45–59, 21.3%; 60–74, 13.4%; 75 and over, 4.1%.

Population projection: (2020) 114,000; (2030) 110,000.

Ethnic composition (2006): non-Hispanic black 70.6%; non-Hispanic white 11.3%; Hispanic black 5.6%; Hispanic white 1.7%; other Hispanic 6.6%; Asian 1.1%; other 3.1%.³

Religious affiliation (2000): Christian 96.3%, of which Protestant 51.0% (including Anglican 13.0%), Roman Catholic 27.5%, independent Christian 12.2%; nonreligious 2.2%; other 1.5%.

Major towns (2000): Charlotte Amalie 11,004 (urban agglomeration 18,914); Christiansted 2,637; Frederiksted 732.

Vital statistics

Birth rate per 1,000 population (2007): 12.6 (world avg. 20.3); (1998) within marriage 30.2%⁴, outside of marriage 69.8%.

Death rate per 1,000 population (2007): 6.4 (world avg. 8.5).

Natural increase rate per 1,000 population (2007): 6.2 (world avg. 11.8).

Total fertility rate (avg. births per childbearing woman; 2007): 1.91.

Marriage/divorce rates per 1,000 population: (2004) 35.8⁵/(2003) 3.9.

Life expectancy at birth (2007): male 75.8 years; female 82.0 years.

Major causes of death per 100,000 population (2002): malignant neoplasms (cancers) 114.6; diseases of the heart 110.9; cerebrovascular diseases 46.1; accidents 31.6; communicable diseases 27.5; diabetes mellitus 25.6.

National economy

Budget. Revenue (2008): n.a.; direct federal expenditures U.S.\$682,000,000, rum excise tax returned to U.S.V.I. government U.S.\$91,900,000. Expenditures (proposed; 2009): U.S.\$837,000,000.

Public debt (2005–06): U.S.\$1,150,000,000.

Production. Agriculture, forestry, fishing (value of sales in U.S.\$'000; 2002): ornamental plants and other nursery products 799, livestock and livestock products 775 (notably cattle and calves and hogs and pigs), vegetables 340 (notably tomatoes and cucumbers), fruits and nuts 131 (notably mangoes, bananas, papayas, and avocados); livestock (number of live animals; 2007) 8,100 cattle, 4,100 goats, 3,250 sheep, 2,650 hogs and pigs, 40,000 chickens; roundwood, n.a.; fisheries production (2007) 1,137 metric tons (from aquaculture, 1%). Mining and quarrying: sand and crushed stone for local use. Manufacturing (U.S.\$'000; 2002): beverages and tobacco products 44,766; stone, clay, and glass products 32,939; computer and electronic products 22,875; chemicals and chemical products 16,989. Energy production (consumption): electricity (kW-hr; 2006) 1,065,000,000 ([2008] 756,000,000); coal (metric tons; 2002) none (290,000); crude petroleum (barrels; 2002) none (149,000,000); petroleum products (metric tons; 2002) 18,801,000 (1,588,000); natural gas, none (none).

Household income and expenditure (2004). Average household size 2.5; average annual income per household U.S.\$37,201; sources of income (1999): wages and salaries 73.9%, transfers 10.0%, self-employment 8.8%, interest, dividends, and rents 5.7%; expenditures (2001)⁷: housing 38.8%, food and beverages 12.5%, transportation 11.1%, education and communications 7.1%, health 5.8%.

Population economically active (2004)⁸: total 44,299; activity rate of total population 39.7% (participation rates: over age 15, 53.1%; female 52.7%; unemployed [2008] 5.8%).

Price and earnings indexes (2001 = 100)							
	2002	2003	2004	2005	2006	2007	2008
Consumer price index	102.1	104.4	107.1	109.7	113.0	118.4	126.9
Annual earnings index ⁹	104.4	106.0	109.4	114.3	121.1	125.0	...

Gross domestic product (at current market prices; 2006): U.S.\$4,078,000,000 (U.S.\$35,870 per capita).

Structure of gross domestic product and labour force

	2003		2007	
	in value U.S.\$'000,000	% of total value	labour force	% of labour force
Agriculture, fishing	...	...	...	...
Mining	...	...	10	10
Manufacturing	189	7.5	2,318	4.4
Construction	142	5.6	3,470 ¹⁰	6.6 ¹⁰
Public utilities	...	...	1,625	3.1
Transp. and commun.	...	...
Trade, hotels, restaurants, leisure	648	25.7	14,482	27.5
Services	555	22.0	10,203	19.4
Finance, insurance, real estate	...	...	2,459	4.7
Pub. admin., defense	584	23.2	12,698	24.1
Other	404	16.0	5,415 ¹¹	10.3 ¹¹
TOTAL	2,522 ¹²	100.0 ¹²	52,670	100.0 ¹³

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 1,433; remittances, n.a.; foreign direct investment, n.a. Disbursements for (U.S.\$'000,000): tourism, n.a.; remittances, n.a.

Land use as % of total land area (2007): in temporary crops 2.9%, in permanent crops 2.9%, in pasture 5.7%, forest area 26.0%.

Foreign trade

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
U.S.\$'000,000	−90.6	+359.8	+233.0	+11.8	+710.8	−611.9
% of total	0.8%	2.3%	1.1%	0.5%	2.8%	1.7%

Imports (2008): U.S.\$17,861,300,000 (foreign crude petroleum 67.4%, other [significantly manufactured goods] 32.6%). **Major import sources:** United States 6.8%; other countries (mostly Venezuela) 93.2%.

Exports (2008): U.S.\$17,249,400,000 (refined petroleum to U.S. 78.8%, unspecified [significantly rum and watches] 21.2%). **Major export destinations:** United States 84.0%; other countries 16.0%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 781 mi, 1,257 km (paved 95%). Vehicles (2008): registered vehicles 64,469. Cruise ships (2008): passenger arrivals 1,757,067. Air transport (2008)¹⁴: passenger arrivals 683,295.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2000	65	594	PCs	2006	...	...
Telephones				Dailies	2007	17 ¹⁵	150 ¹⁵
Cellular	2005	80 ¹⁶	713 ¹⁶	Internet users	2008	30	274
Landline	2008	74	677	Broadband	2005	3.0 ¹⁶	27 ¹⁶

Education and health

Educational attainment (2004). Percentage of population age 25 and over having: no formal schooling 0.5%; incomplete primary to incomplete secondary 39.1%; complete secondary 29.8%; some higher 11.9%; undergraduate 13.8%; advanced degree 4.9%. **Literacy:** n.a.

Education (2005)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 5–12) ¹⁷	750 ¹⁸	9,475 ¹⁸	12.6 ¹⁸	...
Secondary (age 12–18) ¹⁷	772 ¹⁸	8,329 ¹⁸	10.8 ¹⁸	...
Tertiary	107	2,392	22.4	... (age 19–23)

Health (2005): physicians 165 (1 per 680 persons); hospital beds 320¹⁹ (1 per 350 persons); infant mortality rate per 1,000 live births (2007) 7.9; undernourished population, n.a.

Military

Total active duty personnel (2008): no domestic military force is maintained; the United States is responsible for defense and external security.

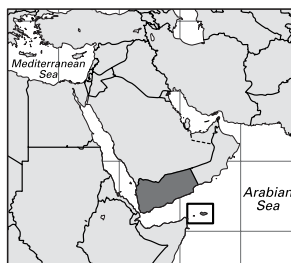
¹May be administered by officials assigned by the governor. ²Census-designated place. ³Birthplace (2004): U.S. Virgin Islands 45.4%; other Caribbean 34.9%, of which St. Kitts and Nevis 6.9%, Dominica 5.9%, Antigua and Barbuda 4.8%; mainland U.S. 11.3%; Puerto Rico 5.4%; other 3.0%. ⁴Percentage of births within marriage may be an underestimation due to the common practice of consensual marriage. ⁵Includes numerous marriages by visitors. ⁶Figures are for value of sales. ⁷Weights of consumer price index components. ⁸Age 16 and over. ⁹Average gross pay. ¹⁰Construction includes Mining. ¹¹Includes 3,123 unemployed. ¹²Tourism in 2003 accounted for more than 60% of gross domestic product. ¹³Detail does not add to total given because of rounding. ¹⁴St. Croix and St. Thomas airports. ¹⁵Circulation of daily newspapers. ¹⁶Subscribers. ¹⁷Public schools only. ¹⁸2002. ¹⁹Main hospitals on St. Thomas and St. Croix only.

Internet resources for further information:

- Pacific Web
<http://www.pacificweb.org>
- Bureau of Economic Research
<http://www.usviber.org>

Yemen

Official name: Al-Jumhūriyah al-Yamaniyah (Republic of Yemen).
Form of government: multiparty republic with two legislative houses (Consultative Council [111¹]; House of Representatives [301]).
Head of state: President.
Head of government: Prime Minister.
Capital: Sanaa.
Official language: Arabic.
Official religion: Islam.
Monetary unit: Yemeni rial (YR); valuation (Sept. 1, 2009) 1 U.S.\$ = YR 204.94; 1 £ = YR 332.53.



Area and population

	area ²	population		area ²	population
Governorates	sq km	2007 estimate	Governorates	sq km	2007 estimate
Abyān	23,897	468,420	Al-Mahrah	93,907	99,724
'Adan (Aden)	6,863	654,099	Al-Mahwit	2,545	539,219
'Amran	9,261	937,791	Ma'rib	15,201	259,356
Al-Bayda'	10,757	623,793	Raymah	2,241	431,448
Al-Dali'	3,448	519,945	Sa'dah	13,343	769,775
Dhamār	8,296	1,455,280	San'a' (Sanaa)	16,394	987,056
Hadramawt	193,582	1,126,355	Shabwah	39,134	509,748
Hajjah	8,882	1,618,858	Ta'izz	12,631	2,589,769
Al-Hudaydah	15,657	2,370,444			
Ibb	6,160	2,306,919	Capital City		
Al-Jawf	28,930	479,964	Sanaa ³	292	2,006,619
Lahij	16,655	784,412	TOTAL	528,076	21,538,995 ⁴

Demography

Population (2009): 22,858,000.
Density (2009): persons per sq mi 112.1, persons per sq km 43.3.
Urban-rural (2008): urban 31.0%; rural 69.0%.
Sex distribution (2008): male 50.81%; female 49.19%.
Age breakdown (2008): under 15, 44.3%; 15–29, 29.9%; 30–44, 14.0%; 45–59, 7.8%; 60–74, 3.1%; 75 and over, 0.9%.
Population projection (2020) 29,727,000; (2030) 35,473,000.
Doubling time: 24 years.
Ethnic composition (2000): Arab 92.8%; Somali 3.7%; black 1.1%; Indo-Pakistani 1.0%; other 1.4%.
Religious affiliation (2005): Muslim nearly 100%, of which Sunni c. 58%, Shi'i c. 42%.
Major cities (2004): Sanaa (2007) 2,006,619; Aden 588,938; Ta'izz 466,968; Al-Hudaydah 409,994; Ibb 212,992.

Vital statistics

Birth rate per 1,000 population (2008): 36.2 (world avg. 20.3).
Death rate per 1,000 population (2008): 7.7 (world avg. 8.5).
Total fertility rate (avg. births per childbearing woman; 2008): 5.20.
Life expectancy at birth (2008): male 60.7 years; female 64.7 years.
Major causes of death per 100,000 population (2002): cardiovascular diseases c. 184, of which ischemic heart disease c. 84; infectious and parasitic diseases c. 171, of which diarrheal diseases c. 99; lower respiratory infections c. 126; perinatal conditions c. 90; accidents c. 77.

National economy

Budget (2007). Revenue: YR 1,406,400,000,000 (oil revenue 69.1%; tax revenue 21.9%; nontax revenue and grants 9.0%). Expenditures: YR 1,748,300,000,000 (transfers and subsidies 29.7%; wages and salaries 27.9%; interest on debt 5.7%).
Public debt (external, outstanding; January 2009): U.S.\$5,977,000,000.
Population economically active (2008): total 5,206,000; activity rate of total population 23.4% (participation rates: ages 15 and older, 42.7%; female 11.8%; unemployed 15.0%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	71.7	79.5	89.4	100.0	110.8	119.6	142.3

Production (metric tons except as noted). Agriculture, forestry, fishing (2008): mangoes 387,906, sorghum 376,728, alfalfa 290,370, potatoes 263,945, tomatoes 239,897, onions 202,761, wheat 170,446, khat (qat) 165,668⁵, oranges 131,241, bananas 128,796, grapes 127,132, dates 55,204, chickpeas (2007) 54,000, sesame 23,895, coffee 18,788; livestock (number of live animals) 8,889,000 sheep, 8,708,000 goats, 1,531,000 cattle, 373,000 camels; roundwood (2007) 394,700 cu m, of which fuelwood 100%; fisheries production 132,062 (from aquaculture, none). Mining and quarrying (2007): salt 100,000; gypsum 44,000. Manufacturing (gross value added in YR '000,000; 2008): food and beverages 112,090; plastic products 60,299; paper and paper products 46,850; fabricated metal products 45,832; cement, bricks, and ceramics 43,462; wearing apparel, textiles, and leather 27,828; tobacco products 15,952; wood and wood products 15,320; refined petroleum products 10,509. Energy production (consumption): electricity (kW-hr; 2008) 6,545,830,000 (4,496,700,000); coal, none (none); crude petroleum (barrels; 2008–09) 102,041,700 ([2006] 29,150,000); petroleum products (metric tons; 2008) 3,307,000 ([2006] 5,394,000); natural gas (cu m; 2007) 25,000,000,000⁶ (°).
Gross national income (GNI; 2008): U.S.\$21,901,000,000 (U.S.\$950 per capita); purchasing power parity GNI (U.S.\$2,210 per capita).

Structure of gross domestic product and labour force

	2008		2005–06	
	in value YR '000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing ⁵	593,667	10.3	1,406,099	28.4
Crude petrol., natural gas	1,647,600	28.7		
Mining and quarrying	11,047	0.2	14,959	0.3
Manufacturing	462,295 ⁷	8.1 ⁷	222,138	4.5
Public utilities	43,099	0.7	18,773	0.4
Construction	296,195	5.2	485,864	9.8
Transp. and commun.	576,276	10.0	239,477	4.8
Trade, restaurants, hotels	1,024,833	17.9	724,868	14.7
Finance, real estate	605,543	10.6	39,907	0.8
Pub. admin., defense	341,897	6.0	453,532	9.2
Services	293,370	5.1	402,816	8.2
Other	–161,153 ⁸	–2.8 ⁸	936,328 ⁹	18.9 ⁹
TOTAL	5,734,669	100.0	4,944,763⁴	100.0

Household income and expenditure. Average household size (2007) 7.1; income per household (1998) YR 29,035 (U.S.\$217); expenditures (1999)¹⁰: food and nonalcoholic beverages 43.8%, tobacco and khat (qat) 14.8%, housing and energy 13.3%, transportation 4.3%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 425; remittances (2008) 1,420; foreign direct investment (FDI; 2005–07 avg.) 428; official development assistance (2007) 225. Disbursements for (U.S.\$'000,000): tourism (2008) 184; remittances (2008) 319; FDI (2005–07 avg.) 58.

Land use as % of total land area (2007): in temporary crops 2.6%, in permanent crops 0.5%, in pasture 41.7%, forest area 1.0%.

Foreign trade¹¹

Balance of trade (current prices)

	2003	2004	2005	2006	2007	2008
YR '000,000	+10,779	+17,063	+44,668	+119,386	–437,478	–568,714
% of total	0.8%	1.1%	2.1%	4.8%	14.8%	15.8%

Imports (2008): YR 2,087,876,317,000 (crude and refined petroleum 29.1%; food and live animals 22.3%, of which grains 13.2%; transportation equipment 7.0%; base and fabricated metals 6.5%; chemicals and chemical products 6.4%). **Major import sources:** U.A.E. 28.9%; China 7.0%; Saudi Arabia 6.7%; Kuwait 6.4%; India 3.9%.

Exports (2008): YR 1,519,162,467,000 (refined petroleum products 77.3%; crude petroleum 9.9%; food and live animals 5.0%, of which fish 2.6%; transportation equipment 1.9%; chemicals and chemical products 1.7%). **Major export destinations:** China 31.1%; Thailand 23.8%; U.A.E. 9.5%; India 8.0%; South Korea 6.3%.

Transport and communications

Transport. Railroads: none. Roads (2007): total length 71,300 km (paved 9%). Vehicles (2004): passenger cars 522,437; trucks and buses 506,766. Air transport (2007): passenger-km (2004) 2,473,000,000; metric ton-km cargo 41,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	6,780	359	PCs	2006	587	28
Telephones				Dailies	2007	40 ¹²	1.9 ¹²
Cellular	2008	3,700 ¹³	161 ¹³	Internet users	2008	370	16
Landline	2008	1,117	49	Broadband	2008	...	...

Education and health

Educational attainment (2005–06). Percentage of population age 10 and over having: no formal schooling/unknown 42.3%; reading and writing ability 33.6%; primary education 13.1%; secondary 8.7%; higher 2.3%. **Literacy** (2007): percentage of total population age 15 and over literate 58.9%; males literate 77.0%; females literate 40.5%.

Education (2004–05)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–11)	110,127 ¹⁴	3,219,564	22.4 ¹⁴	75
Secondary/Voc. (age 12–17)	55,862 ¹⁵	1,455,206	24.6 ¹⁵	37
Tertiary	6,062	209,386	33.2	9 ¹⁶ (age 18–22)

Health (2008): physicians 6,187 (1 per 3,592 persons); hospital beds 15,184 (1 per 1,464 persons); infant mortality rate 60.1; undernourished population (2002–04) 7,600,000 (38% of total population based on the consumption of a minimum daily requirement of 1,770 calories).

Military

Total active duty personnel (November 2008): 66,700 (army 90.0%, navy 2.5%, air force/air defense 7.5%). **Military expenditure as percentage of GDP** (2007): 4.2%; per capita expenditure U.S.\$42.

¹All nonelected. ²Approximate figures. ³Regarded as a governorate for administrative purposes. ⁴Detail does not add to total given because of rounding. ⁵Khat's (or qat's) agricultural contribution to GDP is about 2.5% of total GDP; khat cultivation employs nearly 15% of the labour force. ⁶Virtually all natural gas was flared or reinjected for field pressure maintenance. ⁷Includes petroleum refining. ⁸Customs duties less imputed bank service charges. ⁹Includes 795,316 unemployed. ¹⁰Weights of consumer price index components. ¹¹Imports c.i.f.; exports f.o.b. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴1999–2000. ¹⁵2002–03. ¹⁶2005–06.

Internet resources for further information:

- Central Bank of Yemen <http://www.centralbank.gov.ye>
- Central Statistical Organisation <http://www.cso-yemen.org>

Zambia

Official name: Republic of Zambia.

Form of government: multiparty republic with one legislative house (National Assembly [158!]).

Head of state and government: President.

Capital: Lusaka.

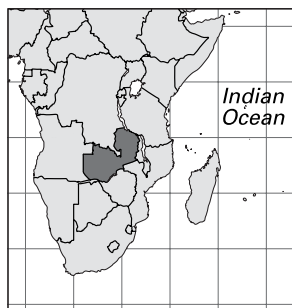
Official language: English.

Official religion: none².

Monetary unit: Zambian kwacha

(K); valuation (Sept. 1, 2009)

1 U.S.\$ = K 4,623; 1 £ = K 7,500.



Area and population

		area		population
		sq mi	sq km	2000 census
Provinces	Capitals			
Central	Kabwe	36,446	94,394	1,012,257
Copperbelt	Ndola	12,096	31,328	1,581,221
Eastern	Chipata	26,682	69,106	1,306,173
Luapula	Mansa	19,524	50,567	775,353
Lusaka	Lusaka	8,454	21,896	1,391,329
North-Western	Solwezi	48,582	125,827	583,350
Northern	Kasama	57,076	147,826	1,258,696
Southern	Livingstone	32,928	85,283	1,212,124
Western	Mongu	48,798	126,386	765,088
TOTAL		290,585³	752,612³	9,885,591

Demography

Population (2009): 12,935,000.

Density (2009): persons per sq mi 44.5, persons per sq km 17.8.

Urban-rural (2008): urban 35.4%; rural 64.6%.

Sex distribution (2005): male 49.75%; female 50.25%.

Age breakdown (2005): under 15, 46.2%; 15–29, 30.6%; 30–44, 13.4%; 45–59, 6.1%; 60–74, 3.0%; 75–84, 0.6%; 85 and over, 0.1%.

Population projection: (2020) 16,916,000; (2030) 20,889,000.

Doubling time: 35 years.

Ethnic composition (2000): Bemba 21.5%; Tonga 11.3%; Lozi 5.2%; Nsenga 5.1%; Tumbuka 4.3%; Ngoni 3.8%; Chewa 2.9%; other 45.9%.

Religious affiliation (2000): Christian 82.4%, of which Roman Catholic 29.7%, Protestant (including Anglican) 28.2%, independent Christian 15.2%, unaffiliated Christian 5.5%; traditional beliefs 14.3%; Bahā'ī 1.8%; Muslim 1.1%⁴; other 0.4%.

Major cities (2006): Lusaka 1,306,600; Kitwe 408,300; Ndola 398,100; Kabwe 191,100; Chingola 148,600.

Vital statistics

Birth rate per 1,000 population (2008): 38.8 (world avg. 20.3).

Death rate per 1,000 population (2008): 18.5 (world avg. 8.5).

Natural increase rate per 1,000 population (2008): 20.3 (world avg. 11.8).

Marriage/divorce rates per 1,000 population (2005): n.a./n.a.

Total fertility rate (avg. births per childbearing woman; 2006): 5.39.

Life expectancy at birth (2006): male 38.0 years; female 38.2 years.

Major causes of death by overall percentage (2004): fever/malaria 21.7%, diarrhea 11.8%, tuberculosis 10.4%, cough/chest infection 9.6%, abdominal pain 5.2%, lack of blood/anemia 5.1%.

Adult population (ages 15–49) *living with HIV* (2007): 15.2% (world avg. 0.8%).

National economy

Budget (2007). Revenue: K 10,094,600,000,000 (tax revenue 77.3%, of which income tax 33.1%, VAT 24.1%; grants 20.4%; nontax revenue 2.3%). Expenditures: K 12,034,400,000,000 (education 16.9%; economic affairs 14.1%; housing and community amenities 12.2%; defense 8.2%; public order 6.8%; public debt 6.0%; health 3.8%).

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 2,500,000, corn (maize) 1,366,158, cassava 940,000, seed cotton 160,000, wheat 115,843, sweet potatoes 67,500, peanuts (groundnuts) 41,000, sunflower seeds 8,200, tobacco 4,800, fresh-cut flowers (value of sales; 2000) U.S.\$21,000,000; livestock (number of live animals) 2,610,000 cattle, 1,275,000 goats, 340,000 pigs, 30,000,000 chickens; roundwood 10,029,900 cu m, of which fuelwood 87%; fisheries production 70,125 (from aquaculture 7%). Mining and quarrying (2007): copper (metal content) 520,000; cobalt (metal content) 7,600; amethyst 1,200,000 kg; emeralds 2,500 kg. Manufacturing (2005): cement 435,000; refined copper 399,000; vegetable oils (2001) 11,800; refined cobalt 5,422. Energy production (consumption): electricity (kW-hr; 2006) 9,385,000,000 (9,130,000,000); coal (metric tons; 2006) 244,000 (171,000); crude petroleum (barrels; 2006) none (4,266,000); petroleum products (metric tons; 2006) 525,000 (577,000); natural gas, none (none).

Household income and expenditure. Average household size (2005) 5.1; average annual income per household (2004) K 6,024,360 (U.S.\$1,261); expenditure (1993–94)⁵: food, beverages, and tobacco 57.1%, transportation and communications 9.6%, housing and energy 8.5%, household furnishings 8.2%.

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 138; remittances (2008) 59; foreign direct investment (FDI; 2005–07 avg.) 652; official development assistance (2007) 1,045. Disbursements for (U.S.\$'000,000): tourism (2007) 56; remittances (2008) 124.

Population economically active (2000): total 3,165,200⁶; activity rate of total population 32.0% (participation rates: ages 12–64, 55.8%; female 41.3%; unemployed 12.7%).

Price index (2005 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	59.0	71.6	84.5	100.0	109.0	120.6	135.7

Gross national income (GNI; 2008): U.S.\$11,986,000,000 (U.S.\$950 per capita); purchasing power parity GNI (U.S.\$1,230 per capita).

Structure of gross domestic product and labour force

	2008		2000	
	in value K '000,000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	10,709	19.6	2,014,000	62.5
Mining	2,280	4.2	36,500	1.1
Manufacturing	5,273 ⁷	9.7 ⁷	77,500	2.4
Construction	8,516	15.6	36,800	1.1
Public utilities	1,525	2.8	11,000	0.3
Transp. and commun.	2,492	4.6	53,700	1.7
Trade, hotels	9,635	17.7	190,400	5.9
Finance, real estate	7,362	13.5	29,200	0.9
Pub. admin., defense	1,325	2.4	363,400	11.3
Services	4,183	7.7		
Other	1,205 ⁸	2.2 ⁸	409,800 ⁹	12.7 ⁹
TOTAL	54,505	100.0	3,222,200³	100.0³

Public debt (external, outstanding; 2007): U.S.\$1,136,000,000.

Land use as % of total land area (2007): in temporary crops 7.1%, in permanent crops 0.04%, in pasture 27.3%, forest area 55.9%.

Foreign trade¹⁰

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	−146	−593	−576	−748	+696	+648
% of total	7.1%	23.2%	15.5%	17.1%	10.2%	7.5%

Imports (2006): U.S.\$3,074,000,000 (machinery and apparatus 29.7%, of which industrial machinery and equipment 19.5%; chemicals and chemical products 14.6%; petroleum 13.6%; road vehicles 10.0%). **Major import sources:** South Africa 47.0%; U.A.E. 10.4%; Zimbabwe 5.7%; Norway 4.0%; U.K. 3.7%.

Exports (2006): U.S.\$3,770,000,000 (refined copper 67.9%; copper ore and concentrate 11.2%; cobalt 3.8%; food 3.8%). **Major export destinations:** Switzerland 39.8%; South Africa 11.0%; Thailand 7.7%; China 6.8%; Egypt 4.2%.

Transport and communications

Transport. Railroads (1998): length (2006)¹¹ 2,157 km; passenger-km 586,000,000; metric ton-km cargo 702,000,000. Roads (2001): total length 91,440 km (paved 22%). Vehicles (2008): passenger cars 172,670; trucks and buses 91,835. Air transport (2006)¹²: passenger-km 56,609,000; metric ton-km cargo, none.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2003	551	51	PCs	2005	131	11
Telephones				Dailies	2007	54 ¹³	8.7 ¹³
Cellular	2008	3,539 ¹⁴	280 ¹⁴	Internet users	2008	700	56
Landline	2008	91	7.2	Broadband	2007	5.7 ¹⁴	0.4 ¹⁴

Education and health

Educational attainment (2001–02)¹⁵. Percentage of population age 15 and over having: no formal schooling 14.4%; some primary education 33.4%; completed primary 19.7%; some secondary 22.0%; completed secondary 5.9%; higher 4.3%; unknown 0.3%. **Literacy** (2007): population age 15 and over literate 83.5%; males literate 88.5%; females literate 78.6%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 7–13)	56,557	2,790,312	49.3	94
Secondary/Voc. (age 14–18)	14,246	607,296	42.6	41
Tertiary	...	24,553 ¹⁶	...	2 ¹⁶ (age 19–23)

Health: physicians (2004) 1,264 (1 per 8,672 persons); hospital beds (2004) 21,924 (1 per 500 persons); infant mortality rate per 1,000 live births (2008) 90.4; undernourished population (2003–05) 5,100,000 (40% of total population based on the consumption of a minimum daily requirement of 1,750 calories).

Military

Total active duty personnel (November 2008): 15,100 (army 89.4%; navy, none; air force 10.6%). **Military expenditure as percentage of GDP** (2007): 2.2%; per capita expenditure U.S.\$20.

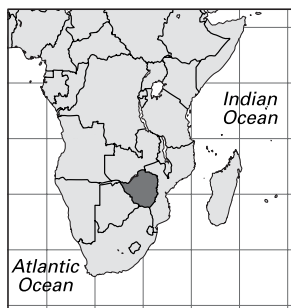
¹Statutory number (including 8 nonelective seats). ²Zambia is a Christian nation per the preamble of a constitutional amendment. ³Detail does not add to total given because of rounding. ⁴3 to 4% in 2005. ⁵Weights of consumer price index components. ⁶Excludes population ages 11 and under. ⁷Manufacturing includes the smelting of copper. ⁸Taxes less imputed bank service charges. ⁹Unemployed. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Includes 891 km of the Tanzania-Zambia Railway Authority. ¹²Zambian Airways Limited only. ¹³Circulation of daily newspapers. ¹⁴Subscribers. ¹⁵Based on a sample survey of 19,531 persons. ¹⁶1999–2000.

Internet resources for further information:

- **Zambian Department of Census and Statistics** <http://www.zamstats.gov.zm>
- **Bank of Zambia** <http://www.boz.zm>

Zimbabwe

Official name: Republic of Zimbabwe.
Form of government: transitional regime with two legislative houses (Senate [93¹]; House of Assembly [210]).
Chiefs of state and government: President/Prime Minister/Cabinet².
Capital: Harare.
Official language: English.
Official religion: none.
Monetary unit: 3, 4.



Area and population

		area		population
		sq mi	sq km	2002 preliminary census
Provinces	Capitals			
Bulawayo	—	185	479	676,787
Harare	—	337	872	1,903,510
Manicaland	Mutare	14,077	36,459	1,566,889
Mashonaland Central	Bindura	10,945	28,347	998,265
Mashonaland East	Marondera	12,444	32,230	1,125,355
Mashonaland West	Chinhoyi	22,178	57,441	1,222,583
Masvingo	Masvingo	21,840	56,566	1,318,705
Matabeleland North	Lupane	28,967	75,025	701,359
Matabeleland South	Gwanda	20,916	54,172	654,879
Midlands	Gweru	18,983	49,166	1,466,331
TOTAL		150,872	390,757	11,634,663

Demography

Population (2009): 12,523,000⁵.
Density (2009): persons per sq mi 83.0, persons per sq km 32.0.
Urban-rural (2008): urban 37.2%; rural 62.8%.
Sex distribution (2008): male 47.40%; female 52.60%.
Age breakdown (2008): under 15, 43.9%; 15–29, 28.8%; 30–44, 13.9%; 45–59, 7.9%; 60–74, 4.1%; 75 and over, 1.4%.
Population projection: (2020) 15,571,000; (2030) 17,917,000.
Ethnic composition (2003): Shona 71%; Ndebele 16%; other African 11%; white 1%; mixed race/Asian 1%.
Religious affiliation (2005): African independent Christian c. 38%; traditional beliefs c. 25%; Protestant c. 14%; Roman Catholic c. 8%; Muslim c. 1%; other (mostly unaffiliated Christian) c. 14%.
Major cities (2002): Harare (2007) 1,572,000; Bulawayo 676,787; Chitungwiza 321,782; Mutare 170,106; Gweru 141,260.

Vital statistics

Birth rate per 1,000 population (2008): 31.6 (world avg. 20.3).
Death rate per 1,000 population (2008): 17.3 (world avg. 8.5).
Total fertility rate (avg. births per childbearing woman; 2008): 3.72.
Life expectancy at birth (2008): male 45.1 years; female 43.5 years.
Adult population (ages 15–49) *living with HIV* (2007): 15.3% (world avg. 0.8%).
Major causes of death per 100,000 population (2002): HIV/AIDS-related c. 1,406; cardiovascular diseases c. 142; lower respiratory infections c. 84; tuberculosis c. 55; malignant neoplasms (cancers) c. 54.

National economy

Budget (2008). Revenue: U.S.\$133,000,000 (tax revenue 96.2%, of which customs duties 33.8%, VAT 24.1%, income tax 16.5%, corporate taxes 13.5%; nontax revenue 3.8%). Expenditures: U.S.\$255,000,000 (current expenditures 94.5%, of which debt service 54.5%, wages and salaries 20.4%, transfer payments 7.1%; capital expenditure 5.5%).
Public debt (external, outstanding; 2007): U.S.\$3,735,000,000.
Population economically active (2008): total 5,836,000; activity rate of total population 46.8% (participation rates: ages 15–64 [2003] 74.0%; female 43.2%; unemployed c. 94%).

Price index (2002 = 100)

	2002	2003	2004	2005	2006	2007	2008
Consumer price index	100.0	575.0	2,150	8,675	103,750	25,432,300	... ⁶

Production (metric tons except as noted). Agriculture, forestry, fishing (2007): sugarcane 3,600,000, corn (maize) 952,600, seed cotton 235,000, cassava 192,000, wheat 128,000, peanuts (groundnuts) 125,000, soybeans 112,300, oranges 93,000, bananas 85,000, tobacco 79,000, sorghum 76,200, tea 22,300, coffee 4,600; livestock (number of live animals) 5,400,000 cattle, 3,000,000 goats, 630,000 pigs, 610,000 sheep; roundwood 9,232,300 cu m, of which fuelwood 92%; fisheries production 12,950 (from aquaculture 19%). Mining and quarrying (2007): chromite 650,000; asbestos 100,000; nickel (metal content) 7,100; cobalt (metal content) 50; platinum-group metals (palladium, platinum, rhodium, ruthenium, and iridium) 11,150 kg; gold 6,750 kg; diamonds 695,015 carats. Manufacturing (value added in U.S.\$'000,000; 1998): beverages 171; foodstuffs 148; textiles 99; iron and steel 86; fabricated metal products 64; cement, bricks, and tiles 63; tobacco products 51. Energy production (consumption): electricity (kW-hr; 2008) 8,890,000,000 (10,890,000,000); coal (metric tons; 2006) 3,447,000 (3,521,000); crude petroleum, none (none); petroleum products (metric tons; 2006) none (624,000).

Household income and expenditure. Average household size (2004) 4.5; expenditure (1995)⁷: food 33.6%, housing 17.3%, beverages and tobacco 16.0%.
Land use as % of total land area (2007): in temporary crops 8.3%, in permanent crops 0.3%, in pasture 31.3%, forest area 43.7%.

Gross national income (2008): U.S.\$3,892,117,285 (U.S.\$312 per capita).

Structure of gross domestic product and labour force

	2006		2002	
	in value Z\$'000,000	% of total value	labour force	% of labour force
Agriculture, forestry, fishing	155,807	15.1	2,800,000	56.4
Mining and quarrying	239,307	23.2	50,000	1.0
Manufacturing	282,960	27.5	378,000	7.6
Construction	15,262	1.5	106,000	2.1
Public utilities	27,343	2.7	10,000	0.2
Transp. and commun.	20,744	2.0	102,000	2.1
Trade, restaurants	168,978	16.4	333,000	6.7
Finance, real estate	42,428	4.1	121,000	2.4
Services	37,265	3.6	578,000	11.7
Pub. admin., defense	6,885	0.7		
Other	33,082 ⁸	3.2 ⁸	485,000 ⁹	9.8 ⁹
TOTAL	1,030,061	100.0	4,963,000	100.0

Selected balance of payments data. Receipts from (U.S.\$'000,000): tourism (2007) 365; remittances (2008) 361; foreign direct investment (FDI; 2005–07 avg.) 71; official development assistance (2007) 465. Disbursements for (U.S.\$'000,000): tourism (1998) 131; remittances, n.a.; FDI (2005–07 avg.) 1.3.

Foreign trade¹⁰

Balance of trade (current prices)

	2002	2003	2004	2005	2006	2007
U.S.\$'000,000	-139	...	-278	-679	-3,851	-284
% of total	29.1%	...	6.7%	19.6%	42.8%	4.1%

Imports (2007): U.S.\$3,594,400,000 (refined petroleum products 15.7%; chemicals and chemical products 12.6%; transportation equipment 9.3%; food and live animals 7.9%; base metals 4.7%). **Major import sources:** South Africa 42.8%; Botswana 11.4%; China 5.7%; Mozambique 4.8%; Malawi 4.8%.
Exports (2007): U.S.\$3,310,200,000 (base metals 18.8%, of which iron and steel 12.6%, nickel 5.9%; machinery and apparatus 10.7%, of which transportation equipment 5.4%; food and live animals 8.6%; beverages and tobacco products 8.4%; textile fibres 4.0%). **Major export destinations:** South Africa 37.4%; Mozambique 13.0%; U.K. 7.4%; Botswana 6.1%; Netherlands 4.6%.

Transport and communications

Transport. Railroads: route length (2008) 3,077 km; passenger-km (1998) 408,223,000; metric ton-km cargo (2004) 1,377,000. Roads (2002): total length 97,267 km (paved 19%). Vehicles (2002): passenger cars 570,866; trucks and buses 84,456. Air transport: passenger-km (2006) 671,185,000¹¹; metric ton-km cargo (2007) 8,000,000.

Communications

Medium	date	number in '000s	units per 1,000 persons	Medium	date	number in '000s	units per 1,000 persons
Televisions	2004	610	50	PCs	2007	1,257	101
Telephones				Dailies	2007	115 ¹²	9.2 ¹²
Cellular	2008	1,655 ¹³	133 ¹³	Internet users	2008	1,421	114
Landline	2008	348	28	Broadband	2008	17 ¹³	1.4 ¹³

Education and health

Educational attainment (2005–06)¹⁴. Percentage of population age 25 and over having: no formal schooling/unknown 13.6%; incomplete primary education 32.8%; complete primary 5.1%; incomplete secondary 42.0%; complete secondary 1.2%; vocational/higher 5.3%. **Literacy** (2007): percentage of total population age 15 and over literate 92.8%; males literate 95.8%; females literate 89.9%.

Education (2006–07)

	teachers	students	student/ teacher ratio	enrollment rate (%)
Primary (age 6–12)	64,001	2,445,520	38.2	88
Secondary/Voc. (age 13–18)	33,964 ¹⁵	831,488	22.3 ¹⁵	37
Tertiary	...	55,689 ¹⁵	...	4 ¹⁵ (age 19–23)

Health: physicians (2004) 2,086 (1 per 5,792 persons); hospital beds (2006) 37,377 (1 per 333 persons); infant mortality rate per 1,000 live births (2008) 33.9; undernourished population (2002–04) 6,000,000 (47% of total population based on the consumption of a minimum daily requirement of 1,840 calories).

Military

Total active duty personnel (November 2008): 29,000 (army 86.2%, air force 13.8%). **Military expenditure as percentage of GDP** (2005): 2.3%; per capita expenditure U.S.\$11.

¹Includes 5 presidential appointees, 16 traditional chiefs, 10 provincial governors, and 2 others. ²Historic pact for the sharing of executive authority (Constitutional Amendment 19) entered into force Feb. 13, 2009. ³The use of the Zimbabwe dollar (Z\$) as legal currency was suspended indefinitely on April 12, 2009, because of long-term hyperinflation. ⁴Multiple foreign currencies (including the U.S. dollar and South African rand) became legal tender in January 2009. ⁵Includes 3 million Zimbabweans living outside of the country, many of whom are in South Africa. ⁶Official year-on-year inflation rate in July 2008 was 231,000,000%; private sector estimates placed it at 80,000,000,000% or higher. Lack of commodities in shops and multiple price changes per day make precise calculation of CPI virtually impossible. ⁷Weights of consumer price index components. ⁸Indirect taxes less imputed bank service charges. ⁹Includes 298,000 unemployed. ¹⁰Imports c.i.f.; exports f.o.b. ¹¹Air Zimbabwe only. ¹²Circulation of daily newspapers. ¹³Subscribers. ¹⁴Based on the 2005–06 Zimbabwe Demographic and Household Survey, comprising 16,082 people. ¹⁵2002–03.

Internet resource for further information:

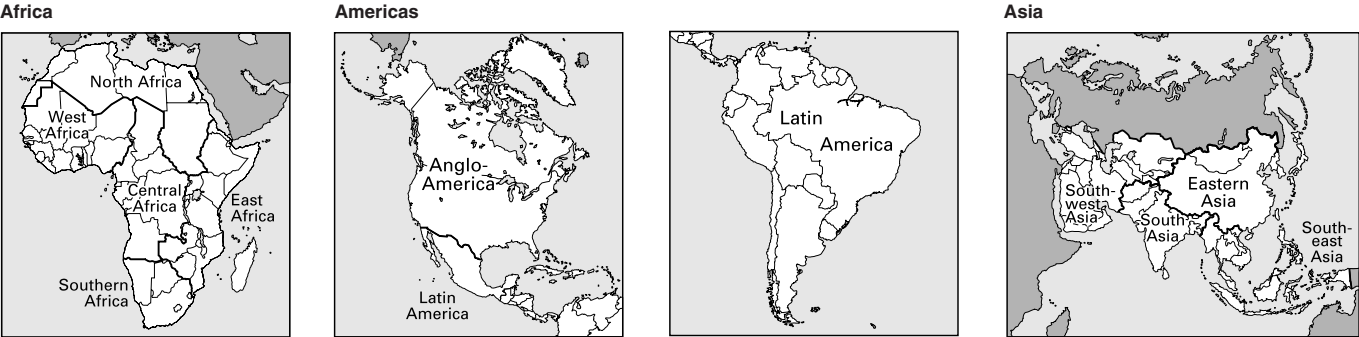
• Reserve Bank of Zimbabwe <http://www.rbz.co.zw>

Comparative National Statistics

World and regional summaries

region/bloc	area and population, 2009						gross national income						labour force, 2000–01		
	area		population			population projection, 2030	total ('000,000 U.S.\$), 2008	GNI per capita (U.S.\$), 2008	% agriculture, 2000	% industry, 2000	% services, 2000	growth rate, 1990–99	total ('000)	% male	% female
	square miles	square kilometres	total	per sq mi	per sq km										
World	52,445,607	135,833,193	6,800,683,850	129.7	50.1	8,227,211,620	57,857,547	8,698	4	28	68	2.5	2,828,551	60.2	39.8
Africa	11,687,458	30,270,144	1,004,139,100	85.9	33.2	1,494,608,800	1,324,457	1,387	16	30	53	2.5	321,761	60.2	39.8
Central Africa	2,553,319	6,613,063	124,834,000	48.9	18.9	197,264,000	109,349	925	17	36	21	1.3	38,800	57.6	42.4
East Africa	2,466,261	6,387,471	315,814,800	128.1	49.4	498,821,000	138,119	460	28	17	54	2.9	114,915	52.9	47.1
North Africa	3,297,726	8,541,071	209,022,000	63.4	24.5	276,511,000	510,064	2,594	16	33	51	3.3	56,141	75.5	24.5
Southern Africa	1,032,824	2,675,004	56,825,000	55.0	21.2	62,947,000	309,356	5,549	3	28	68	1.3	21,488	60.6	39.4
West Africa	2,337,328	6,053,535	297,643,300	127.3	49.2	459,065,800	257,569	905	31	30	38	3.0	90,417	60.9	39.1
Americas	16,300,589	42,218,333	914,248,700	56.1	21.7	1,094,458,400	19,842,761	21,951	2	23	75	3.0	395,502	58.3	41.7
Anglo-America ²	8,368,033	21,673,107	341,043,000	40.8	15.7	413,675,100	15,863,232	47,035	1	22	76	3.0	165,111	54.2	45.8
Canada	3,855,103	9,984,670	33,687,000	8.7	3.4	40,294,000	1,390,040	41,730	3	27	70	2.8	16,224	54.3	45.7
United States	3,676,486	9,522,055	307,226,000	83.6	32.3	373,247,000	14,466,112	47,580	1	22	77	3.0	148,850	54.2	45.8
Latin America	7,932,556	20,545,226	573,205,700	72.3	27.9	680,783,300	3,979,529	6,970	7	29	64	3.4	230,391	61.2	38.8
Caribbean	90,339	233,976	41,116,200	455.1	175.7	47,624,800	254,526	6,209	5	33	56	2.8	15,932	61.2	38.8
Central America	201,740	522,505	41,725,000	206.8	79.9	57,363,000	123,165	3,070	17	21	63	4.4	13,248	67.1	32.9
Mexico	758,450	1,964,375	104,551,000	137.9	53.2	120,928,000	1,061,444	9,980	4	27	69	2.8	40,300	66.4	33.6
South America	6,882,027	17,824,370	385,813,500	56.1	21.7	454,867,500	2,540,000	6,619	8	30	63	3.6	160,911	59.4	40.6
Andean Group	2,111,952	5,469,933	142,824,000	67.6	26.1	177,430,000	796,212	5,667	9	32	59	3.8	56,750	60.2	39.8
Brazil	3,287,612	8,514,877	191,481,000	58.2	22.5	216,410,000	1,411,224	7,350	8	31	60	3.0	83,387	58.8	41.2
Other South America	1,482,463	3,839,560	51,508,500	34.8	13.4	61,027,500	332,958	6,555	5	24	70	4.8	20,774	59.7	40.3
Asia	12,273,581	31,788,350	4,110,089,000	334.9	129.3	4,854,371,000	15,704,974	3,915	8	35	57	3.7	1,751,066	61.6	38.4
Eastern Asia	4,546,224	11,774,709	1,564,838,000	344.2	132.9	1,668,721,000	10,203,613	6,558	4	36	59	3.1	860,729	55.8	44.2
China	3,696,100	9,572,900	1,331,433,000	360.2	139.1	1,440,274,000	3,678,488	2,770	18	49	33	10.8	745,715	55.3	44.7
Japan	145,920	377,930	127,556,000	874.2	337.5	117,794,000	4,879,171	38,210	2	33	66	1.4	67,705	59.4	40.6
South Korea	38,486	99,678	48,333,000	1,256	484.9	49,146,000	1,046,285	21,530	6	49	45	5.7	22,501	59.7	40.3
Other Eastern Asia	665,718	1,724,201	57,516,000	86.4	33.4	61,507,000	599,669	10,510	1	22	73	5.5	24,808	60.1	39.9
South Asia	1,966,480	5,093,163	1,606,590,000	817.0	315.4	2,033,241,000	1,514,432	995	28	23	48	5.5	530,171	71.0	29.0
India	1,222,559	3,166,414	1,198,003,000	979.9	378.4	1,484,598,000	1,215,485	1,070	28	24	48	5.9	398,363	72.0	28.0
Pakistan	340,499	881,889	174,579,000	512.7	198.0	231,495,000	162,930	980	24	18	58	3.5	48,238	75.2	24.8
Other South Asia	403,422	1,044,860	234,008,000	580.1	224.0	317,148,000	136,017	618	35	28	36	4.9	83,570	63.7	36.3
Southeast Asia	1,718,300	4,450,374	579,407,000	337.2	130.2	699,045,000	1,313,315	2,270	21	30	49	5.3	247,704	58.5	41.5
Southwest Asia	4,042,577	10,470,104	359,254,000	88.9	34.3	453,364,000	2,673,614	7,617	10	36	52	2.8	112,462	68.8	31.2
Central Asia	1,545,772	4,003,400	60,669,000	39.3	15.2	72,481,000	143,728	2,384	16	25	58	−4.3	23,445	54.3	45.7
Gulf Cooperation Council	993,134	2,572,194	39,197,000	39.5	15.2	45,544,000	1,161,999	30,456	4	51	45	2.2	11,300	85.6	14.4
Iran	636,374	1,648,200	74,196,000	116.6	45.0	89,936,000	340,948	4,651	21	30	50	3.4	22,788	70.5	29.5
Other Southwest Asia	867,297	2,246,310	185,192,000	213.5	82.4	245,403,000	1,026,939	5,716	11	28	57	4.0	54,929	70.9	29.1
Europe	8,896,280	23,041,268	737,062,400	82.9	32.0	739,501,000	19,972,149	27,064	3	27	70	1.3	345,442	54.9	45.1
European Union (EU)	1,534,638	3,974,695	470,200,000	306.4	118.3	491,808,000	17,084,996	36,352	2	27	71	1.8	212,021	56.5	43.5
France	210,026	543,965	62,596,000	298.0	115.1	66,787,000	2,702,180	42,250	3	22	75	1.5	26,345	54.6	45.4
Germany	137,882	357,114	82,000,000	594.7	229.6	77,680,000	3,485,674	42,440	1	31	68	1.4	40,464	56.3	43.7
Italy	116,346	301,336	60,325,000	518.5	200.2	64,787,000	2,109,075	35,240	3	31	67	1.4	23,838	61.7	38.3
Spain	195,364	505,991	46,059,000	235.8	91.0	51,500,000	1,456,488	31,960	3	24	73	2.3	18,661	60.5	39.5
United Kingdom	93,851	243,073	61,855,000	659.1	254.5	69,466,000	2,787,159	45,390	1	26	73	2.5	29,558	54.5	45.5
Other EU	781,169	2,023,216	157,365,000	201.5	77.8	161,588,000	4,544,420	28,989	3	25	72	2.4	73,155	55.4	44.6
Other Western Europe ³	205,532	532,324	13,390,400	65.2	25.2	15,539,000	955,778	73,470	2	29	67	1.7	6,761	54.5	45.5
Eastern Europe	7,156,110	18,534,249	253,472,000	35.4	13.7	232,154,000	1,931,375	7,563	7	32	61	−3.2	126,660	52.2	47.8
Russia	6,592,800	17,075,400	141,852,000	21.5	8.3	130,131,000	1,364,475	9,620	7	35	59	−6.0	71,319	51.5	48.5
Ukraine	233,062	603,628	46,029,000	197.5	76.3	40,546,000	148,643	3,210	11	30	59	−10.8	22,847	51.1	48.9
Other Eastern Europe	330,248	855,221	65,591,000	198.6	76.7	61,477,000	418,257	6,195	7	30	62	1.3	32,494	54.7	45.3
Oceania	3,287,699	8,515,098	35,144,650	10.7	4.1	44,272,420	1,013,206	28,828	4	21	74	3.9	14,780	55.3	44.7
Australia	2,969,978	7,692,208	21,829,000	7.4	2.8	26,907,000	862,461	40,350	3	22	76	4.1	9,498	55.6	44.4
Pacific Ocean Islands	317,721	822,890	13,315,650	41.9	16.2	17,365,420	150,745	10,990	9	21	64	2.9	5,282	54.8	45.2

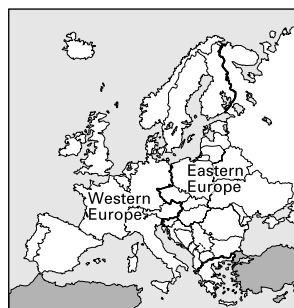
¹Refers only to the outstanding long-term external public and publicly guaranteed debt of the 114 developing countries that report under the World Bank's Debtor Reporting System (DRS). ²Anglo-America includes Canada, the United States, Greenland, Bermuda, and St. Pierre and Miquelon. ³Other Western Europe includes Andorra, Faroe Islands, Gibraltar, Guernsey, Iceland, Isle of Man, Jersey.



	economic indicators							social indicators							region/bloc		
	pop. per 1,000 ha of arable land, 2002	electricity consumption (kW- hr per capita), 2004	trade ('000,000 U.S.\$), 2001–03			debt ('000,000 U.S.\$), 2005¹		life expec- tancy (years), 2005		health			food (% FAO recom- mended minimum), 2004	literacy (%) (latest)			
			imports (c.i.f.)	exports (f.o.b.)	balance	total	% of GNI	male	female	pop. per doctor (latest)	infant mor- tality per 1,000 births, 2005	pop. having safe water (%), 2000		male			female
	4,387	2,717	6,930,434	6,744,616	–185,818	1,353,947	14.9	66.0	70.0	730	38.3	82	118	84.0	70.8	World	
	4,434	607	128,896	140,874	+11,978	228,543	28.2	51.8	53.8	2,560	78.4	64	103	69.6	52.0	Africa	
	4,365	137	8,854	16,653	+7,799	35,512	57.4	49.8	50.2	12,890	96.1	46	80	79.5	60.0	Central Africa	
	5,667	179	19,575	9,904	–9,671	45,086	52.1	46.9	48.2	13,620	86.7	50	86	69.5	53.6	East Africa	
	4,591	1,006	39,602	41,639	+2,037	77,626	27.0	67.2	71.0	890	39.2	87	125	69.2	45.8	North Africa	
	3,161	4,818	38,442	36,089	–2,353	13,198	5.6	47.8	51.2	1,610	55.1	85	119	84.8	84.4	Southern Africa	
	3,876	147	22,423	36,590	+14,167	57,121	42.0	47.7	49.7	6,260	94.3	65	109	62.7	44.7	West Africa	
	2,328	6,753	2,138,514	1,595,412	–543,102	415,488	18.9	71.5	77.6	520	17.1	91	129	91.5	90.2	Americas	
	1,441	14,647	1,528,316	976,367	–551,949	—	—	75.0	80.4	370	6.2	100	140	95.7	95.3	Anglo-America²	
	686	18,408	222,241	252,418	+30,177	—	—	76.7	83.6	540	4.8	100	136	96.6	96.6	Canada	
	1,637	14,240	1,305,092	723,609	–581,483	—	—	74.8	80.1	360	6.4	100	141	95.7	95.3	United States	
	3,692	2,056	610,198	619,045	+8,847	415,488	18.9	69.4	76.0	690	23.6	86	123	89.0	87.1	Latin America	
	7,532	1,946	134,133	113,899	–20,234	14,074	29.2	67.5	71.6	380	29.4	79	118	82.5	82.1	Caribbean	
	6,969	853	25,355	11,344	–14,011	27,697	29.1	67.9	73.7	950	21.4	88	106	78.2	72.3	Central America	
	4,153	2,190	168,651	160,670	–7,981	108,786	14.4	72.7	77.6	810	12.6	88	134	93.1	89.1	Mexico	
	3,253	2,160	120,755	158,917	+38,162	264,931	20.3	68.9	76.2	710	26.3	86	122	89.7	88.6	South America	
	9,110	1,790	56,520	68,915	+12,395	98,352	22.0	69.4	75.6	830	23.5	86	108	92.7	90.1	Andean Group	
	2,986	2,340	49,735	60,632	+10,897	94,497	14.3	67.7	75.9	770	30.7	87	132	85.5	85.4	Brazil	
	1,358	2,484	14,500	29,640	+15,140	72,082	37.1	72.1	79.4	410	17.5	82	120	96.6	96.4	Other South America	
	7,318	1,565	1,799,979	2,028,586	+228,607	517,206	11.1	67.2	70.3	970	39.6	81	116	82.5	65.2	Asia	
	9,736	2,525	1,179,486	1,321,391	+141,905	84,120	3.7	71.2	75.0	610	22.3	78	121	93.3	80.4	Eastern Asia	
	9,005	1,684	295,170	325,596	+30,426	82,853	3.7	70.4	73.7	620	25.2	75	123	92.3	77.4	China	
	28,837	8,459	383,452	471,996	+88,544	—	—	78.6	85.6	530	2.7	97	110	100.0	100.0	Japan	
	28,282	7,716	149,572	160,855	+11,283	—	—	71.7	79.3	740	6.4	92	123	99.2	96.4	South Korea	
	6,672	4,276	351,292	362,945	+11,653	1,267	70.4	71.7	77.3	500	13.8	94	93	97.5	90.9	Other Eastern Asia	
	6,864	546	91,054	75,813	–15,241	140,738	14.8	63.3	64.6	2,100	60.5	85	108	65.8	39.4	South Asia	
	6,490	618	61,118	52,471	–8,647	80,281	10.0	63.6	65.2	1,920	56.3	84	112	68.6	42.1	India	
	6,805	564	13,013	11,910	–1,103	29,490	27.5	64.7	65.5	1,840	76.2	90	100	57.6	27.8	Pakistan	
	9,923	157	16,923	11,432	–5,491	30,967	83.5	60.4	60.5	5,080	71.0	85	97	56.7	33.4	Other South Asia	
	8,406	862	353,337	410,291	+56,954	170,335	22.6	66.8	71.9	3,120	33.9	78	123	92.9	85.8	Southeast Asia	
	3,508	2,845	176,101	221,090	+44,989	122,013	17.3	67.3	71.9	610	35.5	85	118	88.0	72.9	Southwest Asia	
	1,876	2,678	12,654	15,806	+3,152	9,190	13.5	61.0	68.9	330	54.0	82	99	98.8	96.4	Central Asia	
	8,843	8,580	79,974	121,229	+41,255	842	3.7	73.4	77.5	620	12.7	95	117	82.9	69.9	Gulf Cooperation Council	
	4,455	2,460	20,336	28,356	+8,020	10,493	5.9	68.6	71.4	1,200	41.6	92	131	83.7	70.0	Iran	
	3,868	1,908	63,138	55,700	–7,438	101,488	23.2	67.6	71.9	690	31.6	82	119	87.0	66.8	Other Southwest Asia	
	2,534	6,440	2,932,353	3,068,534	+136,181	191,444	13.6	71.0	79.1	300	7.2	98	130	99.4	98.5	Europe	
	4,422	6,936	2,667,945	2,727,170	+59,225	62,914	13.4	75.5	81.8	290	4.8	100	137	99.4	98.9	European Union (EU)	
	3,223	8,231	362,398	357,881	–4,517	—	—	76.7	83.8	330	3.6	100	142	98.9	98.7	France	
	6,997	7,442	601,761	748,531	+146,770	—	—	75.8	82.0	290	4.1	100	131	100.0	100.0	Germany	
	6,935	6,029	242,744	251,003	+8,259	—	—	77.6	83.2	180	5.9	100	151	98.9	98.1	Italy	
	3,054	6,412	165,920	125,872	–40,048	—	—	76.7	83.2	240	4.4	99	138	98.6	96.8	Spain	
	10,296	6,756	399,478	320,057	–79,421	—	—	75.9	81.0	720	5.1	100	137	100.0	100.0	United Kingdom	
	3,436	6,722	895,644	923,825	+28,181	62,914	13.4	73.6	80.3	320	5.2	100	133	99.4	98.9	Other EU	
	9,474	15,621	125,857	153,411	+27,554	—	—	78.5	83.5	480	3.8	100	131	100.0	100.0	Other Western Europe³	
	1,427	5,060	138,550	187,954	+49,404	128,530	13.7	62.3	73.8	290	11.7	95	119	99.4	97.6	Eastern Europe	
	1,177	6,425	52,410	125,960	+73,550	75,359	11.8	59.9	73.3	240	11.5	99	117	99.8	99.2	Russia	
	1,481	3,727	16,976	17,927	+951	10,458	14.6	62.2	74.0	330	10.0	98	120	99.5	97.4	Ukraine	
	2,496	3,083	69,164	44,066	–25,098	42,713	18.7	67.3	74.7	370	13.4	84	121	98.5	94.4	Other Eastern Europe	
	564	8,660	91,999	85,427	–6,572	1,266	45.2	74.5	79.4	480	14.7	87	117	94.7	91.9	Oceania	
	407	11,849	69,260	66,366	–2,894	—	—	78.5	83.3	400	4.7	100	116	99.5	99.5	Australia	
	1,498	3,741	22,738	19,061	–3,677	1,266	45.2	68.3	73.3	770	30.1	67	118	87.9	80.6	Pacific Ocean Islands	

Liechtenstein, Monaco, Norway, San Marino, and Switzerland.

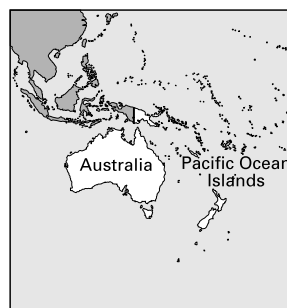
Europe



Eastern Europe



Oceania



Government and international organizations

This table summarizes principal facts about the governments of the countries of the world, their branches and organs, the topmost layers of local government constituting each country's chief administrative subdivisions, and the participation of their central governments in the principal intergovernmental organizations of the world.

In this table "date of independence" may refer to a variety of circumstances. In the case of the newest countries, those that attained full independence after World War II, the date given is usually just what is implied by the heading—the date when the country, within its present borders, attained full sovereignty over both its internal and external affairs. In the case of longer established countries, the choice of a single date may be somewhat more complicated, and grounds for the use of several different dates often exist. The reader should refer to appropriate Britannica articles on national histories and relevant historical acts.

The date of the current, or last, constitution is in some ways a less complicated question, but governments sometimes do not, upon taking power, either adhere to existing constitutional forms or trouble to terminate the previous document and legitimize themselves by the installation of new constitutional forms. Often, however, the desire to legitimize extraconstitutional political activity by associating it with existing forms of long precedent leads to partial or incomplete modification, suspension, or abrogation of a constitution, so that the actual day-to-day conduct of government may be largely unrelated

to the provisions of a constitution still theoretically in force. When a date in this column is given in italics, it refers to a document that has been suspended, abolished by extraconstitutional action, or modified extensively.

The characterizations adopted under "type of government" represent a compromise between the forms provided for by the national constitution and the more pragmatic language that a political scientist might adopt to describe these same systems. For an explanation of the application of these terms in the Britannica World Data, see the Glossary at page 501.

The positions denoted by the terms "chief of state" and "head of government" are usually those identified with those functions by the constitution. The duties of the chief of state may range from largely ceremonial responsibilities, with little or no authority over the day-to-day conduct of government, to complete executive authority as the effective head of government. In certain countries, an individual outside the constitutional structure may exercise the powers of both positions.

Membership in the legislative house(s) of each country as given here includes all elected or appointed members, as well as ex officio members (those who by virtue of some other office or title are members of the body), whether voting or nonvoting. The legislature of a country with a unicameral system is shown as the upper house in this table.

The number of administrative subdivisions for each country is listed down to the second level. In some instances, planning or statistical sub-

Government and international organizations

country	date of independence ^a	date of current or last constitution ^b	type of government	executive branch ^c		legislative branch ^d		admin. subdivisions		seaward claims	
				chief of state	head of government	upper house (members)	lower house (members)	first-order (number)	second-order (number)	territorial (nautical miles)	fishing/ economic (nautical miles)
Afghanistan	Aug. 19, 1919	Jan. 26, 2004	Islamic republic	_____ president _____	_____ president _____	102	249	34	398	—	—
Albania	Nov. 28, 1912	Nov. 28, 1998	republic	_____ president _____	_____ prime minister _____	140	—	12	36	12	²
Algeria	July 5, 1962	Dec. 7, 1996 ³	republic	_____ president _____	_____ prime minister _____	144	389	48	553	12	⁴
American Samoa	—	July 1, 1967	territory (U.S.)	U.S. president	governor	18	20 ⁵	—	⁵⁶	12	200
Andorra	Dec. 6, 1288	May 4, 1993	parl. coprincedom	_____ 7 _____	_____ head of govt. _____	28	—	7	...	—	—
Angola	Nov. 11, 1975	Aug. 27, 1992	republic	_____ president _____	_____ president _____	220 ⁹	—	18	156	12	200
Antigua and Barbuda	Nov. 1, 1981	Nov. 1, 1981	constitutional monarchy	British monarch	prime minister	17	17 ¹⁰	17	—	12 ¹¹	200 ¹¹
Argentina	July 9, 1816	Aug. 24, 1994 ¹²	federal republic	_____ president _____	_____ president _____	72	257	24	376 ¹³	12	200
Armenia	Sept. 23, 1991	Nov. 27, 2005 ¹⁴	republic	_____ president _____	_____ prime minister _____	131	—	11	926	—	—
Aruba	—	Jan. 1, 1986	overseas territory (Neth.)	Dutch monarch	prime minister	21	—	...	...	12	200
Australia	Jan. 1, 1901	Jan. 1, 1901	federal parl. state ¹⁷	British monarch	prime minister	76	150	8	677	12	200
Austria	Oct. 30, 1918	Oct. 1, 1920 ¹⁸	federal state	_____ president _____	_____ chancellor _____	62	183	9	99	—	—
Azerbaijan	Aug. 30, 1991	March 18, 2009 ¹⁹	republic	_____ president _____	_____ president _____	125 ²⁰	—	80	...	...	...
Bahamas, The	July 10, 1973	July 10, 1973	constitutional monarchy	British monarch	prime minister	16	41	32	80	12	200
Bahrain	Aug. 15, 1971	Feb. 14, 2002	constitutional monarchy	_____ monarch _____	_____ prime minister _____	40	40	5	...	12	²¹
Bangladesh	March 26, 1971	Dec. 16, 1972	republic	_____ president _____	_____ prime minister _____	345	—	6	64	12	200
Barbados	Nov. 30, 1966	Nov. 30, 1966	constitutional monarchy	British monarch	prime minister	21	30	—	—	12	200
Belarus	Aug. 25, 1991	Nov. 27, 1996 ²²	republic	_____ president _____	_____ president _____	64 ²⁰	110	7	118	—	—
Belgium	Oct. 4, 1830	Feb. 17, 1994	fed. const. monarchy	_____ monarch _____	_____ prime minister _____	71 ²³	150	²⁴	10	12	²⁵
Belize	Sept. 21, 1981	Sept. 21, 1981	constitutional monarchy	British monarch	prime minister	12 ²⁶	31 ²⁶	27	...	12 ²⁸	200
Benin	Aug. 1, 1960	Dec. 2, 1990	republic	_____ president _____	_____ president _____	83	—	12	77	200	200
Bermuda	—	June 8, 1968	overseas territory (U.K.)	British monarch	_____ 29 _____	11	36	11	—	12	200
Bhutan	March 24, 1910	July 18, 2008	constitutional monarchy	_____ monarch _____	_____ prime minister _____	25	47	20	47	—	—
Bolivia	Aug. 6, 1825	Feb. 8, 2009	republic	_____ president _____	_____ chairman CM _____	36	130	9	112	—	—
Bosnia and Herzegovina	March 3, 1992	Dec. 14, 1995 ³⁰	emerging fed. republic	_____ 31 _____	_____ 31 _____	15	42	3	10	...	...
Botswana	Sept. 30, 1966	Sept. 30, 1966	republic	_____ president _____	_____ president _____	35 ³²	63	16	28	—	—
Brazil	Sept. 7, 1822	Oct. 5, 1988 ¹⁸	federal republic	_____ president _____	_____ president _____	81	513	27	5,564	12	200
Brunei	Jan. 1, 1984	Sept. 29, 1959 ³³	monarchy (sultanate)	_____ sultan _____	_____ sultan _____	29 ³²	—	4	38	12	200
Bulgaria	Oct. 5, 1908	July 12, 1991	republic	_____ president _____	_____ prime minister _____	240	—	28	264	12	200
Burkina Faso	Aug. 5, 1960	June 11, 1991	republic	_____ president _____	_____ prime minister _____	111	—	13	45	—	—
Burundi	July 1, 1962	March 18, 2005	republic	_____ president _____	_____ president _____	49	118	17	117	—	—
Cambodia	Nov. 9, 1953	March 4, 1993 ³⁵	constitutional monarchy	_____ king _____	_____ prime minister _____	61	123	24	185	12	200
Cameroon	Jan. 1, 1960	Jan. 18, 1996	republic	_____ president _____	_____ prime minister _____	180	—	10	58	12	^{2, 36}
Canada	July 1, 1867	April 17, 1982	federal parl. state ¹⁷	Canadian GG ³⁷	prime minister	105 ²⁰	308	13	...	12	200
Cape Verde	July 5, 1975	Sept. 25, 1992	republic	_____ president _____	_____ prime minister _____	72	—	22	32	12 ¹¹	200 ¹¹
Cayman Islands	—	Nov. 6, 2009	overseas territory (U.K.)	British monarch	_____ 29 _____	18	—	...	1	...	...
Central African Republic	Aug. 13, 1960	Dec. 27, 2004	republic	_____ president _____	_____ prime minister _____	105	—	17	71	—	—
Chad	Aug. 11, 1960	April 14, 1996	republic	_____ president _____	_____ prime minister _____	155	—	22	54	—	—
Chile	Sept. 18, 1810	Sept. 17, 2005	republic	_____ president _____	_____ president _____	38	120	15	52	12	200
China	1523 bc	Dec. 4, 1982	people's republic	_____ president _____	_____ premier SC _____	3,000 ²⁰	—	31	333	12	200
Colombia	July 20, 1810	July 6, 1991	republic	_____ president _____	_____ president _____	102	166	33	1,099	12	200
Comoros	July 6, 1975	May 23, 2009	republic	_____ president _____	_____ president _____	33	—	3	4	12 ¹¹	200 ¹¹
Congo, Dem. Rep. of the	June 30, 1960	Feb. 18, 2006	republic	_____ president _____	_____ prime minister _____	108	500	26 ³⁸	...	12	...
Congo, Rep. of the	Aug. 15, 1960	Aug. 10, 2002	republic	_____ president _____	_____ president _____	72 ²⁰	137 ²⁰	16	93	200	²
Costa Rica	Sept. 15, 1821	Nov. 9, 1949	republic	_____ president _____	_____ president _____	57	—	7	81	12	200
Côte d'Ivoire	Aug. 7, 1960	July 23, 2000	transitional regime	_____ president _____	_____ president _____	225 ²⁰	—	19	...	12	200
Croatia	June 25, 1991	Dec. 22, 1990	republic	_____ president _____	_____ prime minister _____	153	—	21	³⁹	12	⁴⁰
Cuba	May 20, 1902	Feb. 24, 1976	socialist republic	_____ president _____	_____ president _____	614	—	15	169	12	200
Cyprus ⁴²	Aug. 16, 1960	Aug. 16, 1960	republic	_____ president _____	_____ president _____	56 ⁴³	—	244 ⁴⁴	...	12	...
Czech Republic	Jan. 1, 1993	Jan. 1, 1993	republic	_____ president _____	_____ prime minister _____	81	200	14	76	—	—
Denmark	c. 800	June 5, 1953	constitutional monarchy	_____ monarch _____	_____ prime minister _____	179	—	5	99	12	⁴⁵
Djibouti	June 27, 1977	Sept. 15, 1992	republic	_____ president _____	_____ president _____	65	—	6	...	12	200
Dominica	Nov. 3, 1978	Nov. 3, 1978	republic	_____ president _____	_____ prime minister _____	32	—	...	—	12	200
Dominican Republic	Feb. 27, 1844	Nov. 28, 1966	republic	_____ president _____	_____ president _____	32	178	32	248	12	200
East Timor	May 20, 2002	May 20, 2002	republic	_____ president _____	_____ prime minister _____	65	—	13	65	12	200
Ecuador	May 24, 1822	Oct. 20, 2008	republic	_____ president _____	_____ president _____	124	—	24	226	200 ⁴⁶	...
Egypt	Feb. 28, 1922	Sept. 11, 1971	republic	_____ president _____	_____ prime minister _____	264 ³²	454	29	166	12	⁴⁷
El Salvador	Jan. 30, 1841	Dec. 20, 1983	republic	_____ president _____	_____ president _____	84	—	14	262	200	200
Equatorial Guinea	Oct. 12, 1968	Nov. 17, 1991	republic	_____ president _____	_____ president _____	100	—	7	30	12	200
Eritrea	May 24, 1993	—	transitional regime	_____ president _____	_____ president _____	150	—	6	...	12	⁴⁹

Government and international organizations (continued)

country	date of independence ^a	date of current or last constitution ^b	type of government	executive branch ^c		legislative branch ^d		admin. subdivisions		seaward claims	
				chief of state	head of government	upper house (members)	lower house (members)	first-order (number)	second-order (number)	territorial (nautical miles)	fishing/economic (nautical miles)
Estonia	Feb. 24, 1918	July 3, 1992	republic	president	prime minister	101	—	15	227	12 ⁵⁰	50
Ethiopia	c. 1000 bc	Aug. 22, 1995	federal republic	president	prime minister	112	547 ²⁰	11	68 ⁵¹	—	—
Faroe Islands	—	April 1, 1948	⁵²	Danish monarch	53	33	—	34	—	—	200
Fiji	Oct. 10, 1970	July 27, 1998	interim regime	president	prime minister	(32)	(71)	4	15	12 ¹¹	200 ¹¹
Finland	Dec. 6, 1917	March 1, 2000	republic	president	prime minister	200	—	6	20	12 ⁵⁵	50
France	August 843	Oct. 4, 1958 ¹⁸	republic	president	prime minister	343	577	22	96 ⁵⁶	12	200
French Guiana	—	Feb. 28, 1983	⁵⁷	French president	58	19 ⁵⁹	31 ⁶⁰	2	22	12	200
French Polynesia	—	Feb. 27, 2004	overseas collectivity (Fr.)	French president	61	57	—	5	48	12	200
Gabon	Aug. 17, 1960	March 26, 1991	republic	president	prime minister	102	120	9	37	12	200
Gambia, The	Feb. 18, 1965	Jan. 16, 1997	republic	— president —	—	53	—	8	39	12	200
Gaza Strip	—	May 4, 1994 ⁶²	interim authority ⁶³	—	—	—	—	—	—	—	—
Georgia	April 9, 1991	Feb. 6, 2004	republic	— president ⁶⁴ —	—	150	—	11 ⁶⁵	66	12	—
Germany	May 5, 1955	May 23, 1949	federal republic	president	chancellor	69	622	16	22	12 ⁴⁵	25
Ghana	March 6, 1957	Jan. 7, 1993	republic	— president —	—	230	—	10	138	12	200
Greece	Feb. 3, 1830	April 17, 2001 ⁶⁷	republic	president	prime minister	300	—	14	54	6/10	2
Greenland	—	June 21, 2009 ⁶⁸	⁵²	Danish monarch	53	31	—	4	—	—	200
Grenada	Feb. 7, 1974	Feb. 7, 1974	constitutional monarchy	British monarch	prime minister	13	15	—	—	12	200
Guadeloupe	—	Feb. 28, 1983	⁵⁷	French president	58	42 ⁵⁹	41 ⁶⁰	2	32	12	200
Guam	—	Aug. 1, 1950	territory (U.S.)	U.S. president	governor	15	—	19	—	12	200
Guatemala	Sept. 15, 1821	Jan. 14, 1986	republic	— president —	—	158	—	22	333	12	200
Guernsey	—	Jan. 1, 1949 ¹⁸	crown dependency (U.K.)	British monarch ⁶⁹	chief minister Pc	50 ⁷⁰	—	1	2	3	12
Guinea	Oct. 2, 1958	Dec. 23, 1990	military regime	— president NCDD ⁸ —	—	(114)	—	8	33	12	200
Guinea-Bissau	Sept. 10, 1974	—	⁷¹	— president ⁸ —	—	102	—	9	37	12	200
Guyana	May 26, 1966	Oct. 6, 1980	republic	— president —	—	65 ⁷²	—	10	—	12	200
Haiti	Jan. 1, 1804	March 29, 1987	republic	president	prime minister	30	99	10	41	12	200
Honduras	Nov. 5, 1838	Jan. 20, 1982	interim regime ⁷³	— president (de facto) —	—	128	—	18	298	12	200
Hong Kong	—	July 1, 1997	⁷⁴	Chinese president	chief executive	60	—	18	—	12	2
Hungary	Nov. 16, 1918	Aug. 20, 1949 ⁷⁵	republic	president	prime minister	386	—	20	306 ⁷⁶	—	—
Iceland	June 17, 1944	June 17, 1944	republic	president	prime minister	63	—	78 ⁷⁷	—	12	200
India	Aug. 15, 1947	Jan. 26, 1950	federal republic	president	prime minister	245	545	35	626	12	200
Indonesia	Aug. 17, 1945	Aug. 17, 1945	republic	— president —	—	128 ³²	560	33	—	12 ¹¹	200 ¹¹
Iran	Oct. 7, 1906	Dec. 2–3, 1979	Islamic republic	— president ⁷⁸ —	—	290	—	30	336	12	45
Iraq	Oct. 3, 1932	Oct. 15, 2005	republic	president	prime minister	275	—	—	—	12	—
Ireland	Dec. 6, 1921	Dec. 29, 1937	republic	president	prime minister	60	166	34	—	12	200
Isle of Man	—	⁷⁹	crown dependency (U.K.)	British monarch ⁶⁹	chief minister CM	11	24	24	—	12 ⁸⁰	—
Israel	May 14, 1948	June 1950 ¹⁸	republic	president	prime minister	120	—	6	15	12	2
Italy	March 17, 1861	Jan. 1, 1948	republic	president	prime minister	322	630	20	110	12	81
Jamaica	Aug. 6, 1962	Aug. 6, 1962	constitutional monarchy	British monarch	prime minister	21	60	13	—	12	200
Japan	c. 660 bc	May 3, 1947	constitutional monarchy	⁸²	prime minister	242	480	47	783 ⁸³	12 ⁸⁴	200
Jersey	—	Jan. 1, 1949 ¹⁸	crown dependency (U.K.)	British monarch ⁶⁹	chief minister CM	58	—	—	—	12	—
Jordan	May 25, 1946	Jan. 8, 1952	constitutional monarchy	— king ⁸ —	—	55	110	12	51	3	2
Kazakhstan	Dec. 16, 1991	Sept. 6, 1995	republic	— president ⁸ —	—	47	107	16	169	—	—
Kenya	Dec. 12, 1963	Dec. 12, 1963	republic	— president ⁸ —	—	224	—	8	68	12	200
Kiribati	July 12, 1979	July 12, 1979	republic	— president —	—	46	—	10	—	12 ¹¹	200 ¹¹
Korea, North	Sept. 9, 1948	Sept. 5, 1998	socialist republic	— supreme leader/chairman NDC —	—	687	—	13	173	12	200
Korea, South	Aug. 15, 1948	Feb. 25, 1988	republic	— president ⁸ —	—	299	—	16	165 ⁸⁵	12	200
Kosovo	Feb. 17, 2008	June 15, 2008	transitional republic	president	prime minister	120	—	30	—	—	—
Kuwait	June 19, 1961	Nov. 16, 1962	const. mon. (emirate)	— emir ⁸ —	—	65 ⁸⁶	—	6	71	12	2
Kyrgyzstan	Aug. 31, 1991	Oct. 23, 2007	republic	— president ⁸ —	—	90	—	9	41	—	—
Laos	Oct. 23, 1953	Aug. 15, 1991	people's republic	president	prime minister	115	—	17	139	—	—
Latvia	Nov. 18, 1918	Nov. 7, 1922	republic	president	prime minister	100	—	—	—	12	45
Lebanon	Nov. 26, 1941	Sept. 21, 1990	republic	president	prime minister	128	—	8	25	12	2
Lesotho	Oct. 4, 1966	April 2, 1993	constitutional monarchy	king	prime minister	33 ³²	120	11	129	—	—
Liberia	July 26, 1847	Jan. 6, 1986	republic	— president —	—	30	64	15	136	200	2
Libya	Dec. 24, 1951	—	authoritarian state	leader ⁶⁷	sec. GPC	468	—	22	—	12	25
Liechtenstein	July 12, 1806	March 16, 2003	constitutional monarchy	prince	head of govt.	25	—	11	—	—	—
Lithuania	Feb. 16, 1918	Nov. 6, 1992	republic	president	prime minister	141	—	10	60	12	45
Luxembourg	May 10, 1867	Oct. 17, 1868	constitutional monarchy	grand duke	prime minister	22 ^{32, 88}	60	3	116	—	—
Macau	—	Dec. 20, 1999	⁷⁴	Chinese president	chief executive	29	—	—	—	—	—
Macedonia	Nov. 17, 1991	Nov. 20, 2001	republic	president	prime minister	120	—	84	—	—	—
Madagascar	June 26, 1960	April 8, 1998 ⁸⁹	interim regime	— president HAT ⁸ —	—	33 ⁹⁰	127 ⁹⁰	22	116	12	200
Malawi	July 6, 1964	May 18, 1994	republic	— president —	—	193	—	91	—	—	—
Malaysia	Aug. 31, 1957	Aug. 31, 1957	fed. const. monarchy	paramount ruler	prime minister	70	222	16	142	12	200
Maldives	July 26, 1965	Aug. 7, 2008	republic	— president —	—	77	—	—	—	12 ¹¹	200
Mali	Sept. 22, 1960	Feb. 25, 1992	republic	president	prime minister	147	—	9	49	—	—
Malta	Sept. 21, 1964	Dec. 13, 1974	republic	president	prime minister	69	—	68	—	12	25
Marshall Islands	Dec. 22, 1990	May 1, 1979	republic	— president —	—	12 ³²	33	4	—	12 ¹¹	200
Martinique	—	Feb. 28, 1983	⁵⁷	French president	58	45 ⁵⁹	41 ⁶⁰	4	34	12	200
Mauritania	Nov. 28, 1960	July 21, 1991	republic	— president ⁸ —	—	56	95	13	44	12	200
Mauritius	March 12, 1968	March 12, 1992	republic	president	prime minister	70	—	92	—	12	200
Mayotte	—	July 11, 2001	dept. collectivity (Fr.)	French president	president GC	19	—	17	—	12	200
Mexico	Sept. 16, 1810	Feb. 5, 1917	federal republic	— president —	—	128	500	32	2,454	12	200
Micronesia	Dec. 22, 1990	Jan. 1, 1981	federal republic	— president —	—	14	—	4	74	12	200
Moldova	Aug. 27, 1991	Aug. 27, 1994	parliamentary republic	president	prime minister	101	—	35/1	—	—	—
Monaco	Feb. 2, 1861	April 12, 2002 ³⁵	constitutional monarchy	prince	min. of state ⁹³	24	—	—	—	12	2
Mongolia	March 13, 1921	Feb. 12, 1992	republic	president	prime minister	76	—	21	315	—	—
Montenegro	June 3, 2006	Oct. 22, 2007	republic	president	prime minister	81	—	22	—	—	—
Morocco	March 2, 1956	Oct. 7, 1996	constitutional monarchy	— king ⁸ —	—	270	325	16 ⁸⁴	62 ⁸⁴	12	200
Mozambique	June 25, 1975	Nov. 16, 2004	republic	— president —	—	250	—	11	128	12	200
Myanmar (Burma)	Jan. 4, 1948	Jan. 4, 1974	military regime	— chairman SPDC ⁸ —	—	(492)	—	14	65	12	200
Namibia	March 21, 1990	March 21, 1990	republic	— president —	—	26	78	13	102	12	200
Nauru	Jan. 31, 1968	Jan. 31, 1968	republic	— president —	—	18	—	—	—	12	200
Nepal	Nov. 13, 1769	Jan. 15, 2007 ⁹⁶	republic	president	prime minister	601	—	14	75	—	—
Netherlands	March 30, 1814	Feb. 17, 1983	constitutional monarchy	monarch	prime minister	75	150	12	441	12	25
Netherlands Antilles	—	Dec. 29, 1954	overseas territory (Neth.)	Dutch monarch	¹⁵	22	—	5	—	12	200

[illegible]

Government and international organizations (continued)

country	date of independence ^a	date of current or last constitution ^b	type of government	executive branch ^c		legislative branch ^d		admin. subdivisions		seaward claims	
				chief of state	head of government	upper house (members)	lower house (members)	first-order (number)	second-order (number)	territorial (nautical miles)	fishing/economic (nautical miles)
New Caledonia	—	March 19, 2003	unique collectivity (Fr.)	French president	— ⁶¹	54	—	3	33	12	200
New Zealand	Sept. 26, 1907	June 30, 1852 ¹⁸	constitutional monarchy	British monarch	prime minister	122	—	129 ⁷	74	12	200
Nicaragua	April 30, 1838	Jan. 9, 1987	republic	— president	—	92	—	17	165	12	200
Niger	Aug. 3, 1960	Aug. 18, 2009 ⁹⁶	republic	— president ⁸	—	113	—	8	37	—	—
Nigeria	Oct. 1, 1960	May 5, 1999	federal republic	— president	—	109	360	37	774	12	200 ³⁶
Northern Mariana Is.	—	Jan. 9, 1978	commonwealth (U.S.)	U.S. president	governor	9	20	3	—	12	200
Norway	June 7, 1905	May 17, 1814	constitutional monarchy	king	prime minister	169	—	19	434	4	200 ⁹⁸
Oman	Dec. 20, 1951	Nov. 6, 1996 ⁹⁹	monarchy (sultanate)	— sultan	—	70 ³²	84 ³²	9	61	12	200
Pakistan	Aug. 14, 1947	Aug. 14, 1973	republic	— president ⁸	—	100	342	6 ¹⁰⁰	—	12	200
Palau	Oct. 1, 1994	Jan. 1, 1981	republic	— president	—	13	16	16	—	3	200
Panama	Nov. 3, 1903	Oct. 27, 2004 ³⁵	republic	— president	—	71	—	12	75	12	200
Papua New Guinea	Sept. 16, 1975	Sept. 16, 1975	constitutional monarchy	British monarch	prime minister	109	—	20	87	3/12	200 ¹¹
Paraguay	May 14, 1811	June 22, 1992	republic	— president	—	45 ¹⁰¹	80	18	229	—	—
Peru	July 28, 1821	Dec. 31, 1993	republic	— president ⁸	—	120	—	25	195	200	200
Philippines	July 4, 1946	Feb. 11, 1987	republic	— president	—	24	240	17	81	102	200 ¹¹
Poland	Nov. 10, 1918	Oct. 17, 1997	republic	— president	—	100	460	16	379	12	45
Portugal	c. 1140	April 25, 1976	republic	— president	—	230	—	20	308	12	200
Puerto Rico	—	July 25, 1952	commonwealth (U.S.)	U.S. president	governor	27	51	78	—	12	200
Qatar	Sept. 3, 1971	June 9, 2005	constitutional emirate	— emir ⁸	—	35 ³²	—	10	—	12	45
Réunion	—	Feb. 28, 1983	— ⁵⁷	French president	— ⁵⁸	49 ⁵⁹	45 ⁶⁰	4	24	12	200
Romania	May 21, 1877	Oct. 29, 2003	republic	— president	—	137	334	42	320	12	200
Russia	Dec. 8, 1991	Dec. 24, 1993	federal republic	— president	—	178 ²⁰	450	7	83	12	200
Rwanda	July 1, 1962	June 4, 2003	republic	— president ⁸	—	26	80	5	30	—	—
St. Kitts and Nevis	Sept. 19, 1983	Sept. 19, 1983	constitutional monarchy	British monarch	prime minister	15	—	1	—	12	200
St. Lucia	Dec. 22, 1979	Feb. 22, 1979	constitutional monarchy	British monarch	prime minister	11	17 ¹⁰	—	—	12	200
St. Vincent	Oct. 27, 1979	Oct. 27, 1979	constitutional monarchy	British monarch	prime minister	22	—	—	—	12	200
Samoa	Jan. 1, 1962	Oct. 28, 1960	— ¹⁰³	head of state	prime minister	49	—	11	—	12	200
San Marino	855	Oct. 8, 1600	republic	— captains-regent (2)	—	60	—	9	—	—	—
Sao Tome and Principe	July 12, 1975	Sept. 10, 1990	republic	— president	—	55	—	7	—	12 ¹¹	200 ¹¹
Saudi Arabia	Sept. 23, 1932	— ¹⁰⁴	monarchy	— king	—	150 ³²	—	13	178	12	2
Senegal	Aug. 20, 1960	Jan. 22, 2001	republic	— president ⁸	—	100	150	14	34	12 ²⁵	200 ²⁵
Serbia	June 5, 2006	Nov. 8, 2006	republic	— president	—	250	—	1	25	—	—
Seychelles	June 29, 1976	June 21, 1993	republic	— president	—	34	—	25	—	12	200
Sierra Leone	April 27, 1961	Oct. 1, 1991	republic	— president	—	124	—	19	—	12	200
Singapore	Aug. 9, 1965	June 3, 1959 ¹⁹	republic	— president	—	94	—	—	—	12 ¹⁰⁵	2
Slovakia	Jan. 1, 1993	Jan. 1, 1993	republic	— president	—	150	—	8	79	—	—
Slovenia	June 25, 1991	Dec. 23, 1991	republic	— president	—	40	90	210	—	12 ¹⁰⁶	106
Solomon Islands	July 7, 1978	July 7, 1978	constitutional monarchy	British monarch	prime minister	50	—	10	—	12 ¹¹	200 ¹¹
Somalia	July 1, 1960	March 12, 2004 ¹⁰⁷	transitional regime	— president ⁸ , ¹⁰⁸	—	550 ¹⁰⁹	—	—	—	200	200
South Africa	May 31, 1910	June 30, 1997	republic	— president	—	90	400	9	52	12	200
Spain	1492	Dec. 29, 1978	constitutional monarchy	— king	—	264 ²⁰	350	19	50	12	110
Sri Lanka	Feb. 4, 1948	Sept. 7, 1978	republic	— president ⁸	—	225	—	9	25	12	200
Sudan	Jan. 1, 1956	July 9, 2005 ⁹⁶	interim regime	— president ³⁴	—	50	450	1 ¹¹¹	25	12	2
Suriname	Nov. 25, 1975	Nov. 25, 1987	republic	— president	—	51	—	10	—	12	200
Swaziland	Sept. 6, 1968	Feb. 8, 2006 ¹¹²	monarchy	— kings	—	30 ³²	66 ³²	4	55	—	—
Sweden	before 836	Jan. 1, 1975	constitutional monarchy	— king	—	349	—	21	290	12	106
Switzerland	Sept. 22, 1499	Jan. 1, 2000	federal state	— president FC	—	46	200	26	150	—	—
Syria	April 17, 1946	March 14, 1973	republic	— president	—	250	—	14	60	12	200
Taiwan	—	Dec. 25, 1947 ¹⁸	republic	— president	—	113	—	1	25	24	200
Tajikistan	Sept. 9, 1991	Nov. 6, 1994	republic	— president	—	34 ¹¹³	63	4	58	—	—
Tanzania	Dec. 9, 1961	April 25, 1977	republic	— president	—	323	—	1	26	12	200
Thailand	1350	Aug. 24, 2007	constitutional monarchy	— king	—	150	480	76	877	12	200
Togo	April 27, 1960	Sept. 27, 1992	republic	— president ⁸	—	81	—	31	—	30	200
Tonga	June 4, 1970	Nov. 4, 1875	constitutional monarchy	— king	—	32	—	3	—	12	200
Trinidad and Tobago	Aug. 31, 1962	July 27, 1976	republic	— president	—	31	41	15	—	12 ¹¹	200 ¹¹
Tunisia	March 20, 1956	June 1, 2002 ³⁵	republic	— president	—	126 ²⁰	214	24	264	12	106
Turkey	Oct. 29, 1923	Nov. 7, 1982	republic	— president	—	550	—	81	923	114	200 ¹¹⁵
Turkmenistan	Oct. 27, 1991	Sept. 26, 2008	republic	— president	—	125	—	6	48/13 ¹¹⁶	—	—
Tuvalu	Oct. 1, 1978	Oct. 1, 1986	constitutional monarchy	British monarch	prime minister	15	—	9	—	12 ¹¹	200 ¹¹
Uganda	Oct. 9, 1962	Oct. 8, 1995	republic	— president ⁸	—	320 ¹¹⁷	—	101	—	—	—
Ukraine	Aug. 24, 1991	June 28, 1996 ¹¹⁸	republic	— president	—	450	—	27	490	12	200
United Arab Emirates	Dec. 2, 1971	Dec. 2, 1971	federation of emirates	— president	—	40 ³²	—	7	—	12	200
United Kingdom	Dec. 6, 1921	— ¹¹⁹	constitutional monarchy	— monarch	—	724	646	3	474	12 ⁸⁰	200
United States	July 4, 1776	March 4, 1789	federal republic	— president	—	100	435	51	3,135 ¹²⁰	12	200
Uruguay	Aug. 25, 1828	Feb. 15, 1967	republic	— president	—	31 ¹²¹	99	19	—	12	200
Uzbekistan	Aug. 31, 1991	Dec. 8, 1992	republic	— president ⁸	—	100	120	14	157	—	—
Vanuatu	July 30, 1980	July 30, 1980	republic	— president	—	52	—	6	—	12 ¹¹	200 ¹¹
Venezuela	July 5, 1811	Dec. 20, 1999	federal republic	— president	—	167	—	25	335	12	200
Vietnam	Sept. 2, 1945	Dec. 15, 1992	socialist republic	— president	—	493	—	8	63	12	200
Virgin Islands (U.S.)	—	July 22, 1954	territory (U.S.)	U.S. president	governor	15	—	—	—	12	200
West Bank	—	May 4, 1994 ⁶²	interim authority	— president ¹²²	—	132	—	16 ¹²³	—	—	—
Western Sahara	—	—	annexure of Morocco	—	—	—	—	—	—	12	200
Yemen	December 1918	Sept. 29, 1994	republic	— president	—	111 ³²	301	21	333	12	200
Zambia	Oct. 24, 1964	May 28, 1996 ³	republic	— president	—	158	—	9	72	—	—
Zimbabwe	April 18, 1980	April 18, 1980	transitional regime	— president/prime minister/cabinet ¹²⁵	—	93	210	10	—	—	—

¹Observer. ²Territorial sea claim. ³Date president signed new constitution. ⁴Varies between 32 and 52 nautical miles. ⁵Excludes nonvoting delegate from Swains Island. ⁶Comprises 3 districts and 2 islands. ⁷President of France and Bishop of Urgell, Spain. ⁸Assisted by the prime minister. ⁹Excludes 3 unfilled seats reserved for Angolans living abroad. ¹⁰Excludes possible ex officio members. ¹¹Measured from claimed archipelagic baselines. ¹²Promulgation date of significant amendments to July 9, 1853, constitution. ¹³Represents the number of departments (including 2 "claimed only" departments in Tierra del Fuego province). ¹⁴Date of referendum adopting significant amendments to 1995 constitution. ¹⁵Executive responsibilities divided between (for the Netherlands) the governor and (locally) the prime minister. ¹⁶Associate member. ¹⁷Formally a constitutional monarchy. ¹⁸Evolving body of constitutional law. ¹⁹Date of referendum approving significant constitutional amendments. ²⁰Statutory number of seats. ²¹Defined by equidistant line. ²²Per nondemocratic national referendum of Nov. 24, 1996, amending the constitution. ²³Excludes children of the monarch serving ex officio from age 18. ²⁴3 autonomous regions/3 linguistic communities. ²⁵Defined by coordinates of points. ²⁶Excludes speaker who may be designated from outside of the legislative house. ²⁷6 districts; 8 town boards. ²⁸3 nautical miles from the mouth of the Sarstoon River (southern boundary with Guatemala) to Ranguana Caye. ²⁹Executive responsibilities divided between (for the U.K.) the governor and (locally) the premier. ³⁰Date of international treaty confirming the existence of a single state; the treaty included a constitution now in force. ³¹Tripartite presidency under the final authority of the high representative/special representative. ³²Body with limited or no legislative authority. ³³Emergency powers since 1962. ³⁴Assisted by vice presidents. ³⁵Date significant amendments were adopted. ³⁶Cameroon-Nigeria maritime boundary over oil fields delimited in 2007. ³⁷Governor-general can exercise all the powers of the reigning monarch of the Commonwealth. ³⁸Implementation pending in late 2009. ³⁹127 towns; 429 municipalities. ⁴⁰Defined by geographical coordinates. ⁴¹Suspension of Cuba from 1962 revoked in June 2009, but Cuba rejects membership. ⁴²Republic of Cyprus only. ⁴³24 seats reserved for Turkish Cypriots are not occupied. ⁴⁴Represents number of municipalities (local governments for urban areas only). ⁴⁵National legislation in possible conjunction with a median (equidistant) line delimits maritime boundaries with adjacent states. ⁴⁶Around the Galápagos Islands and the marine area directly west of mainland Ecuador toward the Galápagos Islands only. ⁴⁷Limits of economic zones between Egypt and Cyprus were defined by agreement in 2003. ⁴⁸Constitution adopted in May 1997 had not been implemented by November 2009. ⁴⁹Partially delimited by Eritrean-Yemeni arbitration. ⁵⁰Defined by coordinates in some parts of the Gulf of Finland. ⁵¹Number of zones. ⁵²Overseas administrative division (Denmark). ⁵³Executive responsibilities divided between (for Denmark) the high commissioner and (locally) the prime minister. ⁵⁴Suspended membership. ⁵⁵To as little as 3 nautical miles in particular circumstances. ⁵⁶Excludes overseas departments. ⁵⁷Overseas department/overseas region (France). ⁵⁸Executive responsibilities divided among (for France) the prefect and (locally) the president of the General Council and the president of the Regional

Area and population

This table provides the area and particular populations for each of the countries of the world and for all but the smallest political dependencies having a permanent civilian population. The data represent the latest published and unpublished data for both the surveyed area of the countries and their populations, the latter as of a single recent year (2009), as of a recent census to provide the fullest comparison of certain demographic measures that are not always available between successive national censuses, and as of decade population estimates over a seventy year (1960–2030) span. The 2009 midyear estimates (as a population estimate by decade) are based on a combination of national sources (both print and online), the United Nations *World Population Prospects: The 2008 Revision*, the U.S. Bureau of the Census International Data Base, databases of other international organizations, and *Encyclopædia Britannica*'s own estimates.

One principal point to bear in mind when studying these statistics is that all of them, whatever degree of precision may be implied by the exactness of the numbers, are estimates—all of varying, and some of suspect, accuracy—even when they *contain* a very full enumeration. The United States—which has a long tradition both of census taking and of the use of the most sophisticated analytical tools in processing the data—is unable to determine within 1.2% (the estimated 2000 undercount) its total population nationally. And that is an *average* underenumeration. In states and larger cities, where enumeration of particular populations, including illegal, is more difficult, the accuracy of the enumerated count may be off as much as 3.1% at a state level (in New Mexico, for instance) and by a greater percent for a single city. The high accuracy attained by census operations in China may approach 0.25% of rigorously maintained civil population

registers. Other national census operations not so based, however, are inherently less accurate. For example, Ethiopia's first-ever census in 1984 resulted in figures that were 30% or more above prevailing estimates. An undercount of 2–8% is more typical, but even census operations offering results of 30% or more above or below prevailing estimates can still represent well-founded benchmarks from which future planning may proceed. The editors have tried to take account of the range of variation and accuracy in published data, but it is difficult to establish a value for many sources of inaccuracy unless some country or agency has made a conscientious effort to establish both the relative accuracy (precision) of its estimate and the absolute magnitude of the quantity it is trying to measure—for example, the number of people in Cambodia who died at the hands of the Khmer Rouge. If a figure of 2,000,000 is adopted, what is its accuracy: ± 1%, 10%, 50%? Are the original data documentary or evidentiary, complete or incomplete, analytically biased or unbiased, in good agreement with other published data?

Many similar problems exist and in endless variations: What is the extent of eastern European immigration to western Europe in search of jobs? And how many of these migrants have returned to their home countries in the recent past? How many registered and unregistered refugees from Afghanistan, The Sudan, or Iraq are there in surrounding countries? How many undocumented aliens are there in the United Kingdom, Japan, or the United States? How many Tamils have left Sri Lanka as a result of civil unrest in their homeland? How many Amerindians exist (remain, preserving their original language and a mode of life unassimilated by the larger national culture) in the countries of South America?

Area and population

country	area			population (latest estimate)					population (recent census)				
	square miles	square kilo-metres	rank	total midyear 2009	rank	density		% annual growth rate 2004–09	census year	total	male (%)	female (%)	urban (%)
						per sq mi	per sq km						
Afghanistan	249,347	645,807	41	28,150,000	43	112.9	43.6	3.6	2002	21,800,000 ¹	51.6 ¹	48.4 ¹	22.4 ²
Albania	11,082	28,703	142	3,191,000	134	287.9	111.2	0.5	2001	3,069,275	49.9	50.1	42.2
Algeria	919,595	2,381,741	11	35,369,000	35	38.5	14.9	1.6	2008	34,229,692 ³	50.5 ³	49.5 ³	63.3 ⁴
American Samoa	77	200	209	64,800	208	841.6	324.0	1.3	2000	57,291	51.1	48.9	46.6 ⁶
Andorra	179	464	195	85,200	203	476.0	183.6	2.7	2007 ^{7, 8}	83,137	52.3 ⁹	47.7 ⁹	91.0 ⁴
Angola	481,354	1,246,700	24	18,498,000	59	38.4	14.8	2.8	1970	5,673,046	52.1	47.9	14.2
Antigua and Barbuda	171	442	198	85,600	202	500.6	193.7	1.3	2001	75,078 ¹⁰	47.6	52.4	37.1 ¹¹
Argentina	1,073,520	2,780,403	8	40,276,000	32	37.5	14.5	1.0	2001	36,260,130	48.7	51.3	88.3 ¹¹
Armenia	11,484	29,743	141	3,083,000	136	268.5	103.7	0.1	2001	3,002,594	46.9	53.1	64.8
Aruba	75	193	210	107,000	195	1,426.7	554.4	1.8	2000	90,506	48.0	52.0	50.5 ⁶
Australia	2,969,978	7,692,208	6	21,829,000	52	7.3	2.8	1.6	2006	19,855,288 ¹³	49.4	50.6	88.2 ⁴
Austria	32,386	83,879	113	8,378,000	91	258.7	99.9	0.5	2001	8,032,926	48.4	51.6	66.8
Azerbaijan	33,436	86,600 ¹⁴	112	8,832,000	89	264.1	102.0	1.1	1999	7,953,438	48.8	51.2	56.9 ¹⁵
Bahamas, The	5,382	13,939	159	342,000	178	63.5	24.5	1.3	2000	303,611	48.7	51.3	88.4 ⁶
Bahrain	290	750	187	1,168,000	157	4,027.6	1,557.3	7.2	2001	650,604	57.4	42.6	88.4
Bangladesh	56,977	147,570	93	156,051,000	7	2,738.8	1,057.5	1.4	2001	123,151,246 ¹³	50.9	49.1	23.4
Barbados	166	430	199	276,000	182	1,662.7	641.9	0.2	2000	250,010 ¹⁶	48.0	52.0	50.0 ⁶
Belarus	80,153	207,595	85	9,658,000	85	120.4	46.5	−0.3	1999	10,045,237	47.0	53.0	69.3
Belgium	11,787	30,528	139	10,779,000	75	914.5	353.1	0.7	2008 ^{7, 8}	10,666,866	49.0	51.0	97.3 ⁴
Belize	8,867	22,965	150	334,000	179	37.7	14.5	3.5	2000	240,204	50.5	49.5	47.7
Benin	43,484	112,622	101	8,792,000	90	202.2	78.1	3.2	2002	6,769,914	48.5	51.5	38.9
Bermuda	21	54	216	67,800	206	3,228.6	1,255.6	0.8	2000 ¹⁸	62,059	48.0	52.0	100.0
Bhutan	14,824	38,394	135	691,000	164	46.6	18.0	1.4	2005	672,425 ^{13, 16}	54.2	45.8	30.9
Bolivia	424,164	1,098,581	28	9,775,000	83	23.0	8.9	1.9	2001	8,274,325	49.8	50.2	62.4
Bosnia and Herzegovina	19,772	51,209	127	3,835,000	127	194.0	74.9	−0.0	1991	4,377,033	49.9	50.1	39.6
Botswana	224,848	582,356	47	1,991,000	146	8.9	3.4	1.9	2001	1,680,863	48.4	51.6	51.5
Brazil	3,287,612	8,514,877	5	191,481,000	5	58.2	22.5	1.1	2000	169,872,856	49.2	50.8	81.2
Brunei	2,226	5,765	170	400,000	177	179.7	69.4	2.0	2001	332,844	50.8	49.2	72.8 ¹¹
Bulgaria	42,858	111,002	103	7,584,000	94	177.0	68.3	−0.5	2001	7,928,901	48.7	51.3	69.0
Burkina Faso	103,456	267,950	75	15,757,000	63	152.3	58.8	3.5	2006	14,017,262	48.3	51.7	22.7
Burundi	10,740	27,816	145	8,303,000	92	773.1	298.5	3.0	1990 ¹⁸	5,292,793	48.6	51.4	6.3
Cambodia	69,898	181,035	89	14,494,000	66	207.4	80.1	1.7	2008	13,388,910 ¹⁶	48.5	51.5	19.5
Cameroon	183,920	476,350	53	19,522,000	58	106.1	41.0	2.3	1987	10,516,232	49.0	51.0	38.3
Canada	3,855,103	9,984,670	2	33,687,000	36	8.7	3.4	1.1	2006	31,612,897 ¹³	49.0 ¹³	51.0 ¹³	80.1 ⁴
Cape Verde	1,557	4,033	172	509,000	171	326.9	126.2	1.7	2000	434,625	48.5	51.5	53.4
Cayman Islands	102	264	208	55,000	210	539.2	208.3	3.8	1999	39,020 ²⁴	48.8 ²⁴	51.2 ²⁴	100.0 ⁶
Central African Republic	240,324	622,436	43	4,511,000	119	18.8	7.2	1.5	2003	3,151,072 ¹²	49.8 ¹²	50.2 ¹²	37.9 ¹²
Chad	495,755	1,284,000	21	10,329,000	78	20.8	8.0	2.6	1993	6,279,931	47.9	52.1	21.4
Chile	291,930	756,096	38	16,602,000	60	56.9	22.0	0.9	2002	15,116,435	49.3	50.7	86.6
China	3,696,100	9,572,900	3	1,331,433,000	1	360.2	139.1	0.5	2000	1,265,830,000	51.6	48.4	36.2
Colombia	440,831	1,141,748	26	44,972,000	29	102.0	39.4	1.2	2005	42,090,502	49.1	50.9	75.0
Comoros	719	1,862	178	676,000	165	940.2	363.1	2.3	2003	575,660	49.6	50.4	27.9
Congo, Dem. Rep. of the	905,355	2,344,858	12	66,020,000	19	72.9	28.2	2.9	1984	29,671,407	49.2	50.8	29.1 ²⁵
Congo, Rep. of the	132,047	342,000	64	3,683,000	128	27.9	10.8	2.0	1984 ¹⁸	1,909,248	48.7	51.3	52.0
Costa Rica	19,730	51,100	128	4,509,000	120	228.5	88.2	1.4	2000	3,810,179	49.9	50.1	59.0
Côte d'Ivoire	123,863	320,803	68	20,617,000	55	166.5	64.3	2.2	1998	15,366,672	51.0	49.0	43.6 ⁶
Croatia	21,831	56,542	126	4,431,000	121	203.0	78.4	−0.0	2001	4,437,460	48.1	51.9	58.1 ¹¹
Cuba	42,427	109,886	104	11,235,000	74	264.8	102.2	−0.0	2002	11,177,743	50.1	49.9	75.9
Cyprus ²⁶	3,572	9,251	167	1,084,000	159	303.5	117.2	2.1	2001 ²⁷	689,565	49.1	50.9	68.8
Czech Republic	30,451	78,867	116	10,504,000	77	344.9	133.2	0.6	2001	10,230,060	48.7	51.3	74.6
Denmark	16,640	43,098	132	5,523,000	109	331.9	128.1	0.4	2008 ⁷	5,475,791	49.5	50.5	86.3
Djibouti	8,950	23,200	149	864,000	160	96.5	37.2	1.8	1983	273,974	51.9	48.1	82.8 ²⁵
Dominica	290	751	186	71,900	205	250.0	96.7	0.4	2001	71,239	51.0	49.0	71.4 ¹¹
Dominican Republic	18,792	48,671	130	9,749,000	84	518.8	200.3	1.4	2002	8,562,541	49.8	50.2	63.6
East Timor	5,760	14,919	158	1,110,000	158	192.7	74.4	3.1	2004	923,198	50.9	49.1	8.4

Still, much information is accurate, well founded, and updated regularly. The sources of these data are censuses; national population registers (cumulated periodically); registration of migration, births, deaths, and so on; sample surveys to establish demographic conditions; and the like.

The statistics provided for area and population by country are ranked, and the population densities based on those values are also provided. The population densities, for purposes of comparison within this table, are calculated on the bases of the 2009 midyear population estimate as shown and of total area of the country. Elsewhere in individual country presentations the reader may find densities calculated on more specific population figures and more specialized area bases: land area for Finland (because of its many lakes) or ice-free area for Greenland (most of which is ice cap). The data in this section conclude with the estimated average annual growth rate for the country (including both natural growth and net migration) during the five-year period 2004–2009.

In the section containing census data, information supplied includes the census total (more often de facto, the population actually present, rather than de jure, the population legally resident, who might be anywhere); the male-female breakdown; the proportion that is urban (usually according to the country's own definition); and finally an analysis of the age structure of the population by 15-year age groups. This last analysis may be particularly useful in distinguishing the type of population being recorded—young, fast-growing nations show a high proportion of people under 30 (many countries in sub-Saharan Africa have about 40% of their population under 15 years), while other nations (for example, Sweden, which suffered no age-group losses in World War II) exhibit quite uniform proportions.

Finally, a section is provided giving the population of each country at 10-year intervals from 1960 to 2030 based on sources cited earlier. The projections for 2010, 2020, and 2030 represent the best fit of available data through late summer 2009. The evidence of the last 30 years with respect to similar estimates published about 1970, however, shows how cloudy is the glass through which these numbers are read. In 1970 no respectable Western analyst would have imagined proposing that mainland China could achieve the degree of birth control that it apparently has since then; on the other hand, even the Chinese admit that their methods have been somewhat Draconian and that they have already seen some backlash in terms of higher birth rates among those who have so far postponed larger families. How much is “some” by 2020 or 2030? Compound that problem with all the social, economic, political, and biological factors (including the impact of AIDS) that can affect 220 countries' populations, and the difficulty facing the prospective compiler of such projections may be appreciated.

Specific data about the vital rates affecting the data in this table may be found in great detail in both the country statistical boxes in “The Nations of the World” section and in the *Vital statistics, marriage, family* table, beginning at page 774.

Percentages in this table for male and female population will always total 100.0, but percentages by age group may not, for reasons such as non-response on census forms, “don't know” responses (which are common in countries with poor birth registration systems), and the like.

							population (by decade, '000s)							country	
age distribution (%)							1960	1970	1980	1990	2000	2010 projection	2020 projection	2030 projection	
0–14	15–29	30–44	45–59	60–74	75 and over										
	45.4 ¹	23.4 ¹	15.2 ¹	9.9 ¹	—6.1 ¹ —		9,616	11,840	13,946	12,580	20,536	29,117	39,585	50,649	Afghanistan
	29.3	24.1	21.2	14.2	8.7	2.5	1,611	2,136	2,671	3,289	3,068	3,205	3,376	3,455	Albania
	26.3 ⁵	32.0 ⁵	22.2 ⁵	12.3 ⁵	5.3 ⁵	1.9 ⁵	10,800	13,746	18,811	25,283	30,506	35,866	41,229	45,385	Algeria
	38.8	25.5	19.4	10.8	4.5	1.0	20	27	32	47	58	66	75	84	American Samoa
	14.6	19.0	29.1	20.8	10.3	6.2	8	20	34	53	66	87	94	94	Andorra
	41.7	23.2	17.0	7.4	3.8	1.0	5,012	6,083	7,854	10,661	14,280	18,993	24,507	30,416	Angola
	26.4 ¹²	25.4 ¹²	23.9 ¹²	13.9 ¹²	—10.4 ¹² —		55	66	69	64	75	87	98	109	Antigua and Barbuda
	28.3	25.0	18.6	14.7	9.3	4.1	20,685	24,003	28,154	32,498	36,939	40,666	44,304	47,255	Argentina
	24.8	24.9	21.8	13.6	12.1	2.8	1,867	2,518	3,096	3,545	3,076	3,090	3,175	3,170	Armenia
	23.2	19.4	28.0	18.2	8.6	2.6	57	61	60	63	91	108	112	113	Aruba
	19.8	20.1	21.9	20.1	11.7	6.4	10,315	12,552	14,471	17,065	19,153	22,218	24,721	26,907	Australia
	16.9	18.6	24.9	18.6	13.8	7.2	7,047	7,467	7,549	7,678	8,012	8,408	8,704	8,989	Austria
	31.8	25.6	24.1	9.5	7.6	1.4	3,894	5,172	6,161	7,212	8,121	8,934	9,838	10,323	Azerbaijan
	29.6	25.8	24.2	12.6	5.9	1.9	110	170	210	256	304	347	389	426	Bahamas, The
	27.9	27.5	29.6	11.0	3.2	0.8	149	210	334	503	629	1,215	1,435	1,634	Bahrain
	35.9	31.5	17.6	9.9	4.0	1.1	54,593	67,331	87,937	111,437	136,681	158,066	180,753	204,142	Bangladesh
	21.8	22.5	24.4	16.0	—15.3 ¹ —		232	239	252	263	269	276	285	288	Barbados
	19.5	21.8	23.4	16.4	—18.9 ¹ —		8,190	9,040	9,650	10,186	10,005	9,631	9,268	8,820	Belarus
	16.7 ¹⁷	18.3 ¹⁷	20.9 ¹⁷	21.1 ¹⁷	14.4 ¹⁷	8.6 ¹⁷	9,153	9,690	9,859	9,967	10,251	10,857	11,399	11,825	Belgium
	41.0	27.7	17.4	8.1	—5.8 ¹ —		90	120	146	189	250	346	417	484	Belize
	46.8	—47.7 ¹ —	—	—	—5.5 ¹ —		2,055	2,620	3,458	4,705	6,619	9,056	11,956	15,248	Benin
	19.1	18.4	27.9	19.6	10.9	4.1	44	53	55	58	63	68	72	73	Bermuda
	33.1 ¹⁹	32.0 ¹⁹	17.5 ¹⁹	10.4 ¹⁹	5.5 ¹⁹	1.5 ¹⁹	212	309	446	615	606	700	782	855	Bhutan
	38.6	27.4	17.0	10.0	5.2	1.8	3,434	4,346	5,441	6,574	8,195	9,947	11,640	13,262	Bolivia
	23.5 ²⁰	26.3 ²⁰	22.6 ²⁰	16.9 ²⁰	8.9 ²⁰	2.7 ²⁰	3,180	3,564	3,914	4,308	3,781	3,829	3,744	3,584	Bosnia and Herzegovina
	36.8	31.1	17.0	8.4	—6.7 ¹ —		497	584	900	1,265	1,680	2,029	2,312	2,519	Botswana
	29.6	28.2	21.1	12.5	6.5	2.1	72,742	95,989	118,563	146,593	171,280	193,253	207,143	216,410	Brazil
	30.3	29.0	26.2	10.2	—4.3 ¹ —		82	130	193	257	333	407	478	547	Brunei
	15.0 ²¹	21.3 ²¹	20.4 ²¹	20.9 ²¹	16.1 ²¹	6.3 ²¹	7,867	8,490	8,862	8,718	7,973	7,545	7,165	6,731	Bulgaria
	46.4 ²²	26.2 ²²	14.3 ²²	7.6 ²²	3.8 ²²	1.2 ²²	4,721	5,608	6,862	8,814	11,676	16,287	21,871	27,940	Burkina Faso
	46.4 ²³	25.3 ²³	15.4 ²³	7.0 ²³	4.0 ²³	1.7 ²³	2,940	3,514	4,130	5,681	6,473	8,519	10,318	11,936	Burundi
	33.2 ²⁵	33.7 ²⁵	17.2 ²⁵	10.4 ²⁵	4.4 ²⁵	1.1 ²⁵	5,761	7,396	6,888	9,345	12,396	14,753	17,601	20,183	Cambodia
	46.4	24.5	14.6	8.7	4.1	1.6	5,408	6,839	9,080	12,233	15,865	19,958	24,349	28,602	Cameroon
	16.9 ⁹	20.2 ⁹	21.6 ⁹	22.0 ⁹	12.3 ⁹	7.0 ⁹	18,267	21,750	24,593	27,791	31,100	34,057	37,284	40,294	Canada
	43.6 ⁶	24.8 ⁶	17.1 ⁶	5.8 ⁶	6.3 ⁶	2.4 ⁶	196	267	289	355	437	518	622	687	Cape Verde
	19.5	22.4	33.4	16.4	6.2	2.1	8	10	17	26	40	56	64	73	Cayman Islands
	42.8 ²	27.9 ²	15.3 ²	7.8 ²	4.9 ²	1.3 ²	1,467	1,839	2,349	3,085	3,940	4,579	5,225	5,744	Central African Republic
	48.0	24.6	14.7	7.2	4.2	1.3	3,042	3,727	4,522	5,841	7,943	10,543	12,756	15,114	Chad
	25.7	24.3	23.6	15.0	8.3	3.1	7,585	9,369	11,094	13,129	15,156	16,746	18,058	18,984	Chile
	22.9	25.4	25.6	15.7	8.2	2.2	650,661	820,403	984,736	1,148,364	1,268,853	1,338,342	1,409,432	1,440,274	China
	30.8 ⁴	27.2 ⁴	21.3 ⁴	13.3 ⁴	5.5 ⁴	1.9 ⁴	16,841	22,500	28,356	34,875	40,282	45,508	50,912	55,768	Colombia
	...	...	...	...	...	...	193	238	329	438	552	691	838	975	Comoros
	47.3 ²⁵	25.9 ²⁵	14.1 ²⁵	8.1 ²⁵	3.8 ²⁵	0.8 ²⁵	15,385	20,285	27,170	37,016	50,829	67,827	87,640	108,594	Congo, Dem. Rep. of the
	44.7	27.2	13.3	9.1	4.6	0.7	1,011	1,333	1,815	2,446	3,036	3,759	4,699	5,479	Congo, Rep. of the
	31.9	27.1	21.7	11.4	5.7	2.2	1,276	1,780	2,316	3,057	3,929	4,564	5,084	5,563	Costa Rica
	42.9	29.6	16.4	7.2	—3.9 ¹ —		3,576	5,579	8,593	12,491	16,885	21,059	25,504	29,724	Côte d'Ivoire
	17.1	20.4	21.4	19.5	16.3	5.3	4,036	4,205	4,383	4,508	4,453	4,428	4,335	4,197	Croatia
	20.5	21.2	27.0	16.6	10.2	4.5	7,141	8,710	9,823	10,605	11,142	11,232	11,207	11,033	Cuba
	21.6	22.4	22.1	17.8	11.2	4.9	573	615	658	751	906	1,100	1,284	1,430	Cyprus ²⁶
	16.3	23.5	20.1	21.8	12.8	5.5	9,539	9,805	10,326	10,363	10,273	10,577	10,737	10,688	Czech Republic
	18.4	17.7	21.6	20.0	15.4	6.9	4,581	4,929	5,123	5,140	5,337	5,555	5,705	5,853	Denmark
	39.4	32.9	16.9	7.4	2.8	0.6	85	162	340	560	730	879	1,027	1,192	Djibouti
	32.7	28.4	17.2	9.5	—12.2 ¹ —		60	70	74	70	71	72	75	77	Dominica
	34.0	27.0	20.0	11.0	5.8	2.2	3,294	4,502	5,808	7,179	8,554	9,884	11,055	12,010	Dominican Republic
	43.2	24.7	17.0	9.4	4.5	1.2	509	598	557	746	847	1,143	1,467	1,800	East Timor

Area and population (continued)

country	area			population (latest estimate)					population (recent census)				
	square miles	square kilo-metres	rank	total midyear 2009	rank	density		% annual growth rate 2004–09	census year	total	male (%)	female (%)	urban (%)
						per sq mi	per sq km						
Ecuador	105,037	272,045	73	14,005,000	68	133.3	51.5	1.4	2001	12,156,608	49.5	50.5	61.0 ²⁸
Egypt	386,874	1,002,000	30	82,999,000	14	214.5	82.8	1.9	2006	72,579,030 ¹⁶	51.1	48.9	42.6
El Salvador	8,124	21,041	152	6,192,000	103	762.2	294.3	1.1	2007	5,744,113	47.3	52.7	62.7
Equatorial Guinea	10,831	28,051	144	633,000	166	58.4	22.6	2.8	2002	1,014,999 ²⁹	49.4 ²⁹	50.6 ²⁹	45.2 ⁶
Eritrea	46,774	121,144	99	5,073,000	113	108.5	41.9	3.3	1984	2,703,998	49.9	50.1	15.1
Estonia	17,462	45,227	131	1,340,000	153	76.7	29.6	−0.1	2000	1,370,052	46.1	53.9	69.2
Ethiopia	435,186	1,127,127	27	82,825,000	15	190.3	73.5	2.6	2007	73,918,505 ³¹	50.5	49.5	16.2
Faroe Islands	540	1,399	180	48,900	214	90.6	35.0	0.3	2007 ^{7, 8}	48,327	52.0	48.0	40.1 ⁹
Fiji	7,055	18,272	155	845,000	161	119.8	46.2	0.7	2007	837,271	50.7	49.3	50.7
Finland	130,667	338,425	65	5,339,000	112	40.9	15.8	0.4	2008 ^{7, 8}	5,300,484	49.0	51.0	62.4 ⁴
France ³²	210,026	543,965	48	62,596,000	21	298.0	115.1	0.6	1999	58,518,748	48.6	51.4	75.5
French Guiana	32,253	83,534	115	231,000	186	7.2	2.8	3.3	1999	157,274	50.4	49.6	77.8 ¹⁵
French Polynesia	1,544	4,000	173	265,000	183	171.6	66.3	1.2	2007	259,596 ¹⁶	51.2 ³³	48.8 ³³	51.6 ⁴
Gabon	103,347	267,667	76	1,475,000	152	14.3	5.5	1.9	1993	1,011,710	49.3	50.7	73.2
Gambia, The	4,491	11,632	162	1,705,000	148	379.6	146.6	2.9	2003	1,364,507	49.6	50.4	26.1 ²
Gaza Strip	140	363	202	1,492,000	151	10,657.1	4,110.2	3.3	2007	1,416,539	50.7	49.3	...
Georgia	27,086 ³⁵	70,152 ³⁵	121	4,368,000 ³⁶	122	196.4 ³⁶	75.8 ³⁶	0.2	2002	4,371,534 ³⁷	47.2	52.8	52.3
Germany	137,882	357,114	63	82,000,000	16	594.7	229.6	−0.1	2007 ^{7, 8}	82,314,900	49.0	51.0	73.4 ⁴
Ghana	92,098	238,533	81	23,832,000	48	258.8	99.9	2.0	2000	18,912,079	49.5	50.5	43.8
Greece	50,949	131,957	96	11,285,000	73	221.5	85.5	0.4	2001	10,964,020	49.5	50.5	72.8
Greenland	836,330	2,166,086	13	56,100	209	0.07	0.03	−0.3	2008 ^{7, 8}	56,462	52.9	47.1	82.2 ²
Grenada	133	344	204	107,000	195	804.5	311.0	0.4	2001	102,632	49.2	50.8	38.4
Guadeloupe	629	1,630	179	408,000	174	648.6	250.3	0.5	1999	422,496 ³⁹	48.1 ³⁹	51.9 ³⁹	99.7 ^{15, 39}
Guam	217	561	193	184,000	189	847.9	328.0	2.0	2000	154,805	51.1	48.9	93.2 ⁶
Guatemala	42,130	109,117	105	14,027,000	67	332.9	128.6	2.5	2002	11,237,196	48.9	51.1	46.1
Guernsey	30	78	214	65,300	207	2,176.7	837.2	0.6	2001	59,807 ⁴⁰	48.7	51.3	28.9 ^{11, 41}
Guinea	94,918	245,836	78	10,699,000	80	106.1	41.0	2.2	1996	7,165,750	48.8	51.2	26.0
Guinea-Bissau	13,948	36,125	137	1,534,000	150	110.0	42.5	2.0	1991	983,367	48.4	51.6	20.3 ²⁰
Guyana	83,012	214,999	84	769,000	163	9.3	3.6	0.3	2002	751,223	50.1	49.9	28.4
Haiti	10,695	27,700	146	9,521,000	86	890.2	343.7	2.1	2003	8,373,750	48.2	51.8	40.8
Honduras	43,433	112,492	102	7,466,000	95	171.9	66.4	2.0	2001	6,535,344	49.4	50.6	44.8
Hong Kong	426	1,104	182	7,038,000	98	16,521.1	6,375.0	0.7	2006	6,864,346	47.7	52.3	100.0
Hungary	35,919	93,030	109	10,021,000	81	279.0	107.7	−0.2	2001	10,198,135	47.6	52.4	64.3
Iceland	39,769	103,000 ⁴⁴	106	318,000	180	8.0	3.1	1.7	2008 ^{7, 8}	313,376	50.9	49.1	93.1
India	1,222,559	3,166,414	7	1,198,003,000	2	979.9	378.3	1.5	2001	1,028,610,328	51.7	48.3	27.8
Indonesia	718,289	1,860,360	16	229,965,000	4	320.2	123.6	1.2	2000	206,264,595	50.1	49.9	42.0
Iran	636,374	1,648,200	18	74,196,000	17	116.6	45.0	1.2	2006	70,495,782	50.9	49.1	68.5
Iraq	167,618	434,128	58	30,747,000 ⁴⁵	39	183.4	70.8	2.2	1997	21,941,050	49.7	50.3	67.9
Ireland	27,133	70,273	122	4,553,000	118	167.8	64.8	2.2	2006	4,239,848	50.0	50.0	60.5 ⁴
Isle of Man	221	572	192	81,500	204	368.8	142.5	0.7	2006	80,058	49.4	50.6	71.6
Israel ^{47, 48}	8,357	21,643	151	7,128,000	97	852.9	329.3	1.6	1995 ^{18, 49}	5,548,523	49.3	50.7	92.9 ²⁵
Italy	116,346	301,336	71	60,325,000	23	518.5	200.2	0.7	2001	56,995,744	48.4	51.6	67.3
Jamaica	4,244	10,991	163	2,702,000	140	636.7	245.8	0.5	2001	2,607,632	49.2	50.8	52.0
Japan	145,920	377,930	62	127,556,000	10	874.2	337.5	−0.0	2005	127,756,000	48.6	51.4	86.3
Jersey	46	118	213	92,300	200	2,006.5	782.2	1.0	2001	87,186	48.7	51.3	28.9 ^{11, 41}
Jordan	34,277	88,778	111	5,981,000	105	174.5	67.4	2.3	2004	5,103,639	51.5	48.5	78.3
Kazakhstan	1,052,090	2,724,900	9	15,881,000	62	15.1	5.8	1.1	1999	14,953,126	48.2	51.8	55.9
Kenya	224,961	582,646	46	39,802,000	34	176.9	68.3	2.7	1999	28,686,607	49.5	50.5	32.2 ¹⁵
Kiribati	313	811	184	99,000	199	316.3	122.1	1.9	2005	92,533	49.3	50.7	47.5 ⁴
Korea, North	47,399	122,762	98	24,162,000	47	509.8	196.8	0.6	2008	24,051,218 ¹⁶	48.7	51.3	61.6 ⁴
Korea, South	38,486	99,678	107	48,333,000	25	1,255.9	484.9	0.4	2005	47,278,951	50.0	50.0	81.5
Kosovo	4,212	10,908	164	1,805,000	147	428.5	165.5	0.5	1991	1,956,196	51.6	48.4	...
Kuwait	6,880	17,818	156	3,442,000	131	500.3	193.2	5.4	2005	2,213,403 ⁵⁰	59.2	40.8	98.3 ⁴
Kyrgyzstan	77,182	199,900	86	5,345,000	111	69.3	26.7	1.1	1999	4,822,938	49.4	50.6	34.8
Laos	91,429	236,800	83	6,320,000	102	69.1	26.7	1.8	2005	5,621,982	49.8	50.2	27.1
Latvia	24,926	64,559	124	2,256,000	141	90.5	34.9	−0.5	2000	2,377,383	46.1	53.9	68.1
Lebanon	4,016	10,400	166	4,224,000	124	1,051.8	406.2	1.0	1997	4,005,025 ⁵¹	50.2 ⁵¹	49.8 ⁵¹	85.0 ²⁵
Lesotho	11,720	30,355	140	2,067,000	143	176.4	68.6	0.9	2006 ^{16, 18}	1,880,661	48.7	51.3	23.8
Liberia	37,743	97,754	108	3,955,000	126	105.6	40.8	4.2	2008	3,476,608	50.0	50.0	59.0 ⁹
Libya	686,127	1,777,060	17	6,420,000	100	9.4	3.6	2.0	2006	5,673,031	51.9	48.1	77.0 ⁴
Liechtenstein	62	160	212	35,700	215	575.8	223.1	0.7	2008 ^{7, 8}	35,356	49.3	50.7	14.3 ⁴
Lithuania	25,212	65,300	123	3,339,000	133	132.4	51.1	−0.6	2001	3,483,972	46.8	53.2	66.9
Luxembourg	999	2,586	175	498,000	172	498.5	192.6	1.7	2001	439,539	49.3	50.7	91.9 ¹¹
Macau	11.3	29.2	217	543,000	168	48,053.1	18,595.9	3.6	2006	502,113	48.8	51.2	100.0
Macedonia	9,928	25,713	148	2,052,000	144	206.7	79.8	0.2	2002	2,022,547	50.2	49.8	59.5 ²
Madagascar	226,662	587,051	45	19,625,000	57	86.6	33.4	2.8	1993	12,238,914	49.7	50.3	22.9
Malawi	45,747	118,484	100	15,029,000	65	328.5	126.8</						

							population (by decade, '000s)							country	
							1960	1970	1980	1990	2000	2010 projection	2020 projection		2030 projection
	age distribution (%)														
	0–14	15–29	30–44	45–59	60–74	75 and over									
	34.0 ²⁸ 31.8 33.9 42.5 ³⁰ 46.1	28.0 ²⁸ -----48.2----- 26.9 26.3 ³⁰ 23.0	19.0 ²⁸ ----- 18.5 16.1 ³⁰ 15.9	10.0 ²⁸ ----- 13.7 11.3 8.7 ³⁰ 8.9	6.0 ²⁸ -----6.3----- 6.5 5.2 ³⁰ 4.4	3.0 ²⁸ ----- 2.9 1.2 ³⁰ 1.6	4,440 27,798 2,578 244 1,424	5,972 35,575 3,598 270 1,847	7,964 44,433 4,586 256 2,469	10,278 57,785 5,110 371 3,158	12,310 70,174 5,441 491 3,657	14,159 84,474 5,830 651 5,224	15,804 98,638 6,692 836 6,719	17,144 110,907 7,257 1,037 8,086	Ecuador Egypt El Salvador Equatorial Guinea Eritrea
	18.1 45.0 22.4 29.0 16.9	21.4 28.3 19.3 27.9 18.7	20.8 14.7 20.6 21.1 19.3	18.6 7.2 18.9 14.5 22.0	15.6 3.7 12.2 6.1 15.3	5.5 1.1 6.6 1.4 7.8	1,211 22,550 35 394 4,430	1,360 28,948 39 520 4,606	1,477 35,409 43 634 4,800	1,569 48,292 48 724 4,986	1,370 65,515 46 795 5,176	1,340 84,976 49 850 5,359	1,334 107,964 52 921 5,524	1,302 131,561 55 1,021 5,586	Estonia Ethiopia Faroe Islands Fiji Finland
	17.9 34.0 26.5 ³³ 33.8 ³⁴ 44.9 ²	20.2 24.2 26.8 ³³ 23.7 ³⁴ 26.4 ²	21.9 23.3 23.1 ³³ 17.0 ³⁴ 15.5 ²	18.7 12.5 15.2 ³³ 17.4 ³⁴ 8.8 ²	13.6 4.3 6.8 ³³ 6.9 ³⁴ 3.6 ²	7.7 1.7 1.6 ³³ 1.2 ³⁴ 0.8 ²	45,684 33 84 486 318	50,770 49 117 529 431	53,880 68 151 682 616	56,699 116 197 926 896	59,045 165 235 1,233 1,302	62,932 237 268 1,501 1,751	65,237 299 300 1,779 2,227	66,787 363 324 2,044 2,736	France ³² French Guiana French Polynesia Gabon Gambia, The
	45.0 ³³ 21.0 13.9 41.3 15.2	28.9 ³³ 22.8 17.6 26.3 22.0	14.9 ³³ 15.9 22.4 16.5 22.3	7.3 ³³ 15.6 21.1 8.7 18.0	2.9 ³³ 14.6 16.7 4.5 16.5	1.0 ³³ 4.1 8.3 2.7 6.0	308 4,159 ³⁸ 72,674 6,958 8,327	370 4,707 ³⁸ 77,709 8,789 8,793	456 5,073 ³⁸ 78,275 11,017 9,643	630 5,439 ³⁸ 79,433 15,414 10,161	1,111 4,418 ³⁶ 82,212 19,736 10,917	1,541 4,341 ³⁶ 81,874 24,279 11,329	2,038 4,083 ³⁶ 80,242 28,567 11,579	2,464 3,875 ³⁶ 77,680 32,398 11,596	Gaza Strip Georgia Germany Ghana Greece
	23.8 35.1 23.6 ³⁹ 30.5 43.6 ³⁰	22.1 28.1 22.4 ³⁹ 24.1 27.4 ³⁰	23.3 17.6 24.3 ³⁹ 23.3 14.4 ³⁰	20.4 9.0 15.7 ³⁹ 13.9 9.4 ³⁰	10.4 -----10.2----- 9.3 ³⁹ 6.7 4.1 ³⁰	7.7 ----- 4.7 ³⁹ 1.5 1.1 ³⁰	32 90 266 67 4,141	46 95 310 85 5,420	50 89 318 107 7,016	56 95 355 134 8,910	56 101 388 155 11,231	56 107 409 189 14,377	56 112 424 226 18,091	55 112 431 242 21,692	Greenland Grenada Guadeloupe Guam Guatemala
	17.2 44.1 ⁴² 43.9 ²⁰ 35.6 ⁴³ 42.7 ²	18.8 26.5 ⁴² 26.5 ²⁰ 25.6 ⁴³ 29.3 ²	23.2 15.9 ⁴² 16.1 ²⁰ 20.9 ⁴³ 14.2 ²	20.0 9.0 ⁴² 8.8 ²⁰ 10.9 ⁴³ 8.2 ²	13.4 3.9 ⁴² 3.7 ²⁰ 4.7 ⁴³ 4.5 ²	7.4 0.6 ⁴² 1.0 ²⁰ 1.6 ⁴³ 1.1 ²	45 3,123 617 571 3,697	51 3,843 620 715 4,541	53 4,628 789 759 5,200	61 6,147 996 751 6,289	62 8,384 1,279 762 7,795	66 10,324 1,565 772 9,697	67 13,467 1,893 768 11,601	67 16,897 2,231 734 13,570	Guernsey Guinea Guinea-Bissau Guyana Haiti
	42.2 ¹¹ 13.7 16.6 21.0 35.3	29.1 ¹¹ 20.6 22.2 22.3 26.6	15.1 ¹¹ 26.2 19.8 21.4 19.5	8.3 ¹¹ 23.5 21.0 19.2 10.9	4.1 ¹¹ 10.4 14.3 10.4 7.7	1.2 ¹¹ 5.6 6.1 5.7 -----	2,003 3,075 9,984 176 448,314	2,691 3,959 10,337 204 552,964	3,634 5,063 10,707 228 692,637	4,901 5,688 10,374 255 862,162	6,230 6,665 10,211 281 1,042,590	7,616 7,096 10,004 317 1,214,464	9,136 7,730 9,873 342 1,367,225	10,492 8,216 9,632 370 1,484,598	Honduras Hong Kong Hungary Iceland India
	30.4 25.1 43.8 ⁴⁶ 20.4 16.9	29.3 35.4 30.2 ⁴⁶ 23.7 17.2	21.8 20.6 14.5 ⁴⁶ 23.0 22.0	11.3 11.6 6.9 ⁴⁶ 17.6 21.1	5.8 5.4 3.6 ⁴⁶ 10.5 14.4	1.4 1.9 1.0 ⁴⁶ 4.8 8.4	93,058 21,704 7,497 2,834 49	116,921 28,805 10,210 2,954 52	146,582 39,330 14,024 3,401 64	177,385 56,733 18,079 3,515 69	205,280 66,903 24,652 3,801 76	232,517 75,078 31,467 4,626 82	254,218 83,740 40,228 5,384 86	271,485 89,936 48,909 5,826 88	Indonesia Iran Iraq Ireland Isle of Man
	29.2 14.1 ¹¹ 32.4 13.6 16.9	25.0 18.1 ¹¹ 25.9 16.8 18.4	19.6 23.8 ¹¹ 20.6 20.4 25.9	13.1 19.0 ¹¹ 11.0 21.3 19.7	9.1 16.0 ¹¹ 6.8 18.4 12.6	4.0 8.2 ¹¹ 3.3 9.5 6.5	2,114 50,200 1,629 94,096 63	2,958 53,822 1,869 104,331 71	3,862 56,434 2,133 116,807 76	4,613 56,719 2,369 123,537 84	6,098 57,645 2,589 126,861 87	7,243 60,667 2,714 127,395 93	8,260 62,938 2,818 124,054 98	9,166 64,787 2,857 117,794 98	Israel ^{47, 48} Italy Jamaica Japan Jersey
	38.2 28.7 43.2 36.9 21.6 ⁵	30.1 25.7 30.3 28.3 23.8 ⁵	18.6 22.1 14.7 18.7 25.2 ⁵	8.0 12.9 7.0 10.7 15.8 ⁵	4.2 -----10.6----- 4.8 4.5 11.2 ⁵	0.9 ----- 0.9 2.4 ⁵	896 9,982 8,104 41 10,946	1,623 13,106 11,249 49 14,247	2,225 14,967 16,261 58 17,239	3,254 16,398 23,433 71 20,143	4,857 14,884 31,441 84 22,859	6,116 16,079 40,863 101 24,248	7,105 17,072 52,034 120 25,068	8,142 17,601 63,199 138 25,572	Jordan Kazakhstan Kenya Kiribati Korea, North
	18.6 ⁴ 37.4 23.7 ⁴ 36.2 ¹⁵ 39.4	22.5 ⁴ 28.8 28.3 ⁴ 27.3 ¹⁵ 28.3	26.0 ⁴ 16.5 33.2 ⁴ 18.6 ¹⁵ 17.0	19.2 ⁴ 10.3 11.7 8.9 ¹⁵ 9.5	10.7 ⁴ 5.3 2.7 ⁴ 7.2 ¹⁵ 4.4	3.0 ⁴ 1.7 0.4 ⁴ 1.8 ¹⁵ 1.4	25,068 947 292 2,173 2,124	31,440 1,219 1,358 2,964 2,692	37,459 1,521 1,358 3,627 3,238	42,983 1,862 2,141 4,395 4,207	46,429 1,700 2,236 4,879 5,403	48,501 1,815 3,442 5,412 6,436	49,475 1,933 4,163 6,005 7,651	49,146 2,066 4,820 6,380 8,854	Korea, South Kosovo Kuwait Kyrgyzstan Laos
	18.1 28.0 ⁵¹ 36.2 43.6 ³³ 30.3 ⁴	21.2 30.0 ⁵¹ 31.0 27.7 ³³ 31.9 ⁴	21.4 19.8 ⁵¹ 15.9 15.2 ³³ 21.0 ⁴	18.3 12.4 ⁵¹ 9.9 8.9 ³³ 10.8 ⁴	15.7 -----9.8 ⁵¹ ----- 5.0 4.0 ³³ 4.9 ⁴	5.3 ----- 2.0 0.6 ³³ 1.1 ⁴	2,121 1,888 851 1,059 1,349	2,359 2,443 1,033 1,430 1,994	2,512 2,785 1,296 1,910 3,063	2,713 2,974 1,602 2,167 4,365	2,373 3,772 1,889 2,824 5,346	2,245 4,255 2,084 4,102 6,546	2,158 4,587 2,244 5,253 7,699	2,054 4,858 2,359 6,470 8,519	Latvia Lebanon Lesotho Liberia Libya
	16.8 19.5 18.9 15.2 21.1	19.9 21.2 18.6 25.6 23.8	22.5 22.8 25.5 26.3 22.0	22.6 17.2 18.4 23.0 18.1	13.1 14.2 12.9 6.6 11.7	5.1 5.1 5.7 3.3 3.3	16 2,765 314 173 1,392	21 3,138 339 254 1,568	26 3,436 364 252 1,795	29 3,698 382 372 1,909	33 3,500 436 441 2,031	36 3,321 507 543 2,052	38 3,204 567 583 2,056	39 3,068 634 606 2,025	Liechtenstein Lithuania Luxembourg Macau Macedonia
	44.7 46.1 ³³ 33.0 ⁶ 31.1 ⁵⁴ 46.3	27.7 29.3 ³³ 28.3 ⁶ 33.2 ⁵⁴ 25.0	15.6 13.1 ³³ 21.0 ⁶ 18.3 ⁵⁴ 14.9	7.2 7.3 ³³ 11.6 ⁶ 9.2 ⁵⁴ 8.2	3.9 3.5 ³³ 4.9 ⁶ 5.2 ⁵⁴ 4.5	0.9 0.7 ³³ 1.2 ⁶ 1.3 ⁵⁴ 1.1	5,103 3,450 8,140 99 4,495	6,546 4,508 10,853 121 5,546	8,604 6,259 13,763 158 6,822	11,273 9,546 18,103 216 8,327	15,275 11,802 23,274 272 10,621	20,146 15,448 27,914 320 13,796	25,687 20,204 32,017 375 17,890	31,528 25,639 35,275 422 22,690	Madagascar Malawi Malaysia Maldives Mali
	17.2 42.9 22.0 43.9 25.2	21.7 28.7 21.0 27.0 26.0	19.7 16.7 24.4 15.9 24.8	22.3 8.2 16.0 7.7 14.9	13.5 2.6 11.1 4.3 6.8	5.6 0.9 5.5 1.2 2.3	329 15 282 1,117 662	326 22 325 1,289 829	364 31 326 1,545 966	360 44 360 1,925 1,059	390 51 385 2,501 1,187	415 54 408 3,205 1,285	429 62 417 4,005 1,359	433 67 420 4,851 1,407	Malta Marshall Islands Martinique Mauritania Mauritius
	42.2 30.7 ⁵⁵ 40.3 19.1 ⁵⁷ 12.8 ⁵⁸	29.2 26.3 ⁵⁵ 28.4 26.3 ⁵⁷ 12.7 ⁵⁸	17.7 20.4 ⁵⁵ 16.9 20.9 ⁵⁷ 19.2 ⁵⁸	7.3 11.8 ⁵⁵ 9.1 19.1 ⁵⁷ 19.1 ⁵⁸	2.9 5.9 ⁵⁵ 3.9 -----14.3 ⁵⁷ ----- 19.1 ⁵⁸	0.7 2.2 ⁵⁵ 1.4 ----- 12.1 ⁵⁸	25 37,877 45 3,004 21	35 52,028 61 3,595 24	52 69,325 73 4,010 27	89 84,002 96 4,364 30	147 98,439 107 4,100 35	201 108,396 111 3,576 35	253 115,762 116 3,378 35	305 120,928 120 3,182 35	Mayotte Mexico Micronesia Moldova Monaco
	35.8 20.6 ⁵⁹ 31.3 ⁶² 44.7 ³³ 38.6	30.2 23.1 ⁵⁹ 28.9 ⁶² 26.4 ³³ 28.7	20.5 20.5 ⁵⁹ 20.1 ⁶² 15.6 ³³ 15.5	8.3 18.2 ⁵⁹ 11.7 ⁶² 8.8 ³³ 10.9	-----5.2----- 12.8 ⁵⁹ 6.0 ⁶² 3.8 ³³ 5.2	3.9 ⁵⁹ 2.0 ⁶² 0.7 ³³	931 467 12,423 7,646 22,839	1,248 520 15,909 9,449 27,393	1,663 579 19,487 12,138 33,061	2,086 591 24,000 13,543 39,243	2,390 612 28,113 18,249 44,301	2,746 631 31,627 23,406 48,511	3,052 636 34,956 28,545 51,787	3,290 639 37,887 33,894 53,905	Mongolia Montenegro Morocco ⁶⁰ Mozambique Myanmar (Burma)

Area and population (continued)

country	area			population (latest estimate)					population (recent census)				
	square miles	square kilo-metres	rank	total midyear 2009	rank	density		% annual growth rate 2004–09	census year	total	male (%)	female (%)	urban (%)
						per sq mi	per sq km						
Namibia	318,193	824,116	35	2,109,000	142	6.6	2.6	1.0	2001	1,830,330	48.5	51.5	33.0
Nauru	8.2	21.2	219	9,800	220	1,195.1	462.3	0.1	2002	10,065	51.0	49.0	100.0
Nepal	56,827	147,181	94	28,563,000	42	502.6	194.1	1.4	2001	23,151,423	49.9	50.1	14.2
Netherlands	16,040	41,543	133	16,522,000	61	1,030.0	397.7	0.3	2001	15,985,538	49.5	50.5	89.6 ¹¹
Netherlands Antilles	308	800	185	202,000	187	655.8	252.5	2.2	2001	175,653	47.0	53.0	69.3 ¹¹
New Caledonia	7,172	18,575	154	251,000	184	35.0	13.5	1.7	2004	230,789	50.5	49.5	63.7 ⁴
New Zealand	104,515	270,692	74	4,317,000	123	41.3	15.9	1.1	2006	4,143,282	48.8	51.2	86.2 ⁴
Nicaragua	50,337	130,373	97	5,743,000	107	114.1	44.1	1.3	2005	5,142,098	49.3	50.7	55.9
Niger	459,286	1,189,546	22	15,306,000	64	33.3	12.9	3.8	2001	11,060,291	49.9	50.1	16.3
Nigeria	356,669	923,768	32	154,729,000	8	433.8	167.5	2.4	2006	140,431,790	50.8	49.2	48.2 ⁴
Northern Mariana Islands	176	457	196	51,000	213	289.8	111.6	−8.4	2000	69,221	46.2	53.8	90.1
Norway	148,718 ⁶³	385,179 ⁶³	61	4,828,000	116	32.5	12.5	1.0	2001	4,520,947	49.6	50.4	76.5
Oman	119,500	309,500	70	2,845,000	137	23.8	9.2	2.1	2003	2,340,815	56.1	43.9	71.5
Pakistan ⁶⁵	340,499	881,889	34	174,579,000	6	512.7	198.0	1.7	1998	130,579,571 ⁶⁶	52.0 ⁶⁶	48.0 ⁶⁶	33.3 ⁶⁶
Palau	188	488	194	20,400	218	108.5	41.8	0.6	2005	19,907	53.7	46.3	70.0 ⁴
Panama	29,119	75,417	118	3,454,000	130	118.6	45.8	1.7	2000	2,839,177	50.5	49.5	56.3
Papua New Guinea	178,704	462,840	54	5,941,000	106	33.2	12.8	2.3	2000	5,130,365	51.9	48.1	13.2 ⁶
Paraguay	157,048	406,752	59	6,349,000	101	40.4	15.6	1.8	2002	5,163,198	50.4	49.6	56.7
Peru	496,218	1,285,198	20	28,887,000	40	58.2	22.5	1.5	2007	27,419,294 ¹³	49.7	50.3	75.9
Philippines	115,831	300,000	72	91,983,000	12	794.1	306.6	1.9	2000	76,504,077	50.4	49.6	58.5 ⁶
Poland	120,726	312,679	69	38,146,000	34	316.0	122.0	−0.0	2002	38,230,100	48.4	51.6	61.8
Portugal	35,556	92,090	110	10,639,000	76	299.2	115.5	0.3	2001	10,356,117 ¹⁸	48.3 ¹⁸	51.7 ¹⁸	65.8 ¹¹
Puerto Rico	3,515	9,104	168	3,966,000	125	1,128.3	435.6	0.4	2000	3,808,610	48.1	51.9	94.6 ⁶
Qatar	4,184	10,836	165	1,661,000	149	397.0	153.3	16.9	2004	744,029	66.7	33.3	92.0 ²
Réunion	970	2,512	176	816,000	162	843.0	325.5	1.2	1999	706,300	49.1	50.9	82.7
Romania	92,043	238,391	82	21,481,000	54	233.4	90.1	−0.2	2002	21,680,974	48.7	51.3	52.7
Russia	6,592,800	17,075,400	1	141,852,000	9	21.5	8.3	−0.3	2002	145,166,731	46.6	53.4	73.3
Rwanda	10,185	26,379	147	9,998,000	82	981.6	379.0	2.5	2002	8,128,553	47.7	52.3	16.9
St. Kitts and Nevis	104	269	207	51,900	212	499.0	192.9	1.3	2001	46,111	49.7	50.3	34.2 ¹¹
St. Lucia	238	617	191	178,000	191	747.9	288.5	1.8	2001	151,156	48.9	51.1	38.0 ¹¹
St. Vincent and the Grenadines	150	389	200	105,000	197	700.0	269.9	−0.2	2001	109,022	50.9	49.1	44.8 ⁶
Samoa	1,075	2,785	174	183,000	190	170.2	65.7	0.4	2006	180,741	51.8	48.2	20.9
San Marino	24	61	215	31,500	217	1,312.5	516.4	1.3	2008 ^{7, 8}	30,792	49.1	50.9	96.0 ⁴
Sao Tome and Principe	386	1,001	183	163,000	192	422.3	162.8	1.7	2001	137,599	49.6	50.4	47.7 ¹¹
Saudi Arabia	830,000	2,149,690	14	25,316,000	46	30.5	11.8	2.4	2004	22,673,538	55.4	44.6	87.7 ²
Senegal	75,955	196,722	87	12,534,000	71	165.0	63.7	2.7	2002	9,855,338	49.2	50.8	40.7
Serbia ⁶⁷	29,922	77,498	117	7,320,000	96	244.6	94.5	−0.4	2002	7,498,001	48.6	51.4	56.4
Seychelles	174	452	197	87,800	201	504.6	194.2	1.3	2002	81,755	49.8	50.2	64.6 ¹¹
Sierra Leone	27,699	71,740	119	5,696,000	108	205.6	79.4	2.9	2004	4,976,871	48.6	51.4	38.8 ²
Singapore	274	710	189	4,954,000 ⁶⁸	114	18,080.3	6,977.5	3.5	2000 ¹⁸	3,263,209	50.0	50.0	100.0
Slovakia	18,932	49,034	129	5,418,000	110	286.2	110.5	0.1	2001	5,379,455	48.6	51.4	55.0
Slovenia	7,827	20,273	153	2,037,000	145	260.3	100.5	0.4	2002	1,964,036	48.8	51.2	50.8
Solomon Islands	10,954	28,370	143	523,000	169	47.7	18.4	2.5	1999	409,042	51.7	48.3	15.6
Somalia	246,201	637,657	42	9,133,000	88	37.1	14.3	2.3	1975	4,089,203	50.1	49.9	25.4
South Africa	471,359	1,220,813	25	49,321,000	24	104.6	40.4	1.2	2001	44,819,778	47.8	52.2	57.7 ¹¹
Spain	195,364	505,991	51	46,059,000	27	235.8	91.0	1.5	2001	40,847,371	49.0	51.0	77.8 ¹¹
Sri Lanka	25,332	65,610	122	20,238,000	56	798.9	308.5	0.9	2001	16,864,544 ⁶⁹	49.5 ⁶⁹	50.5 ⁶⁹	14.6 ⁶⁹
Sudan	967,499	2,505,810	10	42,272,000	30	43.7	16.9	2.2	2008	39,154,490 ¹⁶	51.3	48.7	37.6 ⁹
Suriname	63,251	163,820	91	520,000	170	8.2	3.2	1.0	2004	492,829	50.3	49.7	76.1 ²
Swaziland	6,704	17,364	157	1,337,000	154	199.4	77.0	1.6	2007	1,018,449	47.3	52.7	22.1
Sweden	173,860	450,295	56	9,290,000	87	53.4	20.6	0.7	2008 ^{7, 8}	9,182,927	49.7	50.3	84.4 ⁴
Switzerland	15,940	41,285	134	7,739,000	93	485.5	187.5	0.9	2000 ⁷²	7,288,010	49.0	51.0	68.0
Syria	71,498	185,180	88	21,763,000	53	304.4	117.5	3.7	2004	17,920,844	51.1	48.9	50.6 ⁴
Taiwan	13,973	36,190	136	23,069,000	49	1,651.0	637.4	0.4	2000 ¹⁸	22,300,929	51.1	48.9	80.0 ⁶
Tajikistan	55,300	143,100	95	6,952,000	99	125.7	48.6	1.5	2000	6,127,493	50.3	49.7	26.6
Tanzania	364,901	945,090	31	41,049,000	31	112.5	43.4	2.1	2002	34,569,232	48.9	51.1	23.0
Thailand	198,117	513,120	50	65,998,000	20	333.1	128.6	0.7	2000	60,617,200	49.2	50.8	31.1
Togo	21,925	56,785	125	6,032,000	104	275.1	106.2	2.8	1981	2,719,567	48.7	51.3	15.2
Tonga	289	748	188	103,000	198	356.4	137.7	0.4	2006	101,991	50.8	49.2	23.2
Trinidad and Tobago	1,990	5,155	171	1,302,000	155	654.3	252.6	0.2	2000	1,262,366	50.1	49.9	74.1 ⁶
Tunisia	63,170	163,610	92	10,272,000	79	162.6	62.8	1.0	2004	9,910,872	50.1	49.9	64.9
Turkey	303,224	785,347	37	71,983,000	18	237.4	91.7	1.3	2008	70,586,256 ^{7, 8}	50.1	49.9	70.5 ³³
Turkmenistan	188,500	488,100	52	4,885,000	115	25.9	10.0	1.2	1995	4,483,251	49.6	50.4	46.0
Tuvalu	9.9	25.6	218	11,100	219	1,121.2	433.6	2.1	2002	9,561	49.5	50.5	47.0
Uganda	93,263	241,551	80	32,710,000	37	350.7	135.4	3.3	2002	24,442,084	48.8	51.2	12.3
Ukraine	233,062	603,628	44	46,029,000	28	197.5	76.3	−0.6	2001	48,457,102	46.3	53.7	67.2
United Arab Emirates	32,280	83,600	114	4,765,000	117	147.6	57.0	4.8	2005	3,769,080 ^{16, 75}	67.6	32.4	76.7 ⁴
United Kingdom	93,851	243,073	79	61,855,000	22	659.1	254.5	0.7	2001	58,789,194	48.6	51.4	89.5 ¹¹
United States	3,676,486 ⁷⁶	9,522,055 ⁷⁶	4	307,226,2									

¹Official estimate excluding nomads. ²2003 estimate.

age distribution (%)							population (by decade, '000s)							country	
							1960	1970	1980	1990	2000	2010 projection	2020 projection		2030 projection
0–14	15–29	30–44	45–59	60–74	75 and over										
42.7 ¹¹	28.6 ¹¹	15.5 ¹¹	7.9 ¹¹	3.9 ¹¹	1.4 ¹¹	591	765	1,058	1,471	1,893	2,128	2,263	2,281	Namibia	
38.5	27.7	21.0	10.2	2.2	0.4	4	7	8	9	10	10	12	14	Nauru	
39.3	27.0	17.1	10.1	5.2	1.3	10,035	11,919	14,665	18,918	24,818	28,952	34,209	38,886	Nepal	
18.6	18.8	24.3	20.0	12.2	6.1	11,494	13,020	14,150	14,952	15,926	16,610	17,090	17,458	Netherlands	
24.2	18.2	25.5	19.0	9.4	3.7	136	163	174	188	179	205	214	213	Netherlands Antilles	
28.0	24.3	23.4	14.9	7.2	2.2	78	105	143	171	213	254	290	320	New Caledonia	
21.1	20.5	22.0	19.4	11.4	5.6	2,377	2,820	3,144	3,452	3,860	4,359	4,742	5,068	New Zealand	
37.6	29.9	17.1	9.3	4.3	1.8	1,775	2,400	3,250	4,138	5,101	5,822	6,682	7,387	Nicaragua	
47.5	25.0	16.2	6.8	3.3	1.2	3,913	4,841	6,093	7,842	10,951	15,878	22,749	31,946	Niger	
42.1 ⁹	28.1 ⁹	16.3 ⁹	8.7 ⁹	4.0 ⁹	0.8 ⁹	45,148	56,467	74,523	97,338	124,842	158,259	193,252	226,651	Nigeria	
22.5	31.9	32.2	10.7	2.3	0.4	9	12	17	44	70	48	49	56	Northern Mariana Islands	
20.0 ⁶⁴	18.8 ⁶⁴	22.4 ⁶⁴	19.6 ⁶⁴	11.4 ⁶⁴	7.8 ⁶⁴	3,581	3,877	4,086	4,241	4,491	4,881	5,374	5,842	Norway	
33.8	32.3	20.8	8.9	3.2	1.0	565	747	1,187	1,843	2,402	2,905	3,495	4,048	Oman	
43.2 ⁶⁶	26.9 ⁶⁶	15.6 ⁶⁶	8.8 ⁶⁶	4.3 ⁶⁶	1.2 ⁶⁶	50,387	65,706	85,219	115,458	147,559	177,277	204,274	231,495	Pakistan ⁶⁵	
24.1	21.7	28.7	17.3	5.7	2.5	9	12	13	15	19	21	22	23	Palau	
32.0	26.8	20.6	12.0	6.1	2.5	1,127	1,507	1,951	2,413	2,951	3,508	4,027	4,488	Panama	
40.0	28.5	18.6	8.8	3.5	0.6	1,718	2,214	2,846	3,683	4,813	6,065	7,259	8,359	Papua New Guinea	
37.1	27.3	17.9	10.6	5.1	2.0	1,907	2,484	3,198	4,248	5,349	6,460	7,533	8,483	Paraguay	
30.5	27.5	20.4	12.5	6.4	2.7	9,931	13,193	17,325	21,762	25,192	29,244	32,493	35,127	Peru	
37.0	27.6	19.1	10.3	4.7	1.3	27,057	36,567	48,112	62,427	77,689	93,617	109,683	124,384	Philippines	
18.2	24.4	20.4	20.0	12.1	4.9	29,561	32,526	35,578	38,031	38,259	38,159	38,026	37,040	Poland	
16.0 ¹⁸	22.2 ¹⁸	21.8 ¹⁸	18.3 ¹⁸	14.9 ¹⁸	6.8 ¹⁸	9,037	9,044	9,778	9,923	10,239	10,644	10,698	10,552	Portugal	
23.8	23.3	20.4	17.1	10.6	4.8	2,358	2,722	3,210	3,537	3,814	3,978	4,053	4,039	Puerto Rico	
22.5	25.0	34.4	15.6	2.2	0.3	45	111	229	467	617	1,778	2,052	2,300	Qatar	
27.0	24.8	24.4	13.8	7.2	2.8	338	447	507	601	723	825	918	994	Réunion	
17.6	23.4	21.0	18.7	14.4	4.9	18,407	20,253	22,201	23,207	22,072	21,449	20,946	20,157	Romania	
16.4	24.0	22.5	18.6	—	18.5	119,632	130,245	139,039	147,973	146,710	141,747	136,737	130,131	Russia	
43.8	30.1	14.7	7.1	3.3	1.0	2,887	3,776	5,197	7,150	7,958	10,277	13,233	16,104	Rwanda	
30.7 ⁶	26.5 ⁶	21.1 ⁶	10.8 ⁶	—	10.9 ⁶	51	46	44	41	44	52	56	58	St. Kitts and Nevis	
31.2	27.4	20.6	10.7	6.6	3.5	90	104	118	138	156	180	196	211	St. Lucia	
31.8 ⁶	28.0 ⁶	20.6 ⁶	11.2 ⁶	6.5 ⁶	1.9 ⁶	81	88	98	107	108	104	101	99	St. Vincent and the Grenadines	
39.3	24.6	18.2	11.0	5.2	1.7	110	142	155	161	175	184	191	197	Samoa	
15.0	14.9	26.4	21.5	14.1	8.1	15	19	21	23	27	32	34	36	San Marino	
42.1	30.3	14.5	6.9	4.7	1.5	64	74	94	115	135	165	197	234	Sao Tome and Principe	
34.3	28.6	23.8	9.1	3.2	1.0	4,075	5,745	9,320	15,187	20,474	25,836	31,114	35,974	Saudi Arabia	
42.4	28.5	15.8	8.6	3.9	0.8	3,082	4,169	5,636	7,538	9,902	12,861	16,197	19,541	Senegal	
15.8	20.3	20.1	21.2	17.3	5.3	6,610	7,153	7,670	7,834	7,516	7,289	6,958	6,621	Serbia ⁶⁷	
25.7	26.6	25.3	12.0	7.2	3.2	42	54	63	70	81	89	97	102	Seychelles	
41.7	27.1	16.7	8.0	4.3	2.2	2,254	2,668	3,261	4,084	4,228	5,836	7,318	8,943	Sierra Leone	
21.5	21.2	28.4	18.2	8.2	2.5	1,646 ⁶⁸	2,075 ⁶⁸	2,414 ⁶⁸	3,047 ⁶⁸	4,028 ⁶⁸	5,072 ⁶⁸	5,473 ⁶⁸	5,726 ⁶⁸	Singapore	
18.9	25.1	21.5	18.9	11.0	4.6	4,145	4,528	4,976	5,256	5,401	5,424	5,454	5,360	Slovakia	
15.3	21.5	22.7	20.5	14.4	5.6	1,580	1,727	1,901	1,998	1,990	2,043	2,071	2,055	Slovenia	
44.6 ¹⁵	29.0 ¹⁵	14.3 ¹⁵	7.5 ¹⁵	3.7 ¹⁵	0.9 ¹⁵	118	161	229	314	416	536	662	788	Solomon Islands	
45.6	24.9	15.5	7.4	—	5.4	2,819	3,600	6,434	6,596	7,394	9,359	12,246	15,744	Somalia	
32.0	29.5	20.2	11.0	5.5	1.8	17,396	22,502	29,075	36,745	44,872	49,948	52,104	54,137	South Africa	
14.5	22.4	23.7	17.8	14.2	7.4	30,303	33,779	37,636	38,798	40,263	46,425	49,982	51,500	Spain	
26.0 ⁷⁰	27.5 ⁷⁰	22.3 ⁷⁰	14.5 ⁷⁰	7.3 ⁷⁰	2.4 ⁷⁰	10,018	12,520	15,060	17,290	18,767	20,410	21,713	22,194	Sri Lanka	
42.6	27.7	16.8	7.7	3.8	1.4	11,683	15,039	20,509	27,091	34,904	43,192	52,309	60,995	Sudan	
30.0	26.2	22.7	12.5	6.6	2.0	290	372	366	407	467	524	568	602	Suriname	
44.3 ⁷¹	28.6 ⁷¹	14.4 ⁷¹	7.7 ⁷¹	3.4 ⁷¹	1.6 ⁷¹	352	455	611	882	1,144	1,354	1,513	1,651	Swaziland	
16.8	19.0	20.6	19.3	15.6	8.7	7,480	8,042	8,310	8,559	8,872	9,355	9,840	10,207	Sweden	
17.1 ⁷³	18.0 ⁷³	24.3 ⁷³	20.1 ⁷³	13.2 ⁷³	7.3 ⁷³	5,328	6,181	6,319	6,712	7,184	7,833	8,339	8,786	Switzerland	
39.5	30.2	16.9	8.5	—	4.9	4,533	6,258	8,752	12,500	16,471	22,198	24,744	28,224	Syria	
21.2	25.5	25.4	15.9	9.0	3.0	10,668	14,583	17,642	20,279	22,185	23,144	23,740	23,811	Taiwan	
39.4	27.7	18.4	7.6	5.4	1.5	2,082	2,942	3,953	5,303	6,173	7,075	8,446	9,618	Tajikistan	
44.3	27.7	15.3	7.1	4.1	1.5	10,260	13,807	18,665	25,214	33,712	41,893	49,989	56,530	Tanzania	
24.1	25.6	25.9	15.0	7.5	1.9	27,513	37,091	47,026	55,197	61,904	66,405	69,659	71,408	Thailand	
49.8	24.8	13.1	6.8	3.3	2.0	1,456	1,964	2,481	3,510	4,714	6,200	8,045	10,105	Togo	
38.2	26.3	17.2	10.1	6.1	2.1	65	80	92	96	99	104	109	115	Tonga	
25.5 ⁷⁴	27.5 ⁷⁴	22.6 ⁷⁴	14.5 ⁷⁴	7.2 ⁷⁴	2.7 ⁷⁴	828	941	1,082	1,235	1,263	1,301	1,280	1,220	Trinidad and Tobago	
26.6	29.6	21.3	13.1	7.0	2.4	4,221	5,127	6,457	8,215	9,452	10,374	11,366	12,127	Tunisia	
26.4	26.8	22.0	14.8	7.3	2.7	28,233	36,207	46,161	56,086	63,960	72,839	80,698	86,953	Turkey	
40.1 ²⁵	27.1 ²⁵	18.8 ²⁵	7.9 ²⁵	4.9 ²⁵	1.2 ²⁵	1,585	2,181	2,875	3,658	4,385	4,941	5,529	6,027	Turkmenistan	
36.2	21.2	20.2	13.8	6.8	1.8	5	6	8	9	9	11	12	13	Tuvalu	
49.3	27.3	13.4	5.6	3.3	1.1	6,787	9,443	12,655	17,731	24,433	33,796	46,319	60,819	Uganda	
17.0 ²⁸	22.0 ²⁸	2													

Major cities and national capitals

The following table lists the principal cities or municipalities (those exceeding 100,000 in population) of the countries of the world, together with figures for each national capital or seat of government (indicated by a ★), regardless of size.

Most of the populations given refer to a so-called city proper, that is, a legally defined, incorporated, or chartered area defined by administrative boundaries and by national or state law. In some instances, where cities proper do not exist or are not strictly demarcated, populations of locally defined urban areas may be used. In a few cases, data refer to the municipality, or commune, similar to the medieval city-state in that the city is governed together with its immediately adjoining, economically dependent areas, whether urban or rural in nature. Some countries define no other demographic or legal entities within such communes or municipalities, but many identify a centre, seat, head (*cabecera*), or locality that corresponds to the most densely populated, compact, contiguous core of the municipality. Figures referring to municipalities or communes may be given (identified by the abbreviation “MU”), even though the country itself may define a smaller, more closely knit city proper.

Populations for urban agglomerations as defined by the United Nations are occasionally inset beneath the populations of cities proper. Specifically that is when the urban agglomeration populations are at least three times the size of cities proper.

For certain countries, more than one form of the name of the city is given, usually to permit recognition of recent place-name changes or of *forms* of the place-name likely to be encountered in press stories if the title of the city’s entry in the *Encyclopædia Britannica* is spelled according to a different romanization or spelling policy.

Chinese names for China are usually given in their Pinyin spelling, the official Chinese system encountered in official documents and maps. For Taiwan, the Wade-Giles spelling of place-names is used.

Sources for this data were often national censuses and statistical abstracts of the countries concerned, supplemented by Internet sources.

Internet sources for further information

- City Population: <http://www.citypopulation.de/cities.html>
- World Urbanization Prospects: <http://esa.un.org/unup>

Major cities and national capitals

country city	population	country city	population	country city	population	country city	population	country city	population
Afghanistan (2006 est.)		Córdoba	1,267,521	Austria (2007 est.)		Belize (2007 est.)		Botucatu	128,397
Herāt	349,000	Corrientes	314,546	Graz	247,698	★ Belpopan	16,435	Bragança Paulista	144,066
Jalālābād	168,600	Esteban Echeverría	243,186	Innsbruck	117,693			★ Brasília	2,557,158
★ Kabul	700,000 ¹	Ezeiza	118,072	Linz	188,894	Benin (2007 est.)		Cabo (de Santo	
agglomeration	2,536,300	Florencio Valera	341,507	Salzburg	149,018	Abomey	126,800 ⁵	Agostinho)	169,986
Kandahār		Formosa	198,074	★ Vienna	1,664,146	★ Cotonou (de facto)	762,000	Cabo Frio	180,635
(Qandahār)	324,800	General San Martín	403,107			Djouougou	206,500 ⁵	Cachoeirinha	117,203
Mazār-e Sharif	300,600	Godoy Cruz	182,563	Azerbaijan (2007 est.)		★ Parakou	227,900 ⁵	Cachoeiro de	
		Hurlingham	172,245	★ Baku (Baky)	1,917,000	★ Porto-Novo		Itapemirim	198,962
Albania (2008 est.)		Ituzaingo	158,121	Gāncā (Gyandzha)	309,700	(official)	257,000	Camaçari	227,955
★ Tiranë	400,000	José Carlos Paz	230,208	Sumqayit (Sumgait)	299,700			Camaragibe	141,973
		La Plata	563,943			Bermuda (2000)		Cametá	115,377
Algeria (2004 est.)		La Rioja	143,684	Bahamas, The		★ Hamilton	969	Campina Grande	381,422
★ Algiers	1,790,700	Lanús	453,082	(2007 est.)				Campinas	1,056,644
Annaba	410,700	Las Heras	169,248	★ Nassau	226,100	Bhutan (2005)		Campo Grande	747,189
Batna	285,800	Lomas de Zamora	591,345	★ Thimphu	79,185			Campo Largo	110,796
Béchar	154,400	Los Polvorines	290,691			Bolivia (2008)		Campos dos	
Bejaia	173,300	Mar del Plata	541,733	Bahrain (2007 est.)		Cochabamba	603,300	Goytacazes	431,839
Biskra (Beskra)	201,500	Mendoza	110,993	★ Manama	157,000	El Alto	890,500	Canoas	329,903
Blida (el-Boulaïda)	180,400	Merlo	468,745	Bangladesh (2001)		★ La Paz		Carapicuíba	388,532
Bordj Bou Arreridj	151,500	Moreno	379,300	Barisal	195,955 ⁴	(administrative)	835,300	Cariacica	362,277
Constantine		Morón	309,380	Bogra	150,138	Oruro	216,700	Caruaru	294,558
(Qacentina)	544,700	Neuquén	201,868	Brahmanbaria	131,334	Potosí	152,000	Cascavel	291,747
Djelfa	181,800	Paraná	235,967	Chittagong	2,532,421 ⁴	Quilacollo	95,000	Castanhal	159,110
Ech-Chelif (el-Asnam)	157,800	Pilar	226,517	★ Dhaka (Dacca)	6,737,774 ⁴	Sacaba	141,500	Catanduva	114,069
El-Eulma	123,900	Posadas	252,981	Dinajpur	157,303	Santa Cruz	1,506,200	Caucaia	326,811
El-Wad	123,500	Quilmes	518,788	Jamalpur	116,764	★ Sucre (judicial)	265,300	Caxias	147,416
Ghilzane	122,900	Resistencia	274,490	Jessore	178,273	Tarija	182,700	Caxias do Sul	405,858
Guelma	128,100	Río Cuarto	144,021	Khulna	842,995 ⁴			Chapecô	171,789
Jijel	124,900	Rosario	908,163	Kotwali	285,308	Bosnia and Herzegovina		Codô	113,768
Khenchela	125,000	Salta	462,051	Madhabdi	126,736	(2007 est.)		Colombo	241,505
Médéa	145,600	San Fernando	148,064	Mymensingh	225,811	Banja Luka	198,000	Conselheiro Lafaiete	113,576
Mostaganem	146,600	San Isidro	291,505	Naogaon	123,101	Juzia	131,444	Contagem	617,749
Oran (Wahrán)	772,900	San Justo		Narayanganj	241,694	Mostar	111,198	Cotia	179,100
Saïda	130,600	(La Matanza)	1,253,921	Nawabganj		★ Sarajevo	304,065	Crato	115,724
Sétif (Stif)	249,700	San Luis	153,322	(Nowabgonj)	153,252	Zenica	127,334	Criciúma	187,018
Sidi bel Abbès	212,400	San Miguel	253,086	Pabna	116,371			Cubatão	127,702
Skikda	179,500	San Miguel de		Rajshahi	459,682 ⁴	Botswana (2007 est.)		Cuiabá	544,737
Souq Ahras	136,600	Tucumán	527,150	Rangpur	251,699	★ Gaborone	224,000	Curitiba	1,828,092
Tébessa (Tbessa)	180,600	San Nicolás		Shailakupa	317,881			Diadema	394,266
Tihert	171,300	de los Arroyos	125,408	Sirajgani	127,147	Brazil (2007)		Divinópolis	213,277
Tlemcen (Tilimsen)	141,600	San Salvador de Jujuy	231,229	Sylhet	445,798 ⁴	Ábaetetuba	138,005	Dourados	187,601
Wargla (Ouargla)	139,900	Santa Fe	368,668	Tangail	128,543	Águas Lindas de		Duque de Caxias	864,392
		Santiago del		Tongi	352,900 ⁴	Goiás	139,804	Embu	245,093
		Estero	230,614			Alagoinhas	137,202	Feira de Santana	584,497
American Samoa		Tandil	101,010	Barbados (2000)		Alvorada	211,276	Ferraz de Vasconcelos	175,939
(2000)		Tigre	296,189	★ Bridgetown	5,996	Americana	203,283	Florianópolis	402,346
★ Fagatogo (legislative		Vicente López	274,082	agglomeration	116,000 ⁴	Ananindeua	495,480	Fortaleza	2,473,614
and judicial)	2,096 ²	Villa Nueva	223,365			Anápolis	331,329	Foz do Iguaçu	319,189
★ Utulei (executive)	807 ²			Belarus (2008 est.)		Angra dos Reis	164,191	Franca	327,176
		Armenia (2007 est.)		Babruysk	219,100	Aparecida de Goiânia	494,919	Francisco Morato	155,224
Andorra (2008 est.)		Gyumri (Kumayri;		Baranavichy	167,900	Apucarana	120,123	Franco de Rocha	129,304
★ Andorra la Vella	24,754	Leninakan)		Barysaw	149,900	Araçaju	536,785	Garanhuns	130,154
		Vanadzor	105,200	Brest	301,400	Araçatuba	181,143	Goiânia	1,265,394
Angola (2004 est.)		★ Yerevan	1,104,900	Homyl	481,500	Araguaina	119,128	Governador Valadares	261,981
Huambo	173,600			Hrodna	318,600	Araguari	110,334	Gravatá	266,230
★ Luanda	2,783,000	Aruba (2007 est.)		Mahilyow	367,700	Arapiraca	208,447	Guarapuava	171,230
		★ Oranjestad	32,000	Mazyr	111,600	Araraquara	199,132	Guaratinguetá	112,596
Antigua and Barbuda		Australia (2006) ³		★ Minsk	1,741,000	Araucária	115,849	Guarujá	304,274
(2005 est.)		Adelaide	1,040,719	Navapolack	100,800	Atibaia	125,418	Guarulhos	1,279,202
★ Saint John's	31,000	Brisbane	1,676,389	Orsha	123,900	Bage	115,755	Hortolândia	201,049
		★ Canberra	356,120	Pinsk	129,600	Barbacena	127,328	Ibirité	155,290
Argentina (2001)		Geelong	137,220	Vitsyebsk	343,600	Barra Mansa	176,469	Ilhéus	219,710
Almirante Brown	514,491	Gold Coast	454,436			Barreiras	135,650	Imperatriz	236,311
Avellaneda	328,980	Gosford	282,726	Belgium (2008 est.)		Barretos	112,804	Indaiatuba	180,524
Bahía Blanca	274,509	Hobart	128,577	Antwerp	472,071	Barueri	264,619	Ipatinga	241,720
Belén de Escobar	173,155	Melbourne	3,371,888	Brugge (Bruges)	117,073	Bauru	355,675	Itaboraí	109,380
Berazategui	286,735	Newcastle	288,732	★ Brussels	148,873	Belém	1,424,124	Itabuna	225,309
★ Buenos Aires	2,776,138	Perth	1,256,035	agglomeration	1,048,491	Belford Roxo	495,694	Itaituba	124,865
agglomeration	12,046,799	Sunshine Coast	184,662	Charleroi	201,593	Belo Horizonte	2,434,642	Itajaí	169,927
Caseros	336,467	Sydney	3,641,422	Ghent	237,250	Betim	429,507	Itapecerica da Serra	159,102
Catamarca	140,741	Townsville	128,808	Liège (Luik)	190,102	Blumenau	296,151	Itapetininga	146,760
Comodoro		Wollongong	234,482	Schaerbeek	116,039	Boa Vista	260,930		
Rivadavia	135,632								
Concordia	138,099								

country	city	population	country	city	population	country	city	population	country	city	population
	Itapevi	201,995		São Bernardo do Campo	801,580		Guelph	114,943		Bazhong	226,793
	Itapicoca	112,662		do Campo	151,103		Halifax	372,679		Gaoyao	107,541
	Itaquaquecetuba	351,493		São Caetano do Sul	218,080		Hamilton	504,559		Gaoyou	213,257
	Itu	155,457		São Carlos	982,832		Kelowna	106,707		Gaozhou	477,258
	Jaboatão	678,346		São Gonçalo	468,309		Kinston	117,207		Gejiu	216,476
	Jacareí	210,988		São João de Meriti	199,280		Kitchener	204,668		Genhe	167,133
	Jandira	110,325		São José	135,821		Laval	368,709		Gongyi	149,368
	Jaraguá do Sul	136,282		Sao Jose de Ribamar	414,272		Levis	130,006		Gongzhuling	333,997
	Jaú	133,469		São José	609,229		London	352,395		Guang'an	211,990
	Jequié	150,351		do Rio Prêto	272,530		Longueuil	229,330		Guanghan	135,286
	Ji-Paraná	110,707		São José dos Campos	210,145		Markham	261,573		Guangshui	159,882
	João Pessoa	693,082		São José dos Pinhais	986,826		Mississauga	668,549		Guangyuan	300,669
	Joinville	492,101		São Leopoldo	100,655		Montreal	1,620,693		Guangzhou	
	Juazeiro	237,627		São Luís	10,990,249		Oakville	165,613		(Canton)	6,172,839
	Juazeiro do Norte	246,515		São Mateus	328,522		Oshawa	141,590		Guigang	241,205
	Juiz de Fora	520,612		São Paulo	126,085		★ Ottawa	812,129		Guilin	573,828
	Jundiá	347,738		São Vicente	397,226		Quebec	491,142		Guiping	165,318
	Lages	166,983		Sapucaia do Sul	109,655		Regina	179,246		Guixi	118,138
	Lauro de Freitas	153,016		Serra	221,764		Richmond	174,461		Guiyang	1,475,927
	Limeira	278,776		Sertãozinho	114,649		Richmond Hill	162,704		Gujiao	135,580
	Linhares	130,901		Sete Lagoas	180,046		Saanich	108,265		Haicheng	289,645
	Londrina	505,184		Simões Filho	576,312		Saguenay	143,692		Haikou	864,879
	Luziânia	203,800		Sobral	237,135		Saint Catharines	131,989		Hailin	261,250
	Macaé	188,787		Sorocaba	279,394		St. John's	100,646		Hailun	168,241
	Macapá	359,020		Sumaré	224,757		Saskatoon	202,340		Haimen	176,688
	Maceió	924,143		Susano (Suzano)	107,651		Sherbrooke	147,427		Haining	223,418
	Magé	240,940		Taboão da Serra	270,918		Surrey	394,976		Haiyang	203,012
	Manaus	1,709,010		Tatui	123,858		Thunder Bay	109,140		Hami	284,336
	Marabá	199,946		Taubaté	130,521		Toronto	2,503,281		Hancheng	126,508
	Maracanaú	199,808		Teixeira de Freitas	793,915		Trois-Rivières	126,323		Hanchuan	210,611
	Maranguape	108,525		Teófilo Otoni	159,968		Vancouver	578,041		Handan	1,221,916
	Maricá	119,231		Teresina	148,804		Vaughan	238,866		Hangzhou	2,455,584
	Marília	223,454		Teresopolis	115,136		Whitby	111,184		Hanzhong	247,119
	Maringá	331,412		Timon	292,377		Windsor	216,473		Haocheng	204,732
	Mauá	412,753		Toledo	622,441		Winnipeg	633,451		Harbin	3,075,326
	Mesquita	187,949		Uberaba	127,138					Chifeng	513,922
	Mogi das Cruzes	371,372		Uberlândia	105,282					Chizhou	131,967
	Mogi-Guaçu	138,494		Uruguaiana	120,878					Chongqing	
	Montes Claros	358,271		Valinhos	120,691					(Chungking)	4,776,027
	Mossoró	241,645		Valparaíso de Goiás	237,925					Chongzhou	164,130
	Natal	798,065		Varginha	257,844					Chuxiong	144,137
	Nilópolis	159,005		Várzea Grande	407,579					Chuzhou	231,408
	Niterói	477,912		Viamão	317,817					Cixi	160,813
	Nossa Senhora de Socorro	153,253		Vila Velha	313,898					Conghua	224,324
	Nova Friburgo	178,310		Vitória	125,681					Da'an	154,874
	Nova Iguaçu	855,500		Vitória da Conquista	259,811					Dafeng	212,869
	Novo Hamburgo	255,945		Vitória de Santo Antão						Dali	209,507
	Olinda	394,850		Volta Redonda						Dalian	2,407,345
	Osasco	713,066								Dandong	597,930
	Ourinhos	103,631								Dangyang	124,522
	Palhoça	128,360								Danjiangkou	204,199
	Palmas	184,010								Danyang	203,631
	Paranaguá	138,748								Danzhou	391,076
	Parauapebas	145,326								Daqing	976,188
	Parnaíba	144,892								Dashiqiao	196,968
	Parnamirim	178,819								Datong	1,105,121
	Passo Fundo	185,882								Daye	907,212
	Passos	106,735								Dazhou	225,983
	Patos de Minas	138,466								Dehui	147,329
	Paulista	314,302								Dengfeng	154,781
	Pelotas	343,167								Dengzhou	155,387
	Petrolina	276,174								Dexing	118,356
	Petrópolis	312,776								Deyang	303,731
	Pindamonhangaba	142,997								Dezhou	409,050
	Pinhais	116,984								Diabingshan	176,824
	Piracicaba	365,440								Dingzhou	218,575
	Poá	111,016								Dongfang	106,903
	Poços de Caldas	150,095								Donggang	127,204
	Ponta Grossa	311,106								Dongguan	667,350
	Porto Alegre	1,430,220								Dongtai	433,382
	Porto Seguro	120,460								Dongyang	130,965
	Porto Velho	379,186								Dongying	628,428
	Pouso Alegre	126,100								Duijiangyan	169,588
	Praia Grande	244,533								Dunhua	265,263
	Presidente Prudente	206,164								Duyun	169,325
	Queimados	137,870								Emeishan	137,193
	Recife	1,549,980								Enping	177,373
	Resende	127,763								Enshi	194,597
	Ribeirão das Neves	340,033								Ezhou	369,619
	Ribeirão Pires	111,402								Fangchenggang	135,706
	Ribeirão Preto	558,136								Feicheng	224,202
	Rio Branco	301,398								Fengcheng	
	Rio Claro	189,834								(Guangdong)	178,659
	Rio de Janeiro	6,161,047								Fengcheng (Jiangxi)	303,573
	Rio Grande	195,582								Fenghua	100,833
	Rio Verde	158,818								Foshan	3,544,802
	Rondonópolis	179,094								Fu'an	161,715
	Sabará	125,285								Fuding	194,435
	Salvador	2,948,733								Fujian	180,494
	Santa Bárbara d'Oeste	187,908								Fuqing	194,669
	Santa Cruz do Sul	121,168								Fushun	1,264,685
	Santa Luzia	227,438								Fuxin	691,815
	Santa Maria	266,822								Fuyang (Anhui)	428,969
	Santa Rita	125,858								Fuyang (Zhejiang)	119,651
	Santana de Parnaíba	110,730								Fuzhou (Fujian)	1,457,626
	Santarém	275,571								Fuzhou (Jiangxi)	301,516
	Santo André	671,696								Gaizhou	180,093
	Santos	417,518								Ganzhou	361,913
										Gao'an	182,600
										Gaobeidian	119,305

Major cities and national capitals (continued)

country city	population	country city	population	country city	population	country city	population	country city	population
Jingzhou	636,801	Nankang	122,275	Taizhou (<i>Jiangsu</i>)	587,903	Yingde	215,272	Valledupar	315,396
Jinhua	313,574	Nanning	1,277,300	Taizhou (<i>Zhejiang</i>)	295,293	Yingkou	651,479	Villavicencio	378,668
Jining (<i>Inner Mongolia</i>)	235,985	Nanping	263,564	Tangshan	1,658,162	Yingtian	132,394		
Jining (<i>Shandong</i>)	542,390	Nantong	853,309	Taonan	156,529	Yining	285,809	Comoros (2007 est.)	
Jinjiang	365,341	Nanyang	527,638	Tengzhou	370,233	Yiwu	203,884	★ Moroni	46,000
Jinshi	143,129	Nehe	134,327	Tianchang	154,800	Yixing	576,716		
Jintan	231,891	Neijiang	340,533	Tianjin (Tientsin)	5,332,140	Yiyang	333,667	Congo, Dem. Rep. of the	
Jinzhong	280,520	Ning'an	145,153	Tianmen	227,090	Yizheng	207,820	(2004 est.; MU)	
Jinzhou	721,515	Ningbo	1,214,361	Tianshui	590,347	Yizhou	103,316	Bandundu	117,197
Jishou	145,965	Ningde	118,326	Tieli	279,452	Yong'an	172,056	Boma	171,552
Jiujiang	462,766	Ordos	162,317	Tieling	342,492	Yongcheng	174,616	Bukavu	471,789
Jiuquan	148,825	Panjin	519,103	Tongcheng	103,618	Yongchuan	268,924	Bunia	230,625
Jiutai	184,083	Panshi	174,937	Tongchuan	385,874	Yongzhou	287,382	Butembo	165,333
Jixi	740,470	Panzhihua	524,505	Tonghua	397,373	Yuanjiang	145,554	Gandajka	120,170
Jiyuan	195,329	Penglai	171,433	Tongliao	432,834	Yuanping	118,418	Gemena	113,879
Jurong	199,411	Pengzhou	188,787	Tongling	352,239	Yucheng	164,893	Goma	249,862
Kaifeng	591,303	Pingdingshan	727,576	Tongren	123,000	Yueyang	855,823	Isiro	147,524
Kaili	171,050	Pingdu	423,536	Tongxiang	148,422	Yulin (<i>Guangxi</i>)	209,299	Kabinda	126,723
Kaiping	250,314	Pinghu	154,957	Tongzhou	410,215	Yulin (<i>Shaanxi</i>)	157,510	Kamina	115,626
Kaiyuan (<i>Liaoning</i>)	140,410	Pingliang	148,844	Tumen	105,948	Yuncheng	211,913	Kananga	720,362 ⁷
Kaiyuan (<i>Yunnan</i>)	108,680	Pingxiang	416,036	Tianhot	222,120	Yunfu	284,710	Kikwit	294,210
Karamay	248,797	Pizhou	422,364	Ürümqi	1,504,252	Yushu	189,095	★ Kinshasa	7,273,947 ⁷
Kashgar (Kashi)	246,524	Pulandian	217,005	Wafangdian	328,609	Yuxi	135,105	Kisangani	682,599
Korla	278,682	Puning	636,665	Weifang	975,298	Yuyao	169,255	Kolwezi	456,446
Kuitun	280,325	Putian	397,965	Weihai	452,163	Yuzhou	189,469	Likasi	367,219
Kunming	1,700,210	Puyang	386,847	Weihui	118,583	Zaoyang	351,838	Lubumbashi	1,283,380 ⁷
Kunshan	364,771	Qian'an	105,566	Weinan	250,162	Zaozhuang	762,948	Matadi	245,862
Laibin	158,094	Qianjiang	300,077	Wenchang	117,529	Zengcheng	317,008	Mbanadaka	262,814
Laiwu	494,638	Qidong	187,285	Wendeng	249,530	Zhalantin	165,999	Mbuji-Mayi	1,213,726 ⁷
Laixi	311,493	Qingdao	2,654,340	Wenling	181,915	Zhangjiagang	396,375	Mwene-Ditu	170,786
Laiyang	295,036	Qingyuan	544,389	Wenzhou	633,577	Zhangjiajie	121,289	Tshikapa	366,503
Laizhou	374,670	Qingzhen	109,808	Wuchang	235,005	Zhangjiakou	719,798	Uvira	235,136
Langfang	445,234	Qingzhou	300,477	Wuchuan	289,546	Zhangjiu	264,007		
Langzhong	183,080	Qinhuangdao	776,320	Wudalianchi	204,287	Zhangshu	154,944	Congo, Rep. of the	
Langxi	118,983	Qinzhou	196,687	Wuhai	431,062	Zhangye	179,269	(2005 est.)	
Lanzhou	1,708,168	Qionghai	140,757	Wuhan	8,001,541	Zhangzhou	338,205	★ Brazzaville	1,355,000 ⁴
Laohekou	290,909	Qionglai	191,590	Wuhu	727,872	Zhanjiang	1,433,366	Dolisie	106,262
Lechang	256,361	Qiqihar (Tsitsihar)	1,115,061	Wujiang	242,979	Zhaodong	279,327	Pointe-Noire	663,359
Leiyang	191,760	Qitaihe	352,274	Wuwei	207,358	Zhaoping	483,933		
Leizhou	291,232	Qixia	152,530	Wuxi	2,095,304	Zhaotong	114,884	Costa Rica	
Leling	171,068	Quanzhou	611,078	Wuxue	242,773	Zhaoyuan	197,464	(2006 est.)	
Lengshuijiang	249,478	Qulu	189,938	Wuzhong	166,667	Zhengzhou	1,883,232	★ San José	346,799 ⁸
Leping	180,408	Qujing	239,050	Wuzhou	281,459	Zhenjiang	594,310		
Leqing	118,805	Quzhou	194,700	Xiamen (Amoy)	961,758	Zhijiang	134,729	Côte d'Ivoire (1998)	
Leshan	440,545	Renqiu	285,306	Xi'an (Sian)	3,094,267	Zhongshan	721,082	★ Abidjan	3,802,000 ⁴
Lhasa	156,096	Rizhao	580,395	Xiangcheng	187,748	Zhongwei	128,084	Bouaké	461,618
Lianjiang	348,528	Rongcheng	318,841	Xiangfan	945,883	Zhongxiang	214,682	Daloa	173,107
Lianyuan	159,296	Rugao	428,445	Xiangtan	576,399	Zhoukou	231,563	Korhogo	142,093
Lianyungang	594,504	Rui'an	191,197	Xiangxiang	120,411	Zhoushan	266,665	Man	116,657
Liaocheng	588,956	Ruichang	102,928	Xianning	246,290	Zhuanghe	182,082	San Pedro	131,800
Liaoyang	597,386	Ruijin	107,263	Xiantao	406,881	Zhucheng	362,201	Yamoussoukro	110,013
Liaoyuan	387,813	Rushan	156,901	Xianyang	591,067	Zhuhai	895,994		
Liling	159,015	Ruzhou	109,693	Xiaogan	893,043	Zhuji	146,566	Croatia (2001)	
Lin'an	105,907	Sanhe	153,692	Xiaoyi	191,622	Zhumadian	248,580	Rijeka	143,800
Linfen	341,543	Sanmenxia	220,533	Xichang	195,291	Zhuozhou	187,142	Split	175,140
Lingbao	118,137	Sanming	211,055	Xilinhot	133,966	Zhuzhou	602,625	★ Zagreb	690,000 ⁴
Lingwu	110,344	Sanya	256,169	Xingcheng	130,735	Zibo	1,426,551		
Lingyuan	148,960	Shanghai	11,283,714	Xinghua	315,555	Zigong	596,938	Cuba (2006 est.)	
Linhai	144,095	Shangluo	155,907	Xingning	317,541	Zixing	127,588	Bayamo	144,664
Linhe	242,918	Shangqiu	848,548	Xingping	117,709	Ziyang	184,976	Camagüey	301,574
Linjiang	114,067	Shangrao	202,606	Xingtai	563,575	Zoucheng	389,027	Ciego de Avila	106,225
Linqing	293,078	Shangyu	193,603	Xinyang	110,403	Zunyi	411,829	Cienfuegos	140,734
Linxia	111,810	Shangzhi	251,570	Xingyi	131,526			Guantánamo	208,145
Linxiang	118,541	Shantou	4,840,520	Xining	692,472	Colombia (2007; MU)		Havana	2,201,610
Linyi	1,389,193	Shanwei	464,857	Xinji	201,055	Apartado	122,228	Holguín	269,618
Linzhou	164,221	Shaoguan	907,139	Xinle	117,333	Armenia	278,695	Las Tunas	143,582
Lishui	126,857	Shaowu	133,965	Xinmi	180,917	Barrancabermeja	171,499	Matanzas	127,287
Liu'an	322,505	Shaoxing	459,022	Xinmin	140,652	Barranquilla	1,144,470	Pinar del Río	139,336
Liupanshui	420,414	Shaoyang	375,370	Xintai	393,179	Bello	370,832	Santa Clara	210,220
Liuyang	143,881	Shengzhou	137,737	Xinxiang	694,874	★ Bogotá	7,033,914	Santiago de Cuba	423,392
Liuzhou	871,634	Shenyang	4,101,197	Xinyang	439,411	Bucaramanga	514,596		
Liyang	269,881	Shenzhen	1,819,322	Xinyi (<i>Guangdong</i>)	343,557	Buenaventura	304,206	Cyprus (2006 est.)	
Longhai	144,552	Shihezi	513,559	Xinyi (<i>Jiangsu</i>)	203,318	Cali	2,139,535	★ Lefkosia (Nicosia)	47,832 ⁹
Longjing	141,025	Shijiazhuang	2,241,451	Xinyu	311,911	Cartagena	871,342	agglomeration	228,400 ⁹
Longkou	298,836	Shishi	111,591	Xinzheng	164,933	Cartago	122,721		
Longyan	305,289	Shishou	140,472	Xinzhong	178,576	Cúcuta	582,332	Czech Republic	
Loudi	420,793	Shiyan	467,641	Xuancheng	158,852	Dos Quebradas	175,453	(2008 est.)	
Lufeng	630,220	Shizuishan	350,577	Xuanwei	135,515	Envigado	174,828	Brno	368,533
Luoding	369,735	Shouguang	480,336	Xuchang	391,592	Facatativá	101,523	Olomouc	100,373
Luohe	436,325	Shuangcheng	169,972	Xuzhou	1,536,501	Florencia	125,382	Ostrava	308,374
Luoyang	1,065,137	Shuangliao	169,096	Ya'an	141,612	Floridablanca	251,808	Pízeň	165,238
Luzhou	443,988	Shuangyashan	453,427	Yakeshi	373,618	Giron	125,497	★ Prague	1,212,097
Ma'anshan	494,259	Shulan	199,954	Yan'an	196,049	Ibagué	481,790		
Macheng	279,728	Shuozhou	172,799	Yancheng	765,388	Itagüí	216,752	Denmark (2008 est.)	
Manzhoulí	160,003	Sihui	140,339	Yanchun	222,727	Manizales	358,448	Ålborg	100,873
Maoming	1,213,554	Siping	544,052	Yangjiang	634,958	Medellín	2,248,912	Århus	237,551
Meihokou	261,024	Songyuan	319,212	Yangquan	515,913	Montería	299,715	★ Copenhagen	1,153,781
Meishan	275,736	Songzi	145,358	Yanzhou	790,596	Neiva	305,345	Odense	158,163
Meizhou	307,352	Suihua	288,371	Yanji	374,500	Palmira	233,267		
Mianyang	593,745	Suining	347,642	Yantai	1,258,082	Pasto	321,435	Djibouti (2006 est.)	
Mianzhu	105,257	Suizhou	323,847	Yanzhou	194,747	Pereira	379,589	★ Djibouti	325,000
Miluo	533,030	Suqian	1,091,692	Yibin	343,888	Popayán	230,542		
Mingguang	113,114	Suzhou (<i>Anhui</i>)	382,043	Yichang	694,635	Quibdó	108,515	Dominica (2004 est.)	
Mishan	185,421	Suzhou (<i>Jiangsu</i>)	1,416,234	Yicheng	228,046	Riohacha	139,783	★ Roseau	20,200
Mudanjiang	649,244	Tacheng	102,315	Yichun (<i>Heilongjiang</i>)	786,418	Santa Marta	407,093		
Muling	134,450	Tai'an	698,165	Yichun (<i>Jiangxi</i>)	248,608	Sincelejo	229,852	Dominican Republic	
Nan'an	376,038	Taicang	197,954	Yidu	114,784	Soacha	425,648	(2004 est.)	
Nanchang	1,613,244	Taishan	272,125	Yima	128,165	Soledad	502,736	La Romana	171,500
Nanchong	575,520	Taixing	384,741	Yinchuan	663,655	Tulúa	166,223	La Vega	123,400
Nanjing (Nanking)	4,105,366	Taiyuan	2,162,014	Yingcheng	267,803	Tunja	152,197	Puerto Plata	135,600
								San Cristóbal	120,200

Major cities and national capitals (continued)

country city	population	country city	population	country city	population	country city	population	country city	population
Guwahati (Gauhati)	809,895	Mathura	302,770	Saharsa	125,167	Cimahi	546,879	Khomeynishahr	223,071
Gwalior	827,026	Maunath Bhanjan	212,657	Salem	696,760	Ciomas	187,379 ¹⁴	Khorrāmābād	333,945
Habra	127,602	Medinipur (Midnapore)	149,769	Sambalpur	153,643	Ciparay	111,467 ¹⁴	Khorrāmshahr	125,859
Hajipur	119,412	Meerut	1,068,772	Sambhal	182,478	Ciputat	363,489	Khvoy (Khoy)	181,465
Haldia	170,673	Mira-Bhayandar	520,388	Sangli-Miraj	436,781	Cirebon	308,771	Mahābād	135,780
Haldwani-cum-Kathgodam	129,015	Mirzapur-cum-Vindhyachal	205,053	Santipur (Shantipur)	138,235	Denpasar	574,610	Malārđ	228,713
Halisahar	124,510	Modinagar	113,218	Sasaram	131,172	Depok (<i>West Java</i>)	1,339,263	Malāyer	156,289
Hanumangarh	129,556	Moga	125,573	Satara	108,048	Depok (<i>Yogyakarta</i>)	106,825 ¹⁴	Māndōāb	114,153
Haora (Howrah)	1,007,532	Moradabad	641,583	Satna	225,464	Dumai	140,032	Marāgheh	149,929
Hapur	211,983	Morena	150,959	Secunderabad	206,102	Gorontalo	137,461	Marv Dasht	124,530
Hardoi	112,486	Morvi	145,719	Serampore	197,857	★ Jakarta	8,839,247	Mashhad (Meshed)	2,469,000 ⁴
Haridwar (Hardwar)	175,340	Morvi	145,719	Serilingampalle	153,364	Jambi	409,202	Masjed-e Soleymān	108,682
Hassan	116,574	Mothari	100,683	Shahjahanpur	296,662	Jayapura	142,220	Najafābād	208,647
Hathras	123,244	Mumbai (Bombay)	11,978,450	Shambajinagar		Jember	218,529 ¹⁴	Neūshābūr	208,860
Hazaribag	127,269	Munger (Monghyr)	188,050	(Aurangābād)	873,311	Karawang (Krawang)	145,041 ¹⁴	Orūmīyeh	583,255
Hindupur	125,074	Murwara (Katni)	187,029	Shiliguri (Siliguri)	472,374	Kediri	248,640	Qā'emshahr	174,768
Hisar (Hissar)	256,689	Muzaffarnagar	316,729	Shillong	132,867	Kendari	195,006	Qarchak	174,006
Hosharpur	149,668	Muzaffarpur	305,525	Shimla	142,555	Kupang	230,784	Qazvin	355,338
Hospet	164,240	Mysore	755,379	Shimoga	274,352	Langsa	137,586	Qods	230,147
Hubli-Dharwad	786,195	Nabadwip	115,016	Shivpuri	146,892	Lhokseumawe	154,634	Qom	973,000 ⁴
Hugli		Nadiad	192,913	Sholapur (Solapur)	872,478	Lubukinggau	126,365	Rasht	557,366
(Hooghly-Chinsurah)	170,206	Nagaon	107,667	Sikandarabad		Madiun	171,390	Sabzevār	214,582
Hyderabad	3,637,483	Nagercoil	208,179	(Secunderabad)		Magelang	124,374	Sanandaj	316,862
Ichalkaranji	257,610	Nagpur	2,052,066	Cantonment	206,102	Malang	773,174	Saqqez	133,331
Imphal	221,492	Naihati	215,303	Sikar	185,323	Manado	370,139	Sārī	261,293
Indore	1,474,968	Nala Sopara		Silchar	142,199	Mataram	342,896	Sāveh	180,548
Ingraj Bazar		(Nalasopara)	184,538	Singrauli	185,190	Medan	2,029,797	Semnān	126,780
(English Bazar)	161,456	Nalgonda	110,286	Sirsa	160,735	Mojokerto	111,860	Shāhīnshahr	127,412
Jabalpur	932,484	Nanded-Waghala	430,733	Sitapur	151,908	Padang	686,988	Shahr-e Kord	131,612
Jagadhri	101,290	Nandyal	152,676	Siwan	109,919	Padang Sidempuan	129,489	Shahreza	109,601
Jaipur	2,322,575	Nangloi Jat	150,948	Sonipat (Sonepat)	214,974	Palangkaraya	148,139	Shahriyar	189,421
Jalandhar (Jullundur)	714,077	Nashik (Nasik)	1,077,236	South Dum Dum	392,444	Palembang	1,323,169	Shāhrūd	132,379
Jalgaon	368,618	Navghar-Manikpur	116,723	Srikakulam	109,905	Palu	251,844	Shirāz	1,240,000 ⁴
Jalna	235,795	Navi Mumbai		Srinagar	898,440	Pangkalpinang	139,385	Sirjān	170,916
Jalpaiguri	100,348	(New Mumbai)	704,002	Sultan Pur Majra	164,426	Pasuruan	166,519	Tabriz	1,413,000 ⁴
Jammu	369,959	Navsari	134,017	Sultanpur	100,065	Pekalongan	263,921	★ Tehrān	7,873,000 ⁴
Jamnagar	443,518	Neemuch	107,663	Surat	2,433,835	Pekanbaru	703,956	Vāramīn	208,996
Jamshedpur	573,096	Nellore	378,428	SurenDRanagar		Pemalang	152,667	Yazd	432,194
Jamuria	129,484	★ New Delhi		Dudhrej	156,161	Pematang Siantar	229,525	Yāzūj	100,544
Jaunpur	160,055	Neyveli	127,552	Tambaram	137,933	Percut	129,036 ¹⁴	Zābōl	136,956
Jetpur Navagadh	104,312	Nizamabad	288,722	Tenali	153,756	Pondokgede	263,152 ¹⁴	Zāhedān	567,449
Jhansi	383,644	Noida	305,058	Thane (Thana)	1,262,551	Pontianak	501,843	Zanjān	349,713
Jind	135,855	North Barrackpore	123,668	Thanesar	119,687	Probolinggo	168,734		
Jodhpur	851,051	North Dum Dum	220,042	Thanjavur	215,314	Purwokerto	215,195		
Junagadh	168,515	Ongole	150,471	Thiruvananthapuram		Salatiga	152,913	Iraq (2003 est.)	
Kaithal	117,285	Orai	139,318	Thiruvananthapuram	744,983	Samarinda	505,664	Al-'Amārah	325,000
Kakinada	296,329	Ozhukarai	217,707	Thoothukkudi		Samarinda	505,664	★ Baghdad	5,054,000 ⁴
Kalyan-Dombivli	1,193,512	Palakkad	130,767	Thoothukkudi		Semarang	1,352,869	Bā' qūbah	160,000
Kamarhati	314,507	Palanpur	110,419	(Tuticorin)	216,054	Serang	171,200 ¹⁵	Al-Basrah	890,000
Kanchipuram	153,140	Pali	187,641	Thrissur (Trissur)	317,526	Singkawagang	113,656	Diwaniyah	300,000
Kanchrapara	126,191	Pallavaram	144,623	Tiruchchirappalli	752,066	Sorong	143,430	Al-Fallūjah	284,500 ⁵
Kanpur	2,551,337	Palwal	100,722	Tirunelveli	411,831	Sukabumi	280,373	Al-Hillah	350,000
Kapra	159,002	Panchkula	140,925	Tirupati	228,202	Surabaya	2,611,506	Irbil	926,000
Karawal Nagar	148,624	Panihat	348,438	Tirupper (Tiruppur)	344,543	Surakarta	506,397	Karbalā'	475,000
Karminnagar	205,653	Parbhani	259,329	Tiruvannamalai	130,567	Tangerang	1,451,595	Karkūk	750,000
Karnal	207,640	Patn	112,219	Tiruvottiyur	212,281	Tanjung Balai	133,897	Al-Kūfah	123,500 ⁵
Katihar	175,199	Patna	157,925	Titaagarh	124,213	Tanjung Pinang	167,958	Al-Kūt	300,000
Khammam	159,544	Pathankot	303,151	Tonk	135,689	Tarakan	147,030	Mosul	1,316,000
Khandwa	172,242	Patiala	1,366,444	Tumkur	248,929	Tasikmalaya	456,278	An-Najaf	500,000
Kharagpur	188,761	Patna	1,366,444	Udaipur	389,438	Tebtingtinggi	134,548	An-Nāṣirīyah	400,000
Khardaha	116,470	Pilibhit	124,245	Udupi	113,112	Tegal	238,678	Ar-Ramādī	300,000
Kirari Suleman Nagar	154,633	Pimpri-Chinchwad	1,012,472	Ujjain	430,427	Ternate	133,076	Sāmarrā	125,000
Kishangarh	116,222	Pondicherry	220,865	Ulhasnagar	473,731	Ujung Pandang	1,168,258	As-Samāwah	125,000
Kochi (Cochin)	595,575	Porbandar	133,051	Uluberia	202,135	Waru	124,282 ¹⁴	As-Sulaymāniyah	825,000
Kolar	113,907	Proddatur	150,309	Unnao	144,662	Yogyakarta	433,539	Tall 'Afar	167,800 ⁵
Kolhapur	493,167	Pudukkottai	109,217	Uppal Kalan	117,217			Az-Zubayr	180,900 ⁵
Kolkata (Calcutta)	4,580,546	Puna	119,092	Uttarpara-Kotrung	150,363	Iran (2006)			
Kollam (Quilon)	361,560	Pune	2,538,473	Vadodara (Baroda)	1,306,227	Ābādān	219,772	Ireland (2006)	
Korba	315,690	Puri	157,837	Varanasi (Benares)	1,091,918	Ahvāz	996,000 ⁴	Cork	119,418 ¹⁶
Kota	694,316	Purnia (Purnea)	171,687	Vejalpur	113,445	Āmol	199,698	★ Dublin	506,211 ¹⁶
Kozhikode (Calicut)	436,556	Puruliya	113,806	Vellore	177,230	Andimeshk	120,177	agglomeration	1,186,159
Krishnanagar	139,110	Quthbullapur	231,108	Veraval	141,357	Arāk	446,760		
Krishnarajapura	186,210	Rae Bareilly	169,333	Vidisha	125,453	Ardabil	418,262	Isle of Man (2006)	
Kukatpalle	292,289	Raichur	207,421	Vijayawada	851,282	Bābōl	201,335	★ Douglas	26,218
Kulti-Barakar (Kulti)	289,903	Raiganj	165,212	Virar	118,928	Bandar-e Ābbās	379,301		
Kumbakonam	139,954	Raigarh	111,154	Vishakhapatnam	982,904	Bandar-e Anzālī	110,643	Israel (2008 est.)	
Kurnool	269,122	Raipur	605,747	Vizianagaram	174,651	Bandar-e Būshehr		Ashdod	207,000
Lakhimpur	121,486	Raj Nandgaon	143,770	Warangal	530,636	(Būshehr)	169,966	Ashqelon	108,900
Lalbahadur Nagar		Rajahmundry	315,251	Wardha	111,118	Bandar-e-Māhshahr	111,448	Bat Yam	129,100
(L.B. Nagar)	268,689	Rajapalaiyam	122,307	Yamunanagar	189,696	Birjand	166,138	Beersheba	
Lalitpur	111,892	Rajarat Gopalpur	271,811	Yavatmal (Yeotmal)	120,676	Bojnūrd	176,726	(Be'er Sheva')	186,100
Latur	299,985	Rajendranagar	143,240			Borjerd	229,541	Bene Beraq	151,000
Loni	120,945	Rajkot	967,476	Indonesia (2005 est.; MU) ¹³		Bükān	150,703	Haifa (Hefa)	264,900
Lucknow	2,185,927	Rajpur Sonarpur	336,707	Ambon	204,218	Dezfūl	235,819	Holon	168,800
Ludhiana	1,398,467	Ramagundam	236,600	Balikpapan	440,552	Emāmshahr (Shāhrūd)	132,379	★ Jerusalem	
Macchilipatnam		Rampur	281,494	Banda Aceh	284,000	Esfāhān (Isfahan)	1,628,000 ⁴	(Yerushalayim,	
(Masulipatam)	179,353	Ranchi	847,093	Bandar Lampung	790,057	Golestan	231,905	Al-Quds)	747,600
Madhyamgram	155,451	Raniganj	111,116	Bandung	2,288,570	Gonbad-e Kavus	129,167	Netanya	176,500
Madurai	928,869	Ratlam	222,202	Banjārbaru	145,929	Gorgān	274,438	Petah Tiqwa	188,900
Mahadevapura	135,794	Raurkela	224,987	Banjarmasin	576,413	Hamadān	479,640	Ramat Gan	129,900
Mahubnagar	130,986	Raurkela Township	206,693	Batam	587,227	İlām	160,355	Rehovot	106,200
Maheshstala	385,266	Rewa	183,274	Batu	113,052	İrānshahr	100,642	Rishon LeZiyyon	224,300
Malegaon	409,403	Rishra	113,305	Bekasi	1,940,308	İslāmshahr		Tel Aviv-Yāfo	390,100
Malerkotla	107,009	Robertson Pet	141,424	Bengkulu	252,768	(Eslāmshahr)	357,389		
Malkajigiri	193,863	Rohat	286,807	Binjai	222,299	İzēh	104,364	Italy (2008 est.)	
Mandsaur	116,505	S.A.S. Nagar (Mohali)	123,484	Bitung	131,999	Jahrom	105,285	Ancona	101,424
Mandya	131,179	Sagar	232,133	Blitar	126,776	Karaj	1,423,000 ⁴	Bari	322,511
Mangalore	399,565	Saharanpur	455,754	Bogor	891,467	Kāshān	253,509	Bergamo	115,781
Mango	166,125			Bontang	118,405	Kermān	515,114	Bologna	372,256
				Cilacap	206,928	Kermānshāh		Brescia	189,742
				Saharanpur	276,820	(Bākhtarān)	794,863	Cagliari	158,041

country city	population	country city	population	country city	population	country city	population	country city	population
Catania	298,957	Hiratsuka	260,241	Nagaoka	280,292	Yokohama	3,643,641	Hanam	139,002
Ferrara	133,591	Hirosaki	185,865	Nagareyama	156,686	Yokosuka	422,572	Hwasŏng	392,832
Florence (Firenze)	364,710	Hiroshima	1,164,885	Nagasaki	446,551	Yonago	149,140	Ich'ŏn	198,790
Foggia	153,469	Hitachi	195,844	Nagoya	2,243,564	Zama	127,582	Iksan (Iri)	316,911
Forlì	114,683	Hitachinaka	155,338	Naha	313,436	Jersey (2001)		Inch'ŏn (Incheon)	2,710,040
Genoa (Genova)	610,887	Hōfu	116,393	Nara	366,863	★ St. Helier	28,310	Kangnŭng	222,100
Giugliano in Campania	112,340	Ibaraki	272,153	Narashino	159,758			Kimch'ŏn	140,564
Latina	115,490	Ichihara	279,478	Narita	124,773	Jordan (2004)		Kimhae	475,093
Livorno	160,949	Ichikawa	471,861	Nasushiobara	115,633	★ Amman	1,036,330	Kimp'o	216,931
Messina	243,997	Ichinomiya	376,586	Neyagawa	238,822	★ Irbid	250,645	Kōje	213,638
Milan (Milano)	1,299,633	Ichinoseki	123,155	Niigata	811,613	Al-Quwaysimah	135,500	Kongju	128,573
Modena	179,937	Iida	107,129	Niihama	123,329	Ar-Ruṣayfah	227,735	Koyang	935,643
Monza	120,826	Iizuka	132,208	Niiza	155,926	Wādī as-Sir	122,032	Kumi	396,884
Naples (Napoli)	973,132	Ikeda	104,426	Nishinomiya	477,844	Az-Zarqā'	395,227	Kunp'o	279,536
Novara	102,862	Ikoma	115,359	Nishio	106,643			Kunsan	263,213
Padua (Padova)	210,173	Imabari	170,986	Nishitokyo	193,350	Kazakhstan (2008 est.)		Kuri	198,238
Palermo	663,173	Inazawa	137,475	Nobeoka	132,480	Almaty (Alma-Ata)	1,247,896	Kwangju (<i>Gwangju</i>)	1,423,460
Parma	178,718	Iruma	148,203	Noda	153,422	Aqtāu (Aktau); Shevchenko)		Kwangju (<i>Kyōnggi</i>)	238,044
Perugia	163,287	Isahaya	142,635	Numazu	206,137	Aqtōbe (Aktyubinsk)	258,014	Kwangmyōng	316,354
Pescara	122,790	Ise	133,547	Obihiro	170,066	★ Astana (Aqmola; Tselinograd)		Kwangyang	139,735
Prato	185,603	Isehara	100,779	Odawara	198,841	Osaka	2,649,601	Kyōngju	276,877
Ravenna	153,388	Ilesaki	204,343	Ōgaki	163,047	Osaki	137,164	Kyōngsan	242,744
Reggio di Calabria	185,577	Ishinomaki	163,840	Ōita	467,617	Ōtsu	330,044	Masan	419,251
Reggio nell'Emilia	162,290	Itami	194,488	Okayama	700,646	Atyraū (Guryev)	175,737	Miryang	112,451
Rimini	138,465	Iwaki	348,403	Okazaki	372,089	Ekibastuz	132,455	Mokp'o	244,801
★ Rome (Roma)	2,718,768	Iwakuni	146,885	Okinawa	128,421	Kōkshetaū		Namyangju	497,941
Salerno	140,580	Iwata	172,583	Ōme	141,708	(Kokchetav)	129,885	Nonsan	131,365
Sassari	129,086	Izumi	179,352	Omuta	127,474	Oral (Uralsk)	230,070	Osan	148,580
Syracuse (Siracusa)	123,595	Izumo	146,115	Onomichi	148,085	Ōskemen		P'aju	311,625
Taranto	195,130	Joetsu	206,175	Ōsaka	2,649,601	(Ust-Kamenogorsk)	288,509	Pocheon	166,383
Terni	110,933	Kadoma	130,026	Osaki	137,164	Pavlodar	304,809	P'o-hang	508,684
Trento	908,263	Kagoshima	604,268	Oshū	128,273	Petropavl		Puch'ŏn	876,569
Trieste	112,637	Kakamigahara	145,126	Ōta	214,282	(Petropavlovsk)	190,092	Pusan (Busan)	3,615,101
Turin (Torino)	205,356	Kakegawa	118,660	Ōtaru	138,876	Qaraghandy		P'yōngt'aek	412,757
Venice (Venezia)	268,993	Kakogawa	267,455	Ōtsu	330,044	(Karaganda)	446,139	Sach'ŏn	113,716
Verona	264,191	Kamagaya	104,564	Oyama	162,283	Qostanay (Kustanay)	207,802	Sangju	107,266
Vicenza	114,108	Kamakura	173,588	Saga	239,003	Qyzylord (Kzyl-Orda)	183,716	★ Seoul (Sŏul)	10,421,782
Jamaica (2006 est.)		Kanazawa	455,952	Sagamihara	707,976	Rūdný	120,006	Shihŭng	405,428
★ Kingston	96,052 ¹⁷	Kanoya	105,673	Saijo	112,543	Semey (Semipalatinsk)	281,814	Sŏgwip'o	155,024
agglomeration	585,300	Kanuma	103,690	Saitama	1,197,471	Shymkent (Shimkent; Chimkent)	526,140	Sŏngnam	968,203
Portmore	103,900	Karatsu	129,194	Sakai	835,202	Taldykorgan (Taldy- Kurgan)	106,900	Sŏsan	155,185
Spanish Town	148,800	Kariya	145,117	Sakata	114,964	Taraz (Auliye-Ata; Dzhambul)	336,057	Sunch'ŏn	271,781
Japan (2008 est.)		Kashihara	124,679	Sakura	171,472	Temirtāu	170,667	Suwŏn	1,086,995
Abiko	133,533	Kashiwa	391,210	Sanda	113,600	Kenya (2006 est.)		Taegu	2,512,670
Ageo	222,698	Kasuga	107,845	Sano	123,034	Eldoret	227,800	Taejŏn	1,487,836
Aizuwakamatsu	129,388	Kasugai	300,399	Sapporo	1,896,604	Kisumu	220,000	Tongyōng	136,047
Akashi	292,228	Kasukabe	236,601	Sasebo	253,874	Mombasa	823,500	Üjōngbu	425,693
Akushima	111,763	Kawachinagano	114,428	Sayama	156,634	★ Nairobi	2,864,700	Üiwang	136,264
Akita	327,651	Kawagoe	336,625	Sendai	1,029,576	Nakuru	266,500	Ulsan	1,112,799
Amagasaki	460,956	Kawaguchi	495,250	Seto	132,311	Ruiru	120,900	Wŏnju	301,101
Anjō	176,046	Kawanishi	157,461	Shibata	103,490	Thika	102,300	Yangju	187,308
Aomori	304,657	Kawasaki	1,385,003	Shimonoseki	284,981	Kiribati (2005)		Yangsang	235,299
Asahikawa	356,318	Kirishima	127,726	Shizuoka	709,888	★ Ambo (legislative)	1,688	Yōngch'ŏn	107,701
Asaka	126,092	Kiryū	124,892	Shūnan	150,299	★ Bairiki (executive; agglomeration)	2,766	Yōngin	813,653
Ashikaga	157,793	Kisarazu	123,743	Sōka	238,626	★ Betio (judicial)	12,509	Yōngju	116,062
Atsugi	225,732	Kishiwada	200,058	Suita	354,864			Yŏsu	257,196
Beppu	127,345	Kita-Kyūshū	985,046	Suzuka	197,437	Korea, North (2005 est.)			
Chiba	943,568	Kitami	127,338	Tachikawa	175,639	Anju	186,000 ¹⁸	Kosovo (2004 est.)	
Chigasaki	231,703	Kobe	1,532,305	Tajimi	114,866	Ch'ŏngjin	582,480 ¹⁹	★ Priština	107,614
Chikusei	110,813	Kochi	345,418	Takamatsu	417,671	Haeju	273,600	Prizen	165,844
Chōfu	221,120	Kodaira	185,829	Takaoka	178,965	Hamhŭng-Hungnam	804,000	Kuwait (2005)	
Daitō	125,847	Kofu	199,374	Takarazuka	222,713	Hŭich'ŏn	163,000 ¹⁸	Ḥawālī	106,992
Ebetsu	123,671	Koga	144,392	Takasaki	342,046	Hyesan	178,020 ¹⁹	★ Kuwait (Al-Kuwayt)	32,403
Ebina	126,035	Koganei	115,116	Takatsuki	354,257	Kaesŏng	334,433 ¹⁹	agglomeration	1,810,000
Fuchu	250,745	Kokubunji	118,801	Tama	449,404	Kanggye	262,600	Qalib ash-Shuyukh	179,264
Fuji	237,184	Komaki	149,060	Toda	118,591	Kimch'aek (Songjin)	179,000 ¹⁸	As-Sālimiyah	145,328
Fujieda	129,637	Komatsu	109,285	Tōkai	106,708	Kusōng	177,000 ¹⁸	Kyrgyzstan (2006 est.)	
Fujimi	105,286	Kōnosu	119,768	Tokorozawa	338,896	Namp'o	1,102,000	★ Bishkek	839,600
Fujimino	103,724	Koriyama	338,712	Tokushima	265,248	P'yōngsŏng	320,800 ¹¹	Osh	224,300
Fujinomiya	122,122	Koshigaya	319,435	★ Tokyo	8,717,529	★ P'yōngyang	3,351,000	Laos (2003 est.)	
Fujisawa	404,239	Kumamoto	670,014	Tomakomai	173,986	Sariwŏn	298,700 ²⁰	★ Vientiane (Viangchan)	194,200
Fukaya	146,128	Kurashiki	471,876	Tondabayashi	122,205	Sinp'o	158,000 ¹⁸	agglomeration	716,000
Fukui	268,210	Kure	245,188	Toride	109,953	Sinuiju	326,011 ²⁰	Latvia (2008 est.)	
Fukuoka	1,434,650	Kurume	304,683	Tottori	200,315	Sunch'ŏn	356,000 ¹⁸	Daugavpils	105,958
Fukushima	288,602	Kusatsu	123,512	Toyama	420,584	Tanch'ŏn	284,000 ¹⁸	★ Rīga	717,371
Fukuyama	460,292	Kushiro	190,890	Toyohashi	376,716	Tōkch'ŏn	217,000 ¹⁸	Lebanon (2003 est.)	
Funabashi	589,307	Kuwana	140,816	Toyokawa	161,595	Wŏnsan	358,300	★ Beirut (Bayrūt)	1,171,000
Gifu	411,753	Kyōto	1,468,065	Toyonaka	388,043	Korea, South (2007 est.)		Sidon	149,000
Habikino	118,281	Machida	415,325	Toyota	421,820	Andong	169,239	Tripoli (Tarābulus)	212,900
Hachinohe	240,178	Maebashi	317,167	Tsuchiura	143,986	Ansan	734,713	Tyre (Şūr)	117,100
Hachiōji	569,991	Marugame	110,550	Tsukuba	206,679	Anyang	630,688	Lesotho (2007 est.)	
Hadano	169,201	Matsubara	125,274	Tsuruoka	140,097	Asan	227,815	★ Maseru	210,000
Hakodate	288,155	Matsudo	479,888	Tsuyama	109,493	Ch'angwŏn	510,120	Liberia (2008)	
Hakusan	110,563	Matsue	195,875	Ube	176,370	Chech'ŏn	137,545	★ Monrovia	1,010,970
Hamamatsu	811,553	Matsumoto	227,042	Ueda	161,887	Ch'angŭn	184,655	Libya (2005 est., MU)	
Hanamaki	103,718	Matsuyama	514,771	Uji	191,297	Ch'angwŏn	508,114	Banghāzi	685,367
Handa	117,927	Matsuzaka	169,571	Urasoe	108,052	Ch'ŏngju	540,742	Miṣrātah	354,823
Hatsukaichi	115,184	Mihara	103,209	Urayasu	159,312	Ch'ŏngju	638,384	★ Tripoli (Tarābulus)	1,113,000
Higashiomi	117,847	Minōh	127,757	Uruma	114,087	Chōng-ūp	125,524	agglomeration	2,189,000 ⁴
Higashi-Hiroshima	187,711	Misato	128,956	Utsunomiya	508,114	Chōnju	627,339	Liechtenstein	
Higashi-Kurume	115,405	Mishima	112,320	Wakayama	371,504	Ch'unch'ŏn	260,439	(2008 est.)	
Higashi-Murayama	146,585	Mitaka	180,797	Yachiyo	184,655	Ch'ungju	207,036	★ Vaduz	5,109
Higashi-Ōsaka	508,255	Mito	263,299	Yaizu	120,331				
Hikone	110,945	Miyakonōjō	169,384	Yamagata	254,724				
Himeji	535,756	Miyazaki	368,984	Yamaguchi	192,008				
Hino	179,482	Moriguchi	146,294	Yamato	223,605				
Hirakata	406,189	Morioka	298,959	Yao	272,163				
		Musashino	138,516	Yatsushiro	134,491				
		Nagano	377,328	Yokkaichi	306,374				

Major cities and national capitals (continued)

country city	population	country city	population	country city	population	country city	population	country city	population
Lithuania (2008 est.)		Chilpancingo	166,796	Xalapa (Jalapa		Netherlands, The		Minna	261,509
Kaunas	355,586	Chimalhuacán	524,223	Enríquez	387,879	(2008 est.)		Mubi	178,172
Klaipėda	184,657	Ciudad Acuña		Xico (Valle de Chalco)	331,321	Almere	183,299	Nnewi	167,342
Panevėžys	113,653	(Acuña)	124,232	Zacatecas	122,889	Amersfoort	141,202	Ogbomosho	904,000
Šiauliai	127,059	Ciudad Apodaca		Zamora de Hidalgo	127,606	★ Amsterdam (capital)	747,584	Okene	432,332
★ Vilnius	544,206	(Apodaca)	393,195	Zapopan	1,026,492	Apeldoorn	155,065	Okpogho	145,311
Luxembourg (2008 est.)		Ciudad del Carmen	154,197			Arnhem	143,495	Ondo	201,878
★ Luxembourg	85,467	Ciudad Madero	193,045	Micronesia, Federated		Breda	170,985	Onitsha	484,173
Macau (2006)		Ciudad Obregón	270,992	States of		Dordrecht	118,250	Oshogbo	346,876
★ Macau	502,133	Ciudad Santa Catarina		(2005 est.; MU)		Ede	107,722	Owerri	165,470
Macedonia (2004 est.; MU)		(Santa Catarina)	259,202	★ Palikir	7,000	Eindhoven	210,456	Owo	217,263
Kumanovo	105,484	Ciudad Valles	116,261	Moldova (2008 est.)		Emmen	109,196	Oyo	511,285
★ Skopje (Skopije)	506,926	Ciudad Victoria		Bălți (Beltsy)	122,200	Enschede	154,760	Port Harcourt	972,301
Madagascar (2001 est.)		(Victoria)	278,455	★ Chişinău (Kishinyov)	630,300	Groningen	182,954	Sagamu	176,254
★ Antananarivo	1,697,000 ⁴	Coacalco	285,822	Tiraspol	155,000	Haarlem	147,595	Sango Otta	142,830
Antsirabe	160,356	Coatzacoalcos	234,174	Monaco (2006 est.)		Haarlemmermeer	140,698	Sapele	151,461
Fianarantsoa	144,225	Colima	123,597	★ Monaco	32,543	Leiden	116,957	Sokoto	455,642
Mahajanga	135,660	Córdoba	136,237	Mongolia (2008 est.)		Maastricht	118,022	Suleja	145,240
Tomasina	179,045	Cuautitlán Izcalli	477,872	★ Ulaanbaatar (Ulan		Nijmegen	161,226	Ugep	186,289
Toliara	101,661	Cuautla Morelos	145,482	Bator)	1,031,200	Rotterdam	580,952	Umuahia	203,421
Malawi (2008)		Cuernavaca	332,197			's-Hertogenbosch	136,407	Warri	502,283
★ Blantyre (judicial)	661,444	Culiacán	605,304	Montenegro (2006 est.)		★ The Hague (seat of		Zaria	846,290
★ Lilongwe (executive;		Durango	463,830	★ Cetinje (capital)	18,482 ⁵	government)	475,932	Northern Mariana Is.	
legislative)	669,021	Ecatepec		★ Podgorica (administrative		Tilburg	201,931	(2000)	
Mzuzu	128,432	(de Morelos)	1,687,549	centre)	173,000	Utrecht	294,810	★ Capital Hill (executive;	
Malaysia (2000)		Ensenada	260,075	Morocco (2004)		Zaanstad	142,759	legislative)	1,498
Alor Setar	186,433	Fresnillo	110,892	Agadir	678,596	Zoetermeer	119,584	★ Susupe (judicial)	2,083
George Town		General Escobedo	295,131	Beni-Mellal	163,286	Zwolle	116,265	Norway (2008 est.; MU)	
(Pinang)	181,380	Gómez Palacio	239,842	Casablanca	2,933,684	Netherlands Antilles		Bærum	108,144
Ipoh	536,832	Guadalajara	1,600,894	El-Jadida	144,440	(2007 est.)		Bergen	247,746
Johor Bahru	642,944	Guadalupe	691,434	Fès	946,815	★ New Caledonia (2004; MU)		★ Oslo	560,484
Klang	626,699	Hermosillo	641,791	Kenitra	359,142	★ Nouméa	91,386	Stavanger	117,586
Kluang	134,150	Heroica Nogales	189,579	Khemisset	105,088	New Zealand (2007) ⁷		Trondheim	165,191
Kota Baharu	251,801	Huixquilucan	118,181	Khouribga	166,397	Auckland	1,294,000	Oman (2006 est.)	
Kota Kinabalu	306,920	Iguale	110,390	Ksar el-Kebir	107,380	Christchurch	378,700	Bawshar	174,023
★ Kuala Lumpur	1,305,792	Iraxupato	342,561	Larache	107,371	Dunedin	118,683	'Ibri	105,996
Kuala Terengganu	255,109	Ixtapaluca	290,076	Marrakech	823,154	Hamilton	194,800	Matrah	179,926
Kuantan	288,727	Jiutepec	153,704	Meknès	536,232	Manukau	354,800	★ Muscat	27,477
Kuching	422,240	Juárez		Mohammedia	188,619	Napier	122,500	agglomeration	718,917
Miri	169,005	(Ciudad Juárez)	1,301,452	Nador	126,207	North Shore	220,200	Salālāh	171,333
Petaling Jaya	432,619	La Paz	189,176	Oujda	400,738	Tauranga	114,500	As-Sīb	250,100
★ Putrajaya		León	1,137,465	★ Rabat	1,622,860 ²¹	Waitakere	198,400	Suhār	113,629
(partly completed in		Los Mochis	231,977	Tangier	669,685	★ Wellington	379,100	As-Suwayq	109,149
2007)	...	Manzanillo	110,728	Taza	139,686	Nicaragua (2005)		Pakistan (1998)	
Sandakan	276,791	Matamoros	422,711	Tétouan	320,539	Chinandega	121,793	Abbottabad	106,101 ²²
Selayang Baru	174,628	Mazatlán	352,471	Mozambique (2007)		Estelí	112,084	Bahawalnagar	111,313
Seremban	290,709	Mérida	734,153	Beira	436,240	León	174,051	Bahawalpur	408,395 ²²
Shah Alam	314,440	Metepec	164,182	Chimoio	238,976	★ Managua	937,489	Burewala	149,857
Sibu	167,427	Mexicali	653,046	Lichinga	142,253	Masaya	139,582	Chiniot	169,282
Sungai Petani	174,962	★ Mexico City	8,463,906	★ Maputo	1,099,102	Matagalpa	133,416	Dera Ghazi Khan	188,149
Taiping	199,489	Minatitlán	109,791	Matola	675,422	Niger (2001)		Faisalabad	
Tawau	213,745	Monclova	198,819	Maxixe	105,895	Maradi	148,017	(Lyallpur)	2,617,000 ⁴ , ²²
Maldives (2006)		Monterrey	1,133,070	Nacala	207,894	★ Niamey	915,000 ⁴	Gojra	114,967
★ Male	103,693	Morelia	608,049	Nampula	477,900	Zinder	170,575	Gujranwala	1,513,000 ⁴ , ²²
Mali (2007 est.)		Naucaclpan	792,226	Pemba	141,316	Nigeria (2005 est.)		Gujrat	251,792
★ Bamako	1,494,000	Nezahualcōyotl	1,136,300	Quelimane	192,876	Aba	691,376	Hafizabad	130,216
Sikasso	113,803 ²⁰	Nicolás Romero	242,798	Tete	152,909	Abeokuta	487,567	Hyderabad	1,459,000 ⁴ , ²²
Malta (2008 est.)		Nuevo Laredo	348,387	Xai-Xai	116,343	★ Abuja	1,576,000 ⁴	Jacobabad	780,000 ⁴
★ Valletta	6,319	Oaxaca	258,008	Myanmar (Burma)		Ado-Ekiti	215,799	Jhang Sadar	293,366
agglomeration	81,204	Orizaba	117,273	(2004 est.)		Akure	330,526	Jhelum	145,847
Marshall Is. (2004 est.)		Pachuca	267,751	Bassein (Pathein)	215,600	Awka	144,696	Kamoke	150,984
★ Majuro	20,800	Piedras Negras	142,011	Henzada	122,700	Bauchi	285,485	Karachi	12,130,000 ⁴ , ²²
Martinique (2007 est.; MU)		Playa del Carmen	100,383	Lashio	133,600	Benin City	1,190,000 ⁴	Kasur	245,321
★ Fort-de-France	93,000	Hidalgo	181,438	Mandalay	924,000 ⁶	Bida	153,768	Khanewal	132,962
Mauritania (2007 est.)		Salamanca	143,838	Maymyo	113,900	Calabar	429,656	Khanpur	127,764
★ Nouakchott	673,000	Saltillo	633,667	Meiktila	161,000	Damaturu	196,137	Kohat	125,271 ²⁴
Mauritius (2006 est.)		San Cristóbal		Mergui	148,200	Ede	196,781	Lahore	6,577,000 ⁴ , ²²
Beau Bassin-Rose Hill	109,182	de las Casas	142,364	Monywa	163,400	Effon-Alaiye	219,745	Larkana	270,283
★ Port Louis	148,878	San Francisco		Moulmein		Enugu	563,619	Mardan	245,926 ²⁴
Vacoas-Phoenix	106,255	Coacalco	285,822	(Mawlamyine)	405,800	Gboko	139,995	Mingaora	174,469
Mayotte (2007; MU)		San Juan del Río	120,984	Myingyan	128,600	Gombe	226,141	Mirpur Khas	184,465
★ Mamoudzou	53,022	San Luis Potosí	685,934	★ Naypyidaw (officially		Gusau	183,000	Multan	1,522,000 ⁴ , ²²
Mexico (2005)		San Nicolás de los	138,796	proclaimed capital		Ibadan	2,628,000 ⁴	Muridike	108,578
Acapulco	616,394	Garzas	476,751	March 27, 2006)	...	Ife	258,281	Muzaffargarh	121,641
Aguaascalientes	663,671	San Pablo		Pakokku	112,500	Ijebu-Ode	171,831	Nawabshah	183,110
Atizapán de Zaragoza		de las Salinas	160,432	Pegu (Bago)	200,900	Ikare	143,537	Okara	201,815
(Ciudad López		San Pedro Garza		Pyay (Promé, Pye)	131,200	Ikire	154,031	Pakpattan	107,791
Mateos)	471,904	García	121,977	Sittwe (Akyab)	161,400	Ikorodu	255,265	Peshawar	1,303,000 ⁴ , ²²
Boca del Río	129,416	Soledad de Graciano		Taunggyi	151,400	Ikot Ekpene	165,043	Quetta	725,000 ⁹
Buenavista	198,404	Sanchez	215,958	Tavoy (Dawei)	139,900	Ilawe-Ekiti	143,821	Rahimyar Khan	233,537
Campeche	211,671	Tampico	303,635	Thaton	104,800	Sadiqabad	192,747	Rawalpindi	1,858,000 ⁴ , ²²
Cancún	526,701	Tapachula	189,991	Yangón (Rangoon)	4,107,000 ⁶	Sahiwal	735,478	Sadiqabad	141,509
Celaya	310,413	Tehuacán	238,229	Namibia (2005 est.)		Ise	149,471	Sargodha	458,440 ²²
Chalco	144,311	Tepic	295,204	★ Windhoek	289,000	Iseyin	236,276	Shekhupura	280,263
Chetumal	136,825	Tijuana	1,286,187	Nauru (2002)		Iwo	173,672	Shikarpur	133,259
Chicolopan de Juárez	168,591	Tlalnepantla	674,417	★ Yaren	632	Jimeta	195,897	Sialkot	421,502 ²²
Chihuahua	748,518	Tlaquepaque	542,051	Nepal (2001; MU)		Jos	705,360	Sukkur	335,551
		Toluca	467,712	Biratnagar	166,674	Kaduna	1,442,000 ⁴	Tando Adam	103,363
		Tonala	374,258	Birganj	112,484	Kano	3,140,000 ⁴	Wah	198,431 ²²
		Torreón	548,723	★ Kathmandu	671,846	Katsina	358,437	Palau (2005)	
		Tuxtla Gutiérrez	490,455	Lalitpur (Patan)	162,991	Lagos	9,466,000 ⁴	★ Koror (de facto)	10,743
		Uruapan	238,975	Pokhara	156,312	agglomeration	11,100,000 ⁴	★ Melekeok (complex	
		Veracruz	444,438			Maiduguri	854,613	under construction)	391
		Villahermosa	335,778			Makurdi	209,431		

country	city	population	country	city	population	country	city	population	country	city	population				
Panama (2000)	★ Panama City	415,964	Kabankalan		165,294	★ Lisbon		564,657	Krasnoyarsk		920,926				
	San Miguelito	293,745 ²³		Kalookan (Caloocan)	1,378,858		agglomeration	2,812,000 ⁴		Kurgan	329,981	Vladikavkaz		314,073	
				Lapu-Lapu	292,530		Porto	263,131		Kursk	405,499	(Ordzhonikidze)		340,669	
Papua New Guinea (2004 est.)			Las Piñas		532,330	Puerto Rico (2006 est.; MU)			Kyzyl		109,129	Vladivostok		583,673	
	★ Port Moresby (National Capital District)	299,000 ⁴		Legazpi	179,481		Arecibo	102,216		Leninsk-Kuznetsky	107,858		Volgodonsk		170,832
	Lae	109,800		Lipa	260,568		Bayamón	221,546		Lipetsk	502,821		Volgograd		991,643
Paraguay (2002)			Lucena		236,390	★ San Juan		426,618	Lyubertsy		158,725	Vologda		287,001	
	★ Asunción	519,661 ⁶		Mabalacat	203,307		Caguas	142,769		Magadan	100,020		Volzhsky		308,490
	Capiatá	154,274		Makati	510,383		Carolina	187,578		Magnitogorsk	413,208		Voronezh		846,349
Peru (2007)			Malabon		363,681	★ Saint-Denis		143,000	Makhachkala		466,331	Yakutsk		239,225	
	★ Ciudad del Este	222,274		Malolos	223,069		Ponce	181,267		Mezhdurechensk	103,672		Yaroslavl		603,735
	Fernando de la Mora	113,560		Mandaluyong	305,576		agglomeration	2,590,824		Miass	154,519		Yekaterinburg		1,308,441
Rwanda (2007 est.)			Mandaue		318,575	★ Doha		370,700	★ Moscow		10,425,075	Yelets		118,200	
	★ Kigali			860,000	Ar-Rayyān		317,200	Murmansk		320,962	Yoshkar-Ola			251,416	
	★ Basseterre			12,900	St. Kitts and Nevis (2006)					112,975	Yuzhno-Sakhalinsk			173,364	
St. Lucia (2001)			★ Manila		1,660,714	Réunion (2007 est.)			Naberezhnye Chelny (Brezhnev)		507,180	Zelenograd		220,300	
	★ Castries			13,191	Qatar (2006 est.)					Nakhodka	171,666		Zheleznodorozhny		116,456
	agglomeration			37,963	★ Saint-Denis			143,000		Nalchik	271,447		Zlatoust		190,340
St. Vincent and the Grenadines (2007 est.)			Metro Manila		11,100,000	Romania (2007 est.)			Nazran		130,241	Samoa (2006)			
	★ Kingstown			26,000	Arad		167,238	Nefteyugansk		112,975	★ Apia			37,237	
	★ Agglomerations				Bacău		178,203	Nevinnomyssk		129,959	San Marino (2008 est.)				
Sao Tome and Principe (2001)			Ormoc		177,524	★ Bucharest		1,931,838	Nikolo-Beryozovka (Neftekamsk)		118,285	San Marino (2008 est.)			
	★ São Tomé			3,666	Brăila		215,316	Nizhnekamsk		226,928	★ San Marino			4,376	
	agglomeration			58,000 ⁴	Braşov		277,945	Nizhnevartovsk		240,834	São Tomé and Príncipe (2001)				
Saudi Arabia (2004)			Ozamis		112,150	Cluj-Napoca		310,243	Novy Urengoy		103,927	Saudi Arabia (2004)			
	★ Riyadh			4,087,152	Parañaque		552,660	Nizhny Tagil		379,724	Abhā			201,912	
	★ Jeddah			1,228,889	Pasay		403,064	Noginsk		116,277	'Ar'ar			145,237	
Senegal (2007 est.; MU)			Sagay		140,511	Constanţa		304,279	Orsk		247,002	Senegal (2007 est.; MU)			
	★ Dakar			2,243,400	Craiova		299,429	Orsk			247,002				
	★ Banjul			186,000	Drobeta-Turnu Severin		107,882	Orsk			247,002				
Sierra Leone (2004)			Galati		293,523	Galati		293,523	Oryol		325,945	Sierra Leone (2004)			
	★ Freetown			786,900	laşi		315,214	Galaţi		217,706	Penza			509,997	
	★ Kenema			137,696	Oradea		205,007	Perm		993,319	Pervouralsk			132,881	
Singapore (2007 est.)			San Carlos		269,365	Iasi		315,214	Petrozavodsk		265,072	Singapore (2007 est.)			
	★ Singapore			4,436,000	San Juan de los Rios		125,338	Novokuybyshevsk		111,822	Petrozavodsk			265,072	
	★ Singapore			4,436,000	San Mateo		184,860	Novokuznetsk		562,402	P				

Major cities and national capitals (continued)

country city	population	country city	population	country city	population	country city	population	country city	population
Slovenia (2008 est.)		★ Madrid	3,132,463	Dumā	104,600	Togo (2005 est.)		Ukraine (2005 est.)	
★ Ljubljana	141,547	Málaga	561,250	Hamāh	366,800	★ Lomé	921,000	Alchevsk	116,954
Solomon Islands		Marbella	126,422	Āl-Hasakah	211,300			Berdiansk	119,290
(2007 est.)		Mataró	119,035	Homs (Hims)	800,400	Tonga (2006)		Bila Tserkva	204,794
★ Honiara	66,000	Móstoles	204,535	Jaramānah	192,800	★ Nuku'alofa	23,438	Cherkasy	293,271
Somalia (2007)		Murcia	422,861	Latakia				Chernihiv	300,497
★ Mogadishu	...	Ourense (Orense)	107,186	(al-Ladhihiyah)	468,700	Trinidad and Tobago		Chernivtsi	242,250
agglomeration	1,100,000	Oviedo	216,607	Al-Qāmisili	210,300	(2007 est.)		Dniprodzerzhynsk	249,530
		Palma (de Mallorca)	383,107	Ar-Raqqaq	229,100	★ Port of Spain	54,000	Dnipropetrovsk	1,056,497
		Palmas de Gran		Tartūs	162,300			Donetsk	999,975
		Canaria, Las	377,203	Āṭ-Ṭawrah	102,100	Tunisia (2004)		Horlivka	279,061
South Africa		Pamplona (Iruña)	194,894			Aryānah	240,749	Ivano-Frankivsk	219,479
(2005 est.) ^{24, 25}		Reus	104,835	Taiwan (2008 est.)		Bizerte (Banzart)	114,371	Kerch	152,564
Alberton	145,529	Sabadell	201,712	Chang-hua	235,998	Ettadhamen	118,487	Kharkiv	1,464,740
Benoni	359,491	Salamanca	155,921	Chi-lung (Keelung)	390,397	Qābis	116,323	Kherson	319,278
Boksburg	256,639	Santa Coloma de		Chia-i	273,075	Al-Qayrawān (Kairouan)	117,903	Khmelnitsky	255,902
Botshabelo	175,061	Gramanet	116,765	Chun-pei	126,255	Safāqis (Sfax)	265,131	★ Kyiv (Kiev)	2,660,401
Brakpan	168,557	Santa Cruz de		Chung-ho	410,183	Sūsah	173,047	Kirovohrad	248,367
★ Cape Town		Tenerife	220,902	Chung-li	358,656	★ Tunis	728,453	Kramatorsk	174,892
(de facto legislative)	3,103,000	Santander	181,802	Feng-shan	338,900			Kremenchuk	231,202
Carletonville	161,679	Sevilla (Seville)	699,145	Feng-yüan	164,619	Turkey (2007)		Kryvyi Rih	696,667
Durban	2,643,000	Tarragona	134,163	Hsi-chih	180,993	Adana	1,366,027	Luhansk	452,789
East London	258,000	Tarrassa (Tarrasa)	202,136	Hsin-chu	399,035	Adıyaman	191,627	Lutsk	202,915
Ekurhuleni	3,043,000	Torrejón de Ardoz	113,176	Hsin-chuang	396,337	Afyon	159,967	Lviv	733,728
George	152,000	Valencia (València)	797,654	Hsin-tien	290,590	Aksaray	151,164	Lysychansk	111,451
Johannesburg	3,288,000	Valladolid	316,564	Hua-lien	109,847	★ Ankara	3,763,591	Makiyivka	375,992
Kimberley	185,000	Vigo	294,772	Kao-hsiung	1,520,555	Antakya (Hatay)	186,243	Mariupol	482,440
Klerksdorp	192,000	Vitoria-Gasteiz	229,484	Kuei-shan	131,691	Antalya	755,157	Melitopol	159,288
Krugerdsorp	289,717	Zaragoza (Saragossa)	654,390	Lu-chou	192,066	Aydın	168,216	Mykolayiv	509,011
Ladysmith	168,000			Lu-chu	131,942	Balikesir	241,404	Nikopol	131,774
Mabopane	324,000	Sri Lanka (2001) ²⁶		Lung-t'an	112,758	Bandırma	110,248	Odesa (Odessa)	1,007,131
★ Mangaung		★ Colombo		Nan-t'au	105,671	Batman	293,024	Pavlohrad	113,748
(Bloemfontein;		(executive; judicial)	647,100	Pa-te	172,125	Bolu	107,857	Poltava	309,960
de facto judicial)	397,000	Dehiwala–Mount		Pan-ch'-iao	547,625	Bursa	1,431,172	Rivne	247,870
Mdantsane	180,006	Lavinia	210,546	P'ing-chen	202,680	Ceyhan	103,800	Sevastopol	340,353
Midrand	124,333	Jaffna	145,600	P'ing-tung	215,962	Çorlu	190,792	Simferopol	341,599
Newcastle	170,000	Kandy	109,343	San-chu'ung	383,621	Çorum	202,322	Slov'yansk	122,049
Nigel	172,000	Moratuwa	177,563	Shu-lin	164,723	Denizli	323,151	Sumy	282,198
Paarl	149,000	Negombo	121,701	Ta-li	192,437	Derince	113,991	Syeverodonetsk	116,354
Pietermaritzburg	436,000	★ Sri Jayawardenepura		Ta-liao	109,313	Diyarbakır	592,557	Ternopil	220,720
Pietersburg	178,000	Kotte (legislative)	116,366	T'ai-chung	1,055,898	Edirne	136,070	Uzhhorod	117,028
Port Elizabeth	998,000	Sudan, The (2000 est.) ⁷		T'ai-nan	764,658	Elazığ	319,381	Vinnitsya	360,241
Potchefstroom	122,000	Al-Fāshir	205,000	T'ai-p'ing	171,628	Erzurum	338,073	Yevpatoriya	106,250
Rustenburg	170,000	Al-Ginaina	134,000	T'ai-tung	110,204	Eskişehir	570,825	Zaporizhzhya	799,348
Soshanguve	363,000	Juba	143,000	★ Taipei (T'ai-pei)	2,629,269	Gaziantep	1,175,042	Zhytomyr	277,875
Soweto	1,080,317	Kassalā	336,000	Tan-shui	132,101	Gebze	310,815		
Springs	158,166	★ Khartoum		T'ao-yuan	391,822	İçel (Mersin)	623,861	United Arab Emirates	
Tembisa	277,656	(executive)	4,754,000 ⁴	Tou-liu	105,574	İnegöl	130,448	(2007 est.)	
★ Tshwane		Kūsti	252,000	T'u-ch'eng	237,443	İskenderun	177,294	★ Abu Dhabi	633,136
(Pretoria; de facto		Nyala	375,000	Yang-mei	142,895	Isparta	184,735	'Ajmān	250,808
executive)	1,282,000	★ Omdurman		Yüan-lin	126,189	İstanbul	10,757,327	Al-'Ayn	444,331
Uitenhage	188,978	(legislative)	1,271,403 ¹⁹	Yung-ho	236,413	Izmir	2,606,294	Dubai	1,321,453
Vanderbijlpark	249,192	Port Sudan	410,000	Yung-k'ang	210,585	Kahramanmaraş		Ra's al-Khaymah	121,626
Vereniging	1,033,000	Al-Qadāfī	271,000			(Maraş)	371,463	Sharjah	584,286
Verwoerdsburg	112,701	Sinnar Al-Madina	104,000	Tajikistan (2007 est.)		Karabük	105,159		
Welkom	190,000	Al-Ubayyid	329,000	★ Dushanbe	660,900	Karaman	122,809	England	
West Rand	549,000	Wad Madani	276,000	Khujand (Khudzhand;		Kayseri	696,833	Barnsley	223,500
Westonaria	112,069	Waw	109,000	Leninabad)	154,700	Kırıkkale	192,257	Birmingham	994,900
Witbank	210,000			Tanzania (2002) ²⁷		Kızıltepe	127,148	Blackburn with	
		Suriname (2005 est.)		Arusha	270,485	Kocaeli (İzmit)	248,424	Darwen	141,200
		★ Paramaribo	268,000	★ Dar es Salaam		Konya	967,055	Blackpool	142,700
		Swaziland (2007 est.)		(executive; judicial)	2,339,910	Kütahya	212,934	Bolton	262,400
		★ Lobamba (legislative)	...	(legislative)	150,604	Malatya	383,185	Bournemouth	161,200
		★ Lozitha (royal)	...	Dodoma	102,208	Manisa	281,890	Bracknell Forest	112,200
		★ Ludzidzini (royal)	...	İringa	131,792	Nazilli	103,759	Bradford	493,100
		★ Mbabane		Kigoma	232,596	Ordu	134,005	Brighton and Hove	251,400
		(administrative)	78,000	Mbeya	209,058	Osmaniye	180,477	Bristol	410,500
		Sweden (2007; MU)		Morogoro	143,799	Sakarya (Adapazarı)	377,683	Bury	182,900
		Borås	100,221	Moshi	104,851	Samsun	423,859	Calderdale	198,500
		Göteborg	489,757	Musoma	209,806	Siirt	117,599	Cambridge	117,900
		Helsingborg	123,389	Tabora	127,887	Sivas	294,402	Canterbury	146,200
		Jönköping	122,194	Tanga	180,237	Siverek	108,094	Carlisle	103,300
		Linköping	138,580	Zanzibar	205,870	Sultanbeyli	272,758	Chester	119,700
		Lund	103,286			Tarsus	229,921	Chichester	108,900
		Malmö	276,244	Thailand (2000)		Tekirdağ	133,322	Coventry	306,600
		Norrköping	125,463	★ Bangkok		Tokat	127,988	Derby	236,300
		Örebro	128,977	(Krung Thep)	6,355,144	Trabzon	228,826	Doncaster	290,300
		★ Stockholm	782,885	Chiang Mai	174,438	Turgutlu	111,166	Dudley	305,300
		Umeå	111,235	Chon Buri	183,317	Urfa (Şanlıurfa)	472,238	Exeter	119,600
		Uppsala	185,187	Hat Yai	187,920	Uşak	331,986	Gateshead	190,500
		Västerås	132,920	Khlong Luang	106,326	Viranşehir	100,929	Gloucester	113,200
		Switzerland (2007 est.)		Khon Kaen	141,202	Zonguldak	107,354	Halton	119,500
		Basel (Bâle)	163,081	Lampang	148,199			Kingston upon Hull	256,200
		★ Bern (Berne)		Nakhon Pathom	120,818	Turkmenistan (2004 est.)		Kirkcaldy	398,200
		(administrative)	122,422	Nakhon Ratchasima	204,641	★ Ashgabat	773,400	Knowsley	151,300
		Geneva (Genève)	178,603	Nakhon Si Thammarat	118,729	Balkanabat (Nebitdag)	101,600	Lancaster	143,000
		★ Lausanne (judicial)	118,049	Nonthaburi	291,555	Daşoguz	163,100	Leeds	750,200
		Zürich	350,125	Pak Kret	142,225	Mary	129,200	Leicester	289,700
		Syria (2004 est.)		Phra Pradaeng	171,544	Türkmenabat (Chärjew)	242,000	Liverpool	436,100
		Aleppo (Halab)	1,975,200	Rayong	106,737			★ London (Greater	
		★ Damascus (Dimashq)	1,614,500	Samut Prakan	378,741	Tuvalu (2002)		London)	7,517,700 ²⁸
		Dar'ā	103,300	Si Racha	141,410	★ Funafuti	4,492	Luton	186,800
		Dayr az-Zawr	239,800	Surat Thani	111,340			Manchester	452,000
				Thanya Buri	113,825	Uganda (2008)		Milton Keynes	224,800
				Ubon Ratchathani	106,602	Gulu	141,500	Newcastle upon Tyne	270,500
				Udon Thani	222,425	★ Kampala	1,480,200	North Tyneside	195,000
						Kira	158,300	Norwich	129,500

¹1993 estimate. ²Eight villages, including Fagatogo and Utulei, are collectively known as Pago Pago (2001 agglomeration pop. 15,000). ³Urban centre ("urban agglomeration") as defined by 2001census. ⁴2007 estimate. ⁵2004 estimate. ⁶2005 estimate. ⁷Urban agglomeration. ⁸San José canton. ⁹Excludes Lefkoşa (Turkish Nicosia), whose population per 2006 estimate was 49,237.¹⁰Within San Salvador metropolitan area. ¹¹2003 census. ¹²Within Athens urban agglomeration. ¹³Urban population (may or may not be city proper; not urban agglomeration). ¹⁴1990 census.¹⁵2003 estimate. ¹⁶County borough population. ¹⁷2001 census. ¹⁸1987 census. ¹⁹1993 census. ²⁰1998 census. ²¹Includes Salé and Temera. ²²Includes cantonment(s). ²³Urban district

country city	population	country city	population	country city	population	country city	population	country city	population
Nottingham	286,400	Cambridge (Mass.)	101,388	Laredo (Texas)	217,506	San Jose (Calif.)	939,899	Coro	159,000
Oldham	219,600	Cape Coral (Fla.)	156,981	Las Vegas (Nev.)	558,880	Santa Ana (Calif.)	339,555	Cumaná	263,000
Oxford	149,100	Carrollton (Texas)	123,799	Lexington (Ky.)	279,044	Santa Clara (Calif.)	109,756	El Tigre	146,000
Peterborough	163,300	Cary (N.C.)	121,796	Lincoln (Neb.)	248,744	Santa Clarita (Calif.)	169,951	Guacara	142,000
Plymouth	248,100	Cedar Rapids (Iowa)	126,396	Little Rock (Ark.)	187,452	Santa Rosa (Calif.)	154,241	Guanare	111,000
Poole	136,900	Chandler (Ariz.)	246,399	Long Beach (Calif.)	466,520	Savannah (Ga.)	130,331	Guarenas	186,000
Portsmouth	196,400	Charleston (S.C.)	110,015	Los Angeles (Calif.)	3,834,340	Scottsdale (Ariz.)	235,677	Guatire	129,000
Preston	132,000	Charlotte (N.C.)	671,588	Louisville (Ky.)	557,789	Seattle (Wash.)	594,210	La Victoria	104,000
Reading	142,800	Chattanooga (Tenn.)	169,884	Lowell (Mass.)	103,512	Shreveport (La.)	199,569	Los Teques	175,000
Rochdale	206,500	Chesapeake (Va.)	219,154	Lubbock (Texas)	217,325	Simi Valley (Calif.)	120,464	Maracaibo	1,609,000
Rotherham	253,300	Chicago (Ill.)	2,836,658	McAllen (Texas)	127,245	Sioux Falls (S.D.)	151,505	Maracay	394,000
St. Albans	131,300	Chula Vista (Calif.)	217,478	McKinney (Texas)	115,260	South Bend (Ind.)	104,069	Maturín	325,000
St. Helens	177,600	Cincinnati (Ohio)	332,458	Madison (Wis.)	228,775	Spokane (Wash.)	200,975	Mérida	196,000
Salford	218,000	Clarksville (Tenn.)	119,284	Manchester (N.H.)	108,874	Spring Valley (Nev.) ³⁰	176,815	Ocumare del Tuy	104,000
Sandwell	287,600	Clearwater (Fla.)	106,642	Memphis (Tenn.)	674,028	Springfield (Ill.)	117,090	Petare	369,000
Sefton	277,400	Cleveland (Ohio)	438,042	Mesa (Ariz.)	452,933	Springfield (Mass.)	149,938	Puerto Cabello	154,000
Sheffield	525,000	Colorado Springs (Colo.)	375,427	Mesquite (Texas)	131,738	Springfield (Mo.)	154,777	Puerto La Cruz	199,000
Slough	119,500	Columbia (S.C.)	124,818	Metairie (La.) ³⁰	130,000	Stamford (Conn.)	118,475	Punto Fijo	117,000
Solihull	203,000	Columbus (Ga.)	187,046	Miami (Fla.)	409,719	Sterling Heights (Mich.)	127,349	San Cristóbal	234,000
South Tyneside	151,000	Columbus (Ohio)	747,755	Midland (Texas)	103,880	Stockton (Calif.)	287,245	Santa Teresa	125,000
Southampton	228,600	Concord (Calif.)	120,844	Milwaukee (Wis.)	602,191	Sunnyvale (Calif.)	131,140	Turnero	306,000
Southend	159,900	Coral Springs (Fla.)	126,875	Minneapolis (Minn.)	377,392	Sunrise Manor (Nev.) ³⁰	191,966	Valencia	1,196,000
Stockport	280,600	Corona (Calif.)	150,308	Miramar (Fla.)	108,240	Syracuse (N.Y.)	139,079	Valera	113,000
Stockton-on-Tees	189,100	Corpus Christi (Texas)	285,507	Mobile (Ala.)	191,411	Tacoma (Wash.)	196,520		
Stoke-on-Trent	239,700	Costa Mesa (Calif.)	108,978	Modesto (Calif.)	203,955	Tallahassee (Fla.)	168,979	Vietnam (2004 est.)	
Sunderland	280,600	Dallas (Texas)	1,240,499	Montgomery (Ala.)	204,086	Tampa (Fla.)	336,823	Bac Lieu	104,400
Swindon	186,600	Daly City (Calif.)	100,882	Moreno Valley (Calif.)	188,935	Tempe (Ariz.)	174,091	Bien Hoa	384,400
Tameside	214,400	Dayton (Ohio)	155,461	Naperville (Ill.)	142,479	Thornton (Colo.)	110,880	Buon Me Thuot	139,900
Thurrock	148,900	Denton (Texas)	115,506	Nashville (Tenn.)	590,807	Thousand Oaks (Calif.)	123,349	Ca Mau	107,400
Torbay	133,200	Denver (Colo.)	588,349	New Haven (Conn.)	123,932	Toledo (Ohio)	295,029	Cam Pha	146,600
Trafford	211,800	Des Moines (Iowa)	196,998	New Orleans (La.)	239,124	Topeka (Kan.)	122,642	Cam Ranh	145,700
Wakefield	321,200	Detroit (Mich.)	916,952	New York City (N.Y.)	8,274,527	Torrance (Calif.)	141,420	Cam Tho	255,100
Walsall	254,500	Downey (Calif.)	108,109	Newport News (Va.)	179,153	Tucson (Ariz.)	525,529	Da Lat	128,900
Warrington	194,000	Durham (N.C.)	217,847	Norfolk (Va.)	235,747	Tulsa (Okla.)	384,037	Da Nang	679,800 ³¹
Wigan	305,500	East Los Angeles (Calif.) ³⁰	128,500	Norman (Okla.)	106,707	Vallejo (Calif.)	115,552	Haiphong	825,700 ³¹
Winchester	110,000	El Monte (Calif.)	122,272	North Las Vegas (Nev.)	212,114	Vancouver (Wash.)	161,436	Hanoi	2,101,500 ³¹
Windsor and Maidenhead	138,800	El Paso (Texas)	606,913	Norwalk (Calif.)	103,720	Victorville (Calif.)	107,221	Ho Chi Minh City	5,315,000 ³¹
Wirral	311,200	Elgin (Ill.)	104,288	Oakland (Calif.)	401,489	Virginia Beach (Va.)	434,743	Hoa Binh	100,100
Wolverhampton	236,600	Elizabeth (N.J.)	124,862	Oceanside (Calif.)	168,602	Visalia (Calif.)	118,603	Hong Gai	145,900
York	191,800	Elk Grove (Calif.)	121,212	Oklahoma City (Okla.)	547,274	Waco (Texas)	122,222	Hue	277,100
		Erie (Pa.)	103,650	Olathe (Kan.)	118,034	Warren (Mich.)	134,223	Long Xuyen	157,200
Northern Ireland ²⁹		Escondido (Calif.)	135,246	Omaha (Neb.)	424,482	★ Washington, D.C.	588,292	My Tho	121,200
Belfast	268,100	Eugene (Ore.)	149,004	Ontario (Calif.)	170,936	Waterbury (Conn.)	107,174	Nam Dinh	192,200
Derry (Londonderry)	107,300	Evansville (Ind.)	116,253	Orange (Calif.)	134,299	West Covina (Calif.)	106,378	Nha Trang	274,800
Lisburn	111,500	Fairfield (Calif.)	103,992	Orlando (Fla.)	227,907	West Jordan (Utah)	102,445	Phan Thiet	146,000
		Fayetteville (N.C.)	171,853	Overland Park (Kan.)	169,403	West Valley City (Utah)	122,374	Pleiku (Play Cu)	109,100
Scotland		Flint (Mich.)	114,662	Oxnard (Calif.)	184,725	Westminster (Colo.)	106,195	Qui Nhon	203,300
Aberdeen	206,880	Fontana (Calif.)	183,502	Palm Bay (Fla.)	100,116	Wichita (Kan.)	361,420	Rach Gia	207,600
Dundee	142,170	Fort Collins (Colo.)	133,899	Palmdale (Calif.)	140,882	Wichita Falls (Texas)	101,590	Soc Trang	111,500
Edinburgh	463,510	Fort Lauderdale (Fla.)	183,606	Paradise (Nev.) ³⁰	185,935	Winston-Salem (N.C.)	215,348	Thai Nguyen	132,600
Glasgow	580,690	Fort Wayne (Ind.)	251,247	Pasadena (Calif.)	143,400	Worcester (Mass.)	173,966	Thanh Hoa	107,900
		Fort Worth (Texas)	681,818	Pasadena (Texas)	146,518	Yonkers (N.Y.)	199,244	Vinh Long	101,100
Wales		Fremont (Calif.)	201,334	Patterson (N.J.)	146,545			Vung Tau	195,400
Cardiff	317,500	Fresno (Calif.)	470,508	Pembroke Pines (Fla.)	146,828				
Conwy	111,300	Fullerton (Calif.)	132,066	Peoria (Ariz.)	146,743	Uruguay (2007 est.)		Virgin Islands (U.S.)	
Neath Port Talbot	137,100	Gainesville (Fla.)	114,375	Peoria (Ill.)	113,546	★ Montevideo	1,513,000	(2000)	
Newport	140,100	Garden Grove (Calif.)	165,510	Philadelphia (Pa.)	1,449,634			★ Charlotte Amalie	11,004
Rhondda, Cynon, Taff	233,900	Garland (Texas)	218,792	Phoenix (Ariz.)	1,552,259	Uzbekistan (2001 est.)		West Bank (2007 est.)	
Swansea	227,100	Gilbert (Ariz.)	207,550	Pittsburgh (Pa.)	311,218	Andijon (Andizhan)	338,366	Hebron (Al-Khalil)	163,146
Wrexham	131,000	Glendale (Ariz.)	253,152	Piano (Texas)	260,796	Angren	131,900	Nābulus	126,132
		Glendale (Calif.)	196,979	Pomona (Calif.)	152,631	Buxoro (Bukhara)	237,361	★ Rām Allāh (Ramallah)	
United States (2007 est.)		Grand Prairie (Texas)	158,422	Pompano Beach (Fla.)	102,745	Chirchiq (Chirchik)	141,742	(administrative centre)	27,460
Abilene (Texas)	116,219	Grand Rapids (Mich.)	193,627	Port St. Lucie (Fla.)	151,391	Farghona (Fergana)	183,037	Western Sahara	
Akron (Ohio)	207,934	Green Bay (Wis.)	100,781	Portland (Ore.)	550,396	Jizzakh (Dzhizak)	131,512	(2007 est.; MU)	
Albuquerque (N.M.)	518,271	Greensboro (N.C.)	247,183	Portland (Me.)	101,967	Margilan (Margilan)	149,646	Laayoune (El Aaiun)	200,000
Alexandria (Va.)	140,024	Hampton (Va.)	145,439	Providence (R.I.)	172,459	Namangan	391,297		
Allentown (Pa.)	107,117	Hartford (Conn.)	124,563	Provo (Utah)	117,592	Nawoiy (Navoi)	138,082	Yemen (2004)	
Amarillo (Texas)	186,106	Hayward (Calif.)	140,943	Pueblo (Colo.)	103,805	Nuqus (Nukus)	212,012	Aden	588,938
Anaheim (Calif.)	333,249	Henderson (Nev.)	249,386	Raleigh (N.C.)	375,806	Olmalik (Almalyk)	113,114	Dhamār	146,346
Anchorage (Alaska)	279,671	Hialeah (Fla.)	212,217	Richmond (Calif.)	101,454	Qarshi (Karshi)	204,690	Al-Hudaydah	409,994
Ann Arbor (Mich.)	115,092	High Point (N.C.)	100,342	Richmond (Va.)	200,123	Qoqon (Kokand)	197,450	Ibb	212,992
Antioch (Calif.)	204,568	Hollywood (Fla.)	142,473	Riverside (Calif.)	294,437	Samarqand (Samarkand)	361,339	Al-Mukallā	182,478
Arlington (Texas)	371,038	Honolulu (Hawaii)	375,571	Rochester (N.Y.)	206,759	★ Tashkent (Toshkent)	2,184,000 ⁴	★ San 'a'	1,707,531
Arlington (Va.) ³⁰	204,568	Houston (Texas)	2,208,180	Rockford (Ill.)	156,596	Termez	116,467	Ta'izz	466,968
Arvada (Colo.)	106,328	Huntington Beach (Calif.)	192,885	Roseville (Calif.)	108,759	Urganch (Urgench)	138,609		
Athens (Ga.)	112,760	Huntsville (Ala.)	171,327	Sacramento (Calif.)	450,242			Zambia (2000)	
Atlanta (Ga.)	519,145	Independence (Mo.)	110,704	St. Louis (Mo.)	350,759	Vanuatu (2007 est.)		Chingola	147,400
Augusta (Ga.)	192,142	Indianapolis (Ind.)	795,458	St. Paul (Minn.)	277,251	★ Vila	40,000	Kabwe	176,758
Aurora (Colo.)	311,794	Inglewood (Calif.)	113,376	St. Petersburg (Fla.)	246,407	Venezuela (2001)		Kitwe	363,700
Aurora (Ill.)	170,855	Irvine (Calif.)	201,160	Salem (Ore.)	151,913	Acarigua	137,000	Luanshya	115,600
Austin (Texas)	743,074	Irving (Texas)	199,505	Salinas (Calif.)	143,517	Barcelona	328,000	★ Lusaka	1,328,000 ⁴
Bakersfield (Calif.)	315,837	Jackson (Miss.)	175,710	Salt Lake City (Utah)	180,651	Barinas	229,000	Mfulira	122,300
Baltimore (Md.)	637,455	Jacksonville (Fla.)	805,605	San Antonio (Texas)	1,328,984	Barquisimeto	811,000	Ndola	374,757
Baton Rouge (La.)	227,071	Jersey City (N.J.)	242,389	San Bernardino (Calif.)	199,285	Baruta	192,000	Zimbabwe (2002)	
Beaumont (Texas)	109,579	Joliet (Ill.)	144,316	San Buenaventura (Ventura) (Calif.)	103,219	Cabimas	210,000	Bulawayo	676,787
Bellevue (Wash.)	121,347	Kansas City (Kan.)	142,320	San Diego (Calif.)	1,266,731	Calabozo	102,000	Chitungwiza	321,782
Berkeley (Calif.)	101,377	Kansas City (Mo.)	450,375	San Francisco (Calif.)	764,976	★ Caracas	1,836,000	Epworth	113,884
Billingham (Mo.)	101,876	Killeen (Texas)	112,434			Carúpano	112,000	Gweru	137,000
Birmingham (Ala.)	229,800	Knoxville (Tenn.)	183,546			Catia la Mar	112,000	★ Harare	1,572,000 ⁴
Boise (Idaho)	202,832	Lafayette (La.)	113,544			Ciudad Bolívar	287,000	Mutare	170,106
Boston (Mass.)	599,351	Lakewood (Colo.)	140,305			Ciudad Guayana	629,000		
Bridgeport (Conn.)	136,695	Lancaster (Calif.)	143,616			Ciudad Ojeda	114,000		
Brownsville (Texas)	172,806	Lansing (Mich.)	114,947						
Buffalo (N.Y.)	272,632								
Burbank (Calif.)	103,286								

adjacent to Panama City. ²⁴A new municipal system was created in 2005. ²⁵Urban population. ²⁶1997 estimate; 2001 census enumeration was not conducted because of the civil war.

²⁷Urban localities. ²⁸Borough counties, not listed separately, constitute Greater London. ²⁹Cities and borough councils of Northern Ireland with more than 100,000 population. ³⁰Unincorporated place. ³¹2006 estimate.

Language

This table presents estimated data on the principal language communities of the countries of the world. The countries, and the principal languages (occasionally, language families) represented in each, are listed alphabetically. A bullet (●) indicates those languages that are official in each country. The sum of the estimates equals the 2003 population of the country given in the "Area and population" table.

The estimates represent, so far as national data collection systems permit, the distribution of mother tongues (a mother tongue being the language spoken first and, usually, most fluently by an individual). Many countries do not collect any official data whatever on language use, and published estimates not based on census or survey data usually span a substantial range of uncertainty. The editors have adopted the best-founded distribution in the published literature (indicating uncertainty by the degree of rounding shown) but have also adjusted or interpolated using data not part of the base estimate(s). Such adjustments have not been made to account for large-scale refugee movements, as these are of a temporary nature.

A variety of approaches have been used to approximate mother-tongue distribution when census data were unavailable. Some countries collect data on ethnic or "national" groups only; for such countries ethnic distribution often had to be assumed to conform roughly to the distribution of language communities. This approach, however, should be viewed with caution, because a minority population is not always free to educate its children in its own language and because better economic opportunities often draw minority group members into the majority-language community. For some countries, a given individual may be visible in national statistics only as a passport-holder of a foreign country, however long he may remain resident. Such persons, often guest workers, have sometimes had to be assumed to be speakers of the principal language of their home country. For other countries, the language mosaic may be so complex, the language communities so minute in size, scholarly study so inadequate, or the census base so obsolete that it was possible only to assign percentages to entire groups, or families, of related languages, despite their mutual unintelligibility (Papuan and Melanesian languages in Papua New Guinea, for instance). For some countries in the Americas, so few speakers of any single indigenous language remain that it was necessary to combine these groups as *Amerindian* so as to give a fair impression of their aggregate size within their respective countries.

No systematic attempt has been made to account for populations that may legitimately be described as bilingual, unless the country itself collects data on that basis, as does Bolivia or the Comoros, for example. Where a nonindigenous official or excolonial language constitutes a lingua franca of the country, however, speakers of the language as a second tongue are shown in italics, even though very few may speak it as a mother tongue. Lingua franca figures that are both italicized and indented are not included in population totals. No comprehensive effort has been made to distinguish between dialect communities *usually* classified as belonging to the same language, though such distinctions were possible for some countries—*e.g.*, between French and Occitan (the dialect of southern France) or among the various dialects of Chinese.

In giving the names of Bantu languages, grammatical particles specific to a language's autonym (name for itself) have been omitted (the form *Rwanda* is used here, for example, rather than *kinyaRwanda* and *Tswana* instead of *seTswana*). Parenthetical alternatives are given for a number of languages that differ markedly from the name of the people speaking them (such as Kurukh, spoken by the Oraon tribes of India) or that may be combined with other groups sometimes distinguishable in national data but appearing here under the name of the largest member—*e.g.*, "Tamil (and other Indian languages)" combining data on South Asian Indian populations in Singapore. The term *creole* as used here refers to distinguishable dialectal communities related to a national, official, or former colonial language (such as the French creole that survives in Mauritius from the end of French rule in 1810).

Internet resources for further information:

- *Ethnologue* (14th ed.; Summer Institute of Linguistics) <http://www.ethnologue.com>
- Joshua Project 2000—People's List (Christian interfaith missionary database identifying some 2,000 ethnolinguistic groups) <http://www.ad2000.org/peoples/index.htm>
- U.S. Census Bureau: <http://www.census.gov/ftp/pub/ipc/www/idbconf.html> (especially tables 57 and 59)

Language

Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers
Afghanistan ¹		Antigua and Barbuda		Azerbaijan					
Indo-Aryan languages		● English	76,800	Armenian	163,000	Spanish	85,000	Japanese	677,000
Pashai	178,000	English/English Creole	72,000	● Azerbaijani (Azeri)	7,326,000	Spanish (lingua franca)	149,000	● Portuguese	174,226,000
Iranian languages		Other	4,200	Lezgi (Lezgian)	184,000			Other	1,655,000
Balochi	266,000	Argentina		Russian	249,000	Benin ¹		Brunei	
● Dari (Persian)		Amerindian languages	109,000	Other	317,000	Adja	782,000	Chinese	32,000
Chahar Aimak	810,000	Italian	647,000	Bahamas, The		Aizo (Ouidah)	606,000	English	10,400
Hazara	2,530,000	● Spanish	35,682,000	● English	...	Bariba	606,000	English-Chinese	7,300
Tajik	5,859,000	Other	408,000	English/English Creole	282,000	Dendi	154,000	● Malay	159,000
Nuristani group	222,000	Armenia		French (Haitian)	...	Djougou	209,000	Malay-Chinese	3,100
Pamir group	178,000	● Armenian	2,853,000	Creole	32,000	Fon	2,799,000	Malay-Chinese-English	13,500
● Pashto	15,046,000	Azerbaijani (Azeri)	80,000	Bahrain ²		● French	661,000	Malay-English	101,000
Turkic languages		Other	128,000	● Arabic	459,000	Fula (Fulani)	397,000	Other	18,700
Turkmen	555,000	Aruba		English	...	Somba (Ditamari)	463,000	Bulgaria ¹	
Uzbek	2,530,000	● Dutch	4,800	Other	215,000	Yoruba (Nago)	859,000	● Bulgarian	6,480,000
Other	544,000	English	8,700	Bangladesh ¹		Other	165,000	● Macedonian	191,000
Albania ¹		Papiamentu	71,500	● Bengali	130,078,000	Bermuda		Romany	286,000
● Albanian	3,102,000	Spanish	6,800	Chakma	496,000	● English	64,000	Turkish	734,000
Greek	59,000	Other	1,000	English	3,503,000	Portuguese	6,100	Other	95,000
Macedonian	4,600	Australia		Garó	124,000	Bhutan ¹		Burkina Faso ⁴	
Other	900	Aboriginal languages	53,000	Khasi	103,000	Assamese	104,000	Dogon	44,000
Algeria		Arabic	194,000	Marma (Magh)	258,000	● Dzongkha (Bhutia)	343,000	French	44,000
● Arabic	27,346,000	Cantonese	227,000	Mro	41,000	Nepali (Hindi)	239,000	● French (lingua franca)	5,419,000
Berber	4,454,000	Dutch	48,000	Santhali	93,000	Bolivia		Fula (Fulani)	1,272,000
English	...	● English	16,141,000	Tripuri	93,000	● Aymara	278,000	Gur (Voltaic) languages	
French	6,243,000	English (lingua franca)	19,189,000	Other	1,824,000	● Guarani	10,000	Bwamu	288,000
American Samoa		French	47,000	Barbados		● Quechua	700,000	Gouin (Cerma)	77,000
● English	1,900	German	115,000	Bajan (English Creole)	259,000	● Spanish	3,583,000	Grusi (Gurunsi) group	
English (lingua franca)	60,000	Greek	310,000	● English	...	Spanish-Amerindian (multilingual), of which	3,943,000	Ko	22,000
● Samoan	56,000	Hungarian	31,000	Other	13,000	Spanish-Aymara	1,699,000	Lyele	321,000
Tongan	1,900	Indonesian Malay	31,000	Belarus		Spanish-Guarani	31,000	Nuni	155,000
Other	1,900	Italian	439,000	● Belarusian	6,488,000	Spanish-Quechua	2,224,000	Sissala	11,000
Andorra ²		Macedonian	82,000	Polish	49,000	Other	72,000	Lobi	254,000
● Catalan (Andorran)	22,000	Maltese	53,000	● Russian	3,155,000	Bosnia and Herzegovina ¹		Moore (Mossi) group	
French	5,000	Mandarin	105,000	Ukrainian	129,000	● Bosnian	1,637,000	Dagarna	409,100
Portuguese	7,000	Pilipino (Filipino)	81,000	Other	59,000	● Croatian	630,000	Gurma	752,000
Spanish	29,000	Polish	73,000	Belgium ^{2, 3}		● Serbian	1,153,000	Kusaal	22,000
Other	4,000	Portuguese	28,000	Arabic	161,000	Other	300,000	Moore (Mossi)	6,636,000
Angola ¹		Russian	36,000	● Dutch (Flemish; Netherlandic)	6,128,000	Botswana ¹		Senufu group	
Ambo (Ovambo)	255,000	Serbo-Croatian	122,000	● French (Walloon)	3,376,000	● English (lingua franca)	665,000	Minianka	188,000
Chokwe	457,000	Spanish	104,000	● German	101,000	English (lingua franca)	41,000	Kru languages	
Herero	74,000	Turkish	51,000	Italian	252,000	Ndebele	21,000	Seme (Siamou)	22,000
Kongo	1,423,000	Vietnamese	160,000	Spanish	50,000	San (Bushman)	58,000	Mande languages	
Luchazi	255,000	Other/not stated	1,352,000	Turkish	91,000	Shona	207,000	Bobo	299,000
Luimbe-Nkangala	584,000	Austria		Other	181,000	Tswana	1,255,000	Busansi (Bisa)	476,000
Lunda	127,000	● Czech	19,000	Belize		Tswana (lingua franca)	1,330,000	Dyula (Jula)	343,000
Luvale (Lwena)	382,000	● German	7,409,000	● English	136,000	Other	81,000	Marka	221,000
Mbunda	127,000	Hungarian	34,000	English Creole (lingua franca)	202,000	Brazil ¹		Samo	310,000
Mbundu	2,325,000	Polish	19,000	Garifuna (Black Carib)	18,000	Amerindian languages	183,000	Tamashek (Tuareg)	122,000
Nyaneka-Nkhumbi	584,000	Romanian	17,000	German	4,300	German	978,000	Other	940,000
Ovimbundu	4,003,000	Serbo-Croatian	175,000	Mayan languages	26,000	Italian	752,000	Burundi ¹	
(Umbundu)	3,822,000	Slovene	30,000					● French	285,000
● Portuguese	170,000	Turkish	122,000					● Rundi	3,015,000
Other		Other	229,000					Hutu	2,542,000

Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers
Tutsi	447,000	Chile¹		Mboshi	431,000	Eritrea		Soninke	109,000
Twa	31,000	Araucanian (Mapuche)	1,421,000	Monokutuba (lingua franca)	2,221,000	Cushitic languages		Other	18,000
Others ⁵	61,000	Aymara	81,000	Punu	118,000	Afar	180,000	non-Gambians	196,000
Cambodia¹		Rapa Nui	35,000	Sango	105,000	Bilin	130,000	Gaza Strip	
Cham	308,000	● Spanish	13,740,000	Teke	640,000	Hadareb (Beja)	160,000	Arabic	1,297,000
Chinese	403,000	China¹		Other	196,000	Saharo	120,000	Hebrew	6,800
● Khmer	11,629,000	Achang	31,000	Costa Rica		Nilotic languages		Georgia	
Vietnamese	722,000	Bulang (Blang)	92,000	Chibchan languages	12,500	Kunama	110,000	Abkhaz	88,000
Others ⁶	64,000	Ch'iang (Qiang)	225,000	Bribri	8,000	Nara	90,000	Armenian	343,000
Cameroon¹		Chinese (Han)	1,185,204,000	Cabécar	4,600	Semitic languages		Azerbaijani (Azeri)	274,000
Chadic languages		Cantonese		Chinese	8,000	Arabic (Rashaida)	10,000	● Georgian (Kartuli)	3,514,000
Buwal	307,000	(Yüeh [Yue])	51,093,000	English Creole	83,000	Tigré	1,310,000	Ossetian	118,000
Hausa	194,000	Hakka	28,612,000	● Spanish	4,044,000	Tigrinya	2,031,000	Russian	441,000
Kotoko	174,000	Hsiang (Xiang)	39,853,000	Other	11,000	Estonia¹		Other	157,000
Mandara (Wandala)	889,000	Kan (Gan)	22,481,000	Côte d'Ivoire¹		Belarusian	20,000	Germany²	
Masana (Masa)	623,000	● Mandarin	918,652,000	Akan (including Baule and Anyi)	4,996,000	● Estonian	883,000	● German	75,429,000
● English	7,868,000	Min	39,853,000	● French	8,326,000	Finnish	12,000	Greek	362,000
● French	4,700,000	Wu	84,814,000	Gur (Voltaic)		Russian	380,000	Italian	613,000
Niger-Congo languages		Ching-p'o (Jingpo)	133,000	including Senufo and Lobi)	1,946,000	Ukrainian	34,000	Kurdish	402,000
Adamawa-Ubangi languages		Chuang (Zhuang)	17,607,000	Kru (including Bete)	1,748,000	Other	25,000	Polish	281,000
Chamba	378,000	Daghur (Daur)	133,000	Malinke (including Dyula and Bambara)	1,905,000	Ethiopia¹		South Slavic languages	1,196,000
Gbaya (Baya)	194,000	Evenk (Ewenki)	31,000	Southern Mande (including Dan and Guro)	1,280,000	Afar	1,205,000	Turkish	2,120,000
Mbum	204,000	Gelo	501,000	Other (non-Ivoirian population)	4,756,000	Agew (Awngi)	607,000	Other	2,603,000
Atlantic languages		Hani (Woni)	1,431,000	Croatia		Amharic	18,668,000	Ghana¹	
Fula (Fulani)	1,512,000	Hui	9,772,000	● Croatian	4,252,000	Berta	149,000	Akan	10,732,000
Benue-Congo languages		Kazak	1,267,000	Other	176,000	Gedee	548,000	● English	1,436,000
Bamileke (Medumba)-Widikum (Moghamo)-Bamum (Mum)	2,922,000	Korean	2,187,000	Cuba		Gumuz	129,000	Ewe	2,431,000
Basa (Bassa)	174,000	Kyrgyz	164,000	● Spanish	11,295,000	Gurage	2,708,000	Ga-Adangme	1,593,000
Duala	1,717,000	Lahu	470,000	● Greek	685,000	Kaffa	717,000	Gurma	681,000
Fang (Pangwe)-Bet-Bulu	3,096,000	Li	1,267,000	● Turkish	203,000	Kambata	797,000	Hausa (lingua franca)	12,262,000
Ibibio (Efik)	20,000	Lisu	654,000	Other	32,000	Kimant	199,000	Mole-Dagbani (Moore)	3,238,000
Igbo	82,000	Manchu	11,169,000	Cyprus (island)¹		Oromo (Oromifa)	20,291,000	Yoruba	272,000
Jukun	102,000	Maonan	82,000	● Greek	685,000	Sidamo	2,161,000	Other	1,520,000
Lundu	429,000	Miao	8,410,000	● Turkish	203,000	Somali	3,973,000	Greece	
Maka	777,000	Mongol	5,467,000	Other	32,000	Tigrinya	3,764,000	● Greek	10,834,000
Tikar	1,165,000	Mulam	184,000	Czech Republic¹		Walaïta	3,883,000	Turkish	104,000
Tiv	409,000	Na-hsi (Naxi)	317,000	Bulgarian	3,000	Other	5,705,000	Other	63,000
Wute	51,000	Nu	31,000	● Czech	8,282,000	Faroe Islands		Greenland²	
Saharan languages		Pai (Bai)	1,809,000	German	48,000	● Danish	...	● Danish	7,100
Kanuri	51,000	Pumi	31,000	Greek	3,000	● Faroese	48,000	● Greenlandic	50,000
Semitic languages		Puyi (Chung-chia)	2,892,000	Hungarian	20,000	Fiji¹		Grenada	
Arabic	153,000	Salar	102,000	Moravian	1,313,000	● English	172,000	● English	...
Other	123,000	She	715,000	Polish	60,000	● English	420,000	English/English Creole	102,000
Canada		Shui	388,000	Romanian	1,000	● English	361,000	Guadeloupe	
● English	18,703,000	Sibo (Xibe)	194,000	Romany	33,000	● English	45,000	● French	...
● French	7,349,000	Tai (Dai)	1,165,000	Russian	5,000	● English	...	French/French Creole	414,000
English-French	119,000	Tajik	41,000	Ruthenian	2,000	● English	...	Other	21,000
English-other	276,000	Tibetan	5,222,000	Silesian	44,000	Finland		Guam	
French-other	40,000	Tu (Monguor)	215,000	Slovak	312,000	Finnish	4,820,000	Asian languages	10,800
English-French-other	10,000	T'ü-chia (Tujia)	6,489,000	Ukrainian	8,000	Russian	26,000	● Chamorro	34,000
Arabic	164,000	Tung (Dong)	2,861,000	Other	70,000	Sami (Lapp)	2,000	● English	59,000
Chinese	793,000	Tung-hsiang (Dongxiang)	429,000	Denmark²		Swedish	295,000	English (lingua franca)	153,000
Cree	85,000	Uighur	8,206,000	● Danish	39,000	Other	68,000	Philippine languages	34,000
Dutch	148,000	Wa (Va)	399,000	English	5,102,000	France		Other Pacific Island languages	10,500
Eskimo (Inuktitut) languages		Yao	2,422,000	German	26,000	Arabic ⁷	1,514,000	Guatemala	
German	499,000	Yi	7,470,000	South Slavic languages	39,000	English ⁷	81,000	Garifuna (Black Carib)	26,000
Greek	135,000	Other	1,012,000	Turkish	47,000	● French ^{7, 8, 9}	55,974,000	Mayan languages	3,416,000
Italian	537,000	Colombia¹		Other	120,000	Basque	102,000	Cakchiquel	873,000
Pilipino (Filipino)	149,000	Amerindian languages	352,000	Djibouti¹		Breton	813,000	Kekchi	471,000
Polish	236,000	Arawakan	39,000	Afar	162,000	Catalan	264,000	Mam	265,000
Portuguese	234,000	Cariban	29,000	● Arabic	51,000	Corsican	81,000	Quiché	985,000
Punjabi	224,000	Chibchan	176,000	● French	71,000	Dutch (Flemish)	91,000	● Spanish	6,311,000
Spanish	236,000	Other	107,000	Somali	203,000	German (Alsatian)	1,016,000	Guernsey	
Ukrainian	180,000	English Creole	49,000	Gadaboursi	...	Italian ⁷	264,000	● English	63,000
Vietnamese	118,000	● Spanish	40,910,000	Issa	...	Polish ⁷	51,000	Norman French	...
Other	1,327,000	Comoros		Issaq	...	Portuguese ⁷	691,000	Guinea¹	
Cape Verde		● Arabic	...	Other	41,000	Spanish ⁷	224,000	Atlantic languages	
Crioulo (Portuguese Creole)	438,000	● Comorian	374,000	Dominica		Turkish ⁷	213,000	Basari-Konyagi	102,000
● Portuguese	...	Comorian-French	65,000	● English	...	Other ⁷	762,000	Fula (Fulani)	3,269,000
Central African Republic		Comorian-Malagasy	28,000	English Creole	69,700	French Guiana		Kissi	511,000
Banda	858,000	Comorian-Arabic	8,600	French Creole	63,000	Amerindian languages	3,200	Other	261,000
● French	942,000	Comorian-Swahili	2,600	Dominican Republic		Chinese	13,600	● French	795,000
Mandjia	869,000	Comorian-French-other	20,000	French (Haitian) Creole	176,000	Polynesian languages	197,000	Mande languages	
Mbum	230,000	Other	2,600	● Spanish	8,540,000	Tahitian	271,000	Kpelle	397,000
Ngbaka	283,000	Congo, Dem. Rep. of the¹		East Timor		Other	48,000	Loma	193,000
Nzakara	63,000	Boa	1,239,000	Portuguese	80,000	Gabon¹		Malinke	1,964,000
● Sango (lingua franca)	3,244,000	Chokwe	965,000	Tetum (Tetun)	608,000	Fang	476,000	Susu	931,000
Sara	241,000	English	...	Other	310,000	● French	1,108,000	Yalunka	250,000
Zande (Azande)	73,000	● French	4,062,000	Ecuador		Kota	44,000	Other	590,000
Other	523,000	Kongo	8,470,000	Quechuan (and other Amerindian languages)	915,000	Mbete	188,000	Guinea-Bissau¹	
Chad¹		Kongo (lingua franca)	16,250,000	● Spanish	12,088,000	Mpongwe (Myene)	199,000	Crioulo (Portuguese Creole)	601,000
● Arabic	1,140,000	Lingala (lingua franca)	36,562,000	Egypt¹		Punu, Sira, Nzebi	222,000	Ejamat	32,000
Bagirmi	143,000	Luba	9,486,000	● Arabic	67,367,000	Teke	22,000	French	137,000
Fitr-Batha	428,000	Lugbara	853,000	Other	818,000	Other	177,000	Fula (Fulani)	295,000
● French	2,774,000	Mongo	7,109,000	El Salvador		Gambia, The¹		Malinke	179,000
Fula (Fulani)	230,000	Ngala and Bangi	3,047,000	● Spanish	6,515,000	● English	...	Mandayako	148,000
Gorane	581,000	Rundi	2,031,000	Equatorial Guinea¹		Gambians	8,300	Mankanya	53,000
Hadjarai	614,000	Rwanda	5,423,000	Bubi	51,000	Aku (Krio)	131,000	Pepel	137,000
Kanem-Bornu	833,000	Swahili (lingua franca)	25,390,000	Fang	401,000	Atlantic languages	230,000	● Portuguese	148,000
Lac-Iro	55,000	Teke	1,442,000	● French	...	Diola (Jola)	131,000	Other	106,000
Mayo-Kebbi	1,063,000	Zande (Azande)	3,219,000	Krio (English Creole)	...	Fula (Fulani)	230,000	Guyana	
Ouaddai	811,000	Other	9,486,000	Other	41,000	Manjak	23,000	Amerindian languages	
Sara	2,554,000	Congo, Rep. of the¹		Gambia, The¹		Serer	34,000	Arawakan	11,000
Tandjile	603,000	Bobangi	39,000	● Spanish	...	Wolof	179,000	Cariban	17,000
Other	197,000	● French	1,960,000	Other	41,000	Mande languages	10,000	● English	...
		Kongo	1,908,000			Bambara	486,000	English/English Creoles	750,000
		Kota	39,000			Malinke			
		Lingala (lingua franca)	...						
		Maka	65,000						
		Mbete	183,000						

Language (continued)

Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers
Haiti ● French 1,535,000 ● Haitian (French) Creole 7,528,000		Surjapuri 462,000 Other Hindi dialects 7,766,000 Hindi (lingua franca) 703,078,000		Sardinian 1,492,000 Slovene 117,000 Other 127,000		Laos ¹ ● Lao-Lum (Lao) 3,004,000 Lao-Soung (Miao [Hmong] and Man [Yao]) 569,000 Lao-Tai (Tai) 733,000 Lao-Theung (Mon-Khmer) 1,301,000 Other ¹⁴ 52,000		● English 606,000 Lomwe 2,144,000 Ngoni 746,000 Yao 1,538,000 Other 393,000	
Honduras English Creole 13,000 Garifuna (Black Carib) 86,000 Miskito 12,000 ● Spanish 6,611,000 Other 82,000		Kashmiri 4,960,000 Khandeshi 1,230,000 Konkani 2,218,000 Lahnda 32,000 Marathi 78,673,000 Nepali (Gorkhali) 2,617,000 Oriya 35,333,000 Punjabi 29,437,000 Sanskrit 63,000 Sindhi 2,669,000 Kachchhi 715,000 Urdu 54,659,000		● English English/English Creoles 2,492,000 Hindi and other Indian languages 51,000 Other 101,000		● Latvian 1,298,000 Lithuanian 29,000 Polish 48,000 Russian 755,000 Ukrainian 69,000 Other 39,000		Malaysia Bajau 163,000 Chinese 1,464,000 Chinese-others 824,000 Dusun 260,000 English 130,000 English-others 282,000 English (lingua franca) 7,700,000 Iban 597,000 Iban-others 98,000 ● Malay 10,877,000 Malay-others 3,861,000 Tamil 976,000 Tamil-others 11,000 Other 5,683,000	
Hong Kong Chinese 82,000 ● Cantonese 6,059,000 Cantonese (lingua franca) 6,549,000 Chiu Chau 98,000 Fukien (Min) 130,000 Hakka 114,000 Putonghua (Mandarin) 76,000 Putonghua (lingua franca) 1,239,000 Sze Yap 27,000 ● English 151,000 English (lingua franca) 2,156,000 Japanese 14,000 Pilipino (Filipino) 7,000 Other 164,000		Sino-Tibetan languages Adi 200,000 Angami 126,000 Ao 221,000 Bodo/Boro 1,534,000 Dimasa 116,000 Garo 851,000 Karbi/Makir 462,000 Konyak 179,000 Lotha 105,000 Lushai (Mizo) 683,000 Manipuri (Meithei) 1,597,000 Miri/Mishing 494,000 Nissi/Dafila 221,000 Rabha 179,000 Sema 210,000 Tangkhu 126,000 Thado 137,000 Tripuri 872,000 Kokbarak 652,000 Other Sino-Tibetan languages 1,902,000 Other 5,560,000		Japan ² Ainu ¹ 15,000 Chinese 241,000 English 80,000 ● Japanese 126,406,000 Korean 663,000 Philippine languages 90,000 Other 50,000		Latvia ¹ Belarusian 87,000 ● Latvian 1,298,000 Lithuanian 29,000 Polish 48,000 Russian 755,000 Ukrainian 69,000 Other 39,000		Maldives ● Divehi (Maldivian) 285,000	
Hungary German 40,000 ● Hungarian 9,984,000 Romanian 10,000 Romany 51,000 Serbo-Croatian 20,000 Slovak 10,000 Other 20,000		Indo-Iranian languages Azeri 1,597,000 Miri/Mishing 494,000 Nissi/Dafila 221,000 Rabha 179,000 Sema 210,000 Tangkhu 126,000 Thado 137,000 Tripuri 872,000 Kokbarak 652,000 Other Sino-Tibetan languages 1,902,000 Other 5,560,000		Jersey ● English 82,200 French 80,000 Norman French 5,500		Lebanon ¹ ● Arabic 3,468,000 Armenian 219,000 French 896,000 Other 42,000		Mali ¹ Afro-Asiatic languages Berber languages Tamashék (Tuareg) 848,000 Semitic languages Arabic (Mauri) 185,000 ● French 1,195,000 Niger-Congo languages Atlantic languages Dogon 467,000 Fula (Fulani) and Tukolor 1,619,000 Gur (Voltaic) languages Bwa (Bobo) 283,000 Moore (Mossi) 44,000 Senufo and Minianka 1,391,000 Mande languages Bambara (lingua franca) 9,236,000 Bobo Fing 11,000 Dyula (Jula) 337,000 Malinke, Khasonke, and Wasulunka 771,000 Samo (Duun) 76,000 Soninke 1,021,000 Nilo-Saharan languages Songhai 837,000 Other 33,000	
Iceland ² ● Icelandic 278,000 Other 12,000		Indonesia Balinese 3,655,000 Banjarese 3,844,000 Batak 4,884,000 Buginese 4,842,000 ● Indonesian (Malay) 26,627,000 Javanese 86,697,000 Madurese 9,516,000 Minangkabau 5,189,000 Sundanese 34,673,000 Other 39,956,000		Jordan ¹ ● Arabic 5,287,000 Armenian 54,000 Kabardian (Circassian) 54,000		Lesotho ¹ ● English 429,000 ● Sotho 1,533,000 Zulu 270,000		Malta ¹ ● English 24,000 English (lingua franca) 210,000 ● Maltese 354,000 Italian (lingua franca) 89,000 Other 15,000	
India Afro-Asiatic languages Arabic 32,000 Austroasiatic languages Ho 1,198,000 Kharia 284,000 Khasi 1,146,000 Korku 589,000 Munda 526,000 Mundari 1,083,000 Santhali 6,568,000 Savara (Sora) 347,000 Other Austroasiatic 200,000 Dravidian languages Gondi 2,680,000 Kannada 41,239,000 Khond 273,000 Koya 336,000 Kui 809,000 Kurukh (Oraon) 1,797,000 Malayalam 38,254,000 Tamil 66,745,000 Telugu 83,129,000 Tulu 1,955,000 Other Dravidian 694,000 English 221,000 ● English (lingua franca) 202,831,000 Indo-Iranian (Indo-Aryan) languages Assamese 16,468,000 Bengali 87,638,000 Bhili (Bhilodi) 7,020,000 Barel 586,000 Bhiliadi 586,000 Gujarati 51,212,000 Haibali 673,000 ● Hindi 424,684,000 Awadhi 610,000 Baghelkhandi 1,745,000 Bagri 746,000 Banjari 1,114,000 Bhojpuri 29,090,000 Bundelkhandi 2,091,000 Chhattisgarhi 13,336,000 Dhundhari 1,219,000 Garhwali 2,354,000 Harauti 1,555,000 Haryanvi 452,000 Hindi 293,936,000 Kangri 620,000 Khortha (Khottha) 1,324,000 Kumauni 2,165,000 Lamani (Banjari) 2,585,000 Magahi (Magadhi) 13,305,000 Maithili 9,784,000 Malvi 3,741,000 Mandeali 557,000 Marwari 5,885,000 Mewari 2,659,000 Nagpuri 977,000 Nimadi 1,787,000 Pahari 2,743,000 Rajasthani 16,784,000 Sadani (Sadri) 1,976,000 Surgujia 1,314,000		Iran ¹ Armenian 317,000 Iranian languages Bakhtiyari (Luri) 1,110,000 Balochi 1,511,000 ● Farsi (Persian) 30,232,000 Farsi (lingua franca) 54,843,000 Gilaki 3,498,000 Kurdish 6,044,000 Luri 2,864,000 Mazandarani 2,388,000 Other 1,437,000 Semitic languages Arabic 1,427,000 Other 159,000 Turkic languages Afshari 750,000 Azerbaijani (Azeri) 11,138,000 Qashqa'i 845,000 Shahsavani 402,000 Turkish (mostly Pishagchi, Bayat, and Qajar) 476,000 Turkmen 1,036,000 Other 137,000 Other 486,000		Kazakhstan ¹ Azerbaijani (Azeri) 89,000 Belarusian 149,000 German 456,000 ● Kazakh 6,800,000 Korean 89,000 Russian 5,135,000 Tatar 288,000 Uighur 169,000 Ukrainian 734,000 Uzbek 337,000 Other 545,000		Liberia ¹ Atlantic (Mel) languages Gola 137,000 Kissi 137,000 ● English 661,000 Krio (English Creole) 2,939,000 Kru languages Bassa 462,000 Belle 21,000 De (Dewoin, Dey) 11,000 Grebo 294,000 Krahn 126,000 Kru (Krumen) 241,000 Mande (Northern) languages Gbandi 95,000 Kpelle 640,000 Loma 189,000 Malinke (Mandingo) 168,000 Mende 21,000 Vai 116,000 Mande (Southern) languages Gio (Dan) 262,000 Mano 231,000 Other 168,000		Marshall Islands ² ● English 56,000 ● Marshallese 55,000 Other 1,700	
Indonesia Balinese 3,655,000 Banjarese 3,844,000 Batak 4,884,000 Buginese 4,842,000 ● Indonesian (Malay) 26,627,000 Javanese 86,697,000 Madurese 9,516,000 Minangkabau 5,189,000 Sundanese 34,673,000 Other 39,956,000		Iran ¹ Armenian 317,000 Iranian languages Bakhtiyari (Luri) 1,110,000 Balochi 1,511,000 ● Farsi (Persian) 30,232,000 Farsi (lingua franca) 54,843,000 Gilaki 3,498,000 Kurdish 6,044,000 Luri 2,864,000 Mazandarani 2,388,000 Other 1,437,000 Semitic languages Arabic 1,427,000 Other 159,000 Turkic languages Afshari 750,000 Azerbaijani (Azeri) 11,138,000 Qashqa'i 845,000 Shahsavani 402,000 Turkish (mostly Pishagchi, Bayat, and Qajar) 476,000 Turkmen 1,036,000 Other 137,000 Other 486,000		Kenya ¹ Arabic 83,000 Bantu languages Bajun (Rajun) 73,000 Basuba 125,000 Embu 375,000 Gusii (Kisii) 1,949,000 Kamba 3,565,000 Kikuyu 6,609,000 Kuria 188,000 Luhya 4,378,000 Mbere 125,000 Meru 1,731,000 Nyika (Mijikenda) 1,512,000 Pokomo 83,000 Swahili 10,000 ● Swahili (lingua franca) 20,849,000 Taita 313,000 Cushitic languages Oromo languages Boran 146,000 Gabbra 63,000 Gurreh 167,000 Orma 63,000 Somali languages Degodia 198,000 Ogaden 52,000 Somali 323,000 ● English (lingua franca) 2,815,000 Nilotic languages Kalenjin 3,409,000 Luo 4,034,000 Masai 500,000 Sambur 156,000 Teso 271,000 Turkana 427,000 Other 709,000		Libya ● Arabic 5,334,000 Berber 54,000 Other ¹⁵ 163,000		Martinique ● French ... French/French Creole 380,000 Other 13,300	
Italy ¹ Albanian 117,000 Catalan 29,000 French 302,000 German 302,000 Greek 39,000 ● Italian 52,956,000 Rhaetian 722,000 Friulian 702,000 Ladin 20,000 Romany 107,000		Iraq ¹ ● Arabic 19,026,000 Assyrian 207,000 Azerbaijani (Azeri) 424,000 Kurdish 4,678,000 Persian 207,000 Other 141,000		Kiribati ¹ ● English 22,000 Kiribati (Gilbertese) 87,000 Tuvaluan (Elice) 500 Other 600		Lithuania ¹ Belarusian 43,000 ● Lithuanian 2,907,000 Polish 235,000 Russian 220,000 Ukrainian 23,000 Other 24,000		Mauritania ¹ ● Arabic ... French 274,000 Fula (Fulani) 30,000 Hassaniyah Arabic 2,199,000 Soninke 71,000 Tukolor 142,000 Wolof 182,000 Zenaga 30,000 Other 41,000	
Japan ² Ainu ¹ 15,000 Chinese 241,000 English 80,000 ● Japanese 126,406,000 Korean 663,000 Philippine languages 90,000 Other 50,000		Israel ¹² ● Arabic 1,165,000 ● Hebrew 4,079,000 Russian 583,000 Other 646,000		Korea, North ¹ Chinese 31,000 ● Korean 22,435,000		Luxembourg ² Belgian 11,000 Dutch 2,800 English 3,500 French 13,500 German 7,800 Italian 14,200 Luxemburgian 197,000 Portuguese 182,200 Other 21,300		Mayotte ¹⁶ ● Arabic ... ● French 68,000 Mahorais (local dialect of Comorian Swahili) 140,000 Other Comorian Swahili dialects 62,000 Malagasy 54,000 Other 10,000	
Jersey ● English 82,200 French 80,000 Norman French 5,500		Israel ¹² ● Arabic 1,165,000 ● Hebrew 4,079,000 Russian 583,000 Other 646,000		Korea, South ¹ Chinese 51,000 ● Korean 47,874,000		Macau Chinese ● Cantonese (Yüeh [Yue]) 381,000 Mandarin 5,000 Other Chinese languages 40,000 English 2,000 ● Portuguese 10,000 Other 5,000		Mexico Amerindian languages 7,278,000 Amuzgo 50,000 Aztec (Nahuatl) 1,744,000	
Jordan ¹ ● Arabic 5,287,000 Armenian 54,000 Kabardian (Circassian) 54,000		Italy ¹ Albanian 117,000 Catalan 29,000 French 302,000 German 302,000 Greek 39,000 ● Italian 52,956,000 Rhaetian 722,000 Friulian 702,000 Ladin 20,000 Romany 107,000		Kyrgyzstan ¹ Azerbaijani (Azeri) 21,000 German 31,000 Kazakh 52,000 ● Kyrgyz 3,021,000 ● Russian 817,000 Tajik 41,000 Tatar 62,000 Ukrainian 83,000 Uzbek 714,000 Other 217,000		Madagascar ¹ ● French 2,464,000 Malagasy 16,435,000 ● English ... Other 171,000			
Kazakhstan ¹ Azerbaijani (Azeri) 89,000 Belarusian 149,000 German 456,000 ● Kazakh 6,800,000 Korean 89,000 Russian 5,135,000 Tatar 288,000 Uighur 169,000 Ukrainian 734,000 Uzbek 337,000 Other 545,000		Israel ¹² ● Arabic 1,165,000 ● Hebrew 4,079,000 Russian 583,000 Other 646,000		Kosovo ¹³ ● Albanian ... ● Serbian ...		Macedonia ¹ Albanian 470,000 ● Macedonian 1,368,000 Romany 46,000 Serbian 41,000 Turkish 82,000 Vlach 9,000 Other 39,000			
Kenya ¹ Arabic 83,000 Bantu languages Bajun (Rajun) 73,000 Basuba 125,000 Embu 375,000 Gusii (Kisii) 1,949,000 Kamba 3,565,000 Kikuyu 6,609,000 Kuria 188,000 Luhya 4,378,000 Mbere 125,000 Meru 1,731,000 Nyika (Mijikenda) 1,512,000 Pokomo 83,000 Swahili 10,000 ● Swahili (lingua franca) 20,849,000 Taita 313,000 Cushitic languages Oromo languages Boran 146,000 Gabbra 63,000 Gurreh 167,000 Orma 63,000 Somali languages Degodia 198,000 Ogaden 52,000 Somali 323,000 ● English (lingua franca) 2,815,000 Nilotic languages Kalenjin 3,409,000 Luo 4,034,000 Masai 500,000 Sambur 156,000 Teso 271,000 Turkana 427,000 Other 709,000		Israel ¹² ● Arabic 1,165,000 ● Hebrew 4,079,000 Russian 583,000 Other 646,000		Kuwait ● Arabic 1,900,000 Other 539,000		Malawi ¹ Chewa (Maravi) 6,802,000			
Kyrgyzstan ¹ Azerbaijani (Azeri) 21,000 German 31,000 Kazakh 52,000 ● Kyrgyz 3,021,000 ● Russian 817,000 Tajik 41,000 Tatar 62,000 Ukrainian 83,000 Uzbek 714,000 Other 217,000		Israel ¹² ● Arabic 1,165,000 ● Hebrew 4,079,000 Russian 583,000 Other 646,000							

Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers
Chatinio	49,000	Rakhine (Arakanese)	1,915,000	Nigeria ¹		Bilaan	43,000	Tabasaran	97,000
Chinantec	159,000	Shan	3,595,000	Arabic	305,000	Bontoc	64,000	Tatar	5,519,000
Chocho	1,200	Other	2,332,000	Bura	1,932,000	Butuanon	85,000	Tuvan	198,000
Chol	194,000	Namibia		Edo	4,271,000	Cebuano	18,882,000	Udmurt	713,000
Chontal	53,000	Afrikaans	183,000	● English/English Creole		Chavacano	500,000	Ukrainian	3,446,000
Cora	20,000	Caprivi	90,000	(lingua franca)	56,943,000	Chinese	74,000	Uzbek	127,000
Cuicatec	16,000	● English	15,000	Fula (Fulani)	14,134,000	Davaweno (Mansaka)	553,000	Yakut	441,000
Huastec	180,000	English (lingua franca)	370,000	Hausa	26,743,000	● English (lingua franca)	42,207,000	Other	3,836,000
Huave	17,000	German	17,000	Hausa (lingua franca)	63,044,000	● Filipino	23,761,000	Rwanda	
Huichol	38,000	Herero	154,000	Ibibio	7,016,000	Hiligaynon	7,389,000	● English	...
Kanjobal	11,000	Kavango (Okavango)	187,000	Igbo (Ibo)	22,574,000	Ibaloi (Nabaloi)	138,000	● French	576,000
Mame	11,000	Nama	240,000	Itur	2,237,000	Ibanag	298,000	● Rwanda	8,387,000
Mayo	44,000	Ovambo (Ambo [Kwanyama])	976,000	Kanuri	5,186,000	Ifugao	223,000	St. Kitts and Nevis	
Mazahua	172,000	San (Bushman)	37,000	Nupe	1,525,000	Ilocano	7,559,000	● English	...
Mazatec	254,000	Tswana	8,700	Tiv	2,847,000	Ilongot	117,000	English/English Creole	46,400
Mixe	139,000	Other	18,500	Yoruba	26,743,000	Kalinga	138,000	St. Lucia	
Mixtec	538,000	Nauru		Other	9,762,000	Kankanaï	308,000	● English	32,000
Otomí	360,000	Chinese	1,100	Northern Mariana Islands		Kinaray-a (Hamtikanon)	510,000	English/French Creole	130,000
Popoluca	66,000	English	1,000	● Carolinian	3,100	Maguindanao	1,180,000	St. Vincent and the Grenadines	
Purépecha (Tarasco)	143,000	English (lingua franca)	11,000	● Chamorro	16,000	Manobo	542,000	● English	...
Tarahumara	92,000	Kiribati (Gilbertese)	2,200	Chinese	16,900	Maranao	1,031,000	English/English Creole	112,000
Tepehua	11,000	Nauruan	7,300	● English	8,000	Palawano	85,000	Other	1,000
Tepehuan	31,000	Tuvaluan (Ellice)	1,100	English (lingua franca)	66,000	Pampango	2,424,000	Samoa	
Tlapanec	123,000	Nepal		Philippine languages	17,600	Pangasinan	1,467,000	● English	1,000
Tojolabal	46,000	Austroasiatic (Munda) languages	7,147,000	Other Pacific Island languages	3,900	Romblon	255,000	● Samoan	85,000
Totonac	287,000	Santhali	39,000	Other	6,700	Samal	510,000	Samoan-English	93,000
Trique	25,000	English	7,147,000	Norway ²		Sambal	213,000	San Marino ¹	
Tzeltal	344,000	Indo-Aryan languages		Danish	18,000	Subanon	330,000	● Italian (Romagnolo)	29,000
Tzotzil	362,000	Bengali	39,000	English	24,000	Surigaoanon	595,000	São Tomé and Príncipe	
Yaqi	16,000	Bhojpuri	1,801,000	● Norwegian	4,411,000	Tau Sug	936,000	Crioulo (Portuguese Creole)	124,000
Yucatec (Mayan)	948,000	Dhanwar	29,000	Swedish	13,000	Tboli	106,000	English	...
Zapotec	533,000	Hindi (Awadhi dialect)	225,000	Other	102,000	Tinggian	74,000	French	1,000
Zoque	64,000	Maithili	2,869,000	Oman		Tiruray	74,000	● Portuguese	...
Other	496,000	● Nepali (Eastern Pahari)	12,169,000	Arabic (Omani)	2,012,000	Waray-Waray	3,094,000	Other	17,000
● Spanish	85,871,000	Rajbansi	108,000	Other	609,000	Yakan	160,000	Saudi Arabia ¹	
Spanish-Amerindian languages	5,987,000	Tharu	1,302,000	Pakistan		Other	1,595,000	● Arabic	22,809,000
Micronesia		Urdu	264,000	Balochi	4,484,000	Poland		Other	1,199,000
Chuukese (Trukese)/Mortlockese	56,000	Tibeto-Burman languages		Brahui	1,821,000	Belarusian	190,000	Senegal	
English	1,500	Bhutia (Sherpa)	157,000	English (lingua franca)	16,842,000	German	500,000	● French	3,547,000
Kosraean	7,700	Chepang	29,000	Pashto	19,579,000	● Polish	37,704,000	Senegalese	
Pohnpeian	28,000	Gurung	294,000	Punjabi		Ukrainian	230,000	Bambara	91,000
Polynesian languages	1,600	Limbu	333,000	Hindko	3,621,000	Portugal ²		Diola	497,000
Woleaian	4,700	Magar	558,000	Punjabi	71,778,000	● Portuguese	10,079,000	Fula (Fulani)-Tukulor	2,199,000
Yapese	6,000	Newari	901,000	Sindhi		Other	102,000	Malinke (Mandingo)	375,000
Other	1,400	Rai and Kiranti	578,000	Saraiki	14,642,000	Puerto Rico		Serer	1,267,000
Moldova		Tamang	1,185,000	Urdu	11,326,000	● English	543,000	Soninke	132,000
Bulgarian	70,000	Thakali	9,800	Other	4,242,000	● Spanish	3,297,000	Wolof	4,865,000
Gagauz	139,000	Thami	20,000	Palau		Other ¹⁸	376,000	(lingua franca)	8,108,000
● Romanian (Moldovan)	2,646,000	Other	773,000	Chinese	300	Réunion		Other	446,000
Russian	985,000	Netherlands, The ²		● English	600	Chinese	21,000	non-Senegalese	223,000
Ukrainian	368,000	Arabic	133,000	English (lingua franca)	20,000	Comorian	21,000	Serbia ¹⁹	
Other	60,000	● Dutch	15,556,000	● Palauan	17,000	French Creole	697,000	Albanian	1,738,000
Monaco ²		Turkish	105,000	Philippine languages	2,000	Malagasy	11,000	Hungarian	346,000
English	2,100	Other	444,000	Other	700	Tamil	148,000	Macedonian	49,000
● French	13,600	Netherlands Antilles		Panama		Other	11,000	Romanian	40,000
Italian	5,200	● Dutch	...	Amerindian languages		Romania ¹		Romany	148,000
Monegasque	5,200	English	14,000	Bokotá	5,500	Bulgarian	8,000	● Serbian	7,920,000
Other	6,300	Papiamentu	145,000	Chibchan		Czech	4,000	Slovak	69,000
Mongolia ¹		Other	10,000	Guaymí (Ngöbe Buglé)		German	64,000	Vlach	20,000
Bayad	49,000	New Caledonia ¹		Kuna	166,000	Hungarian	1,427,000	Other	198,000
Buryat	43,000	● French	75,000	Teribe	63,000	Polish	4,000	Seychelles	
Darhat	18,000	Indonesian	5,000	Chocó	3,000	● Romanian	19,346,000	English	3,000
Dariganga	35,000	Melanesian languages	99,000	Emberá	20,000	Romany (Tigani)	540,000	English (lingua franca)	29,000
Dörbet	68,000	Polynesian languages	26,000	Wounaan	3,000	Russian	43,000	French	1,000
Dzakhchin	27,000	Vietnamese	3,100	Arabic	18,000	Serbo-Croatian	26,000	French (lingua franca)	78,000
Kazakh	147,000	Other	12,000	Chinese	9,000	Slovak	22,000	Seselwa (French Creole)	75,000
● Khalkha (Mongolian)	1,962,000	New Zealand		English	...	Tatar	22,000	Other	3,000
Khalkha (lingua franca)	2,232,000	● English	3,483,000	English Creoles	436,000	Turkish	43,000	Sierra Leone ¹	
Ould	10,000	English-Māori	155,000	● Spanish	2,393,000	Ukrainian	64,000	Atlantic languages	
Torgut	13,000	● Māori	15,000	Papua New Guinea ¹		Other		Bullom-Sherbro	190,000
Tuvan (Uryankhai)	25,000	Other	349,000	● English	159,000	Russia ¹		Fula (Fulani)	190,000
Other	98,000	Nicaragua		Melanesian languages		Adyghian	119,000	Kissi	114,000
Montenegro ¹⁷		English Creole	31,000	Motu	1,121,000	Armenian	713,000	Limba	418,000
● Montenegrin	...	Misumalpan languages		Papuan languages	4,349,000	Avar	604,000	Temne	1,578,000
Morocco		Miskito	90,000	Tok Pisin (English Creole)	3,624,000	Bashkir	1,375,000	● English	475,000
● Arabic	19,390,000	Sumo	9,000	Other	113,000	Belarusian	972,000	Krio (English Creole (lingua franca))	4,182,000
Berber	9,845,000	● Spanish	5,350,000	Paraguay		Buryat	453,000	Mande languages	
French	11,905,000	Other	2,300	German	51,000	Chechen	898,000	Kono-Vai	257,000
Other	600,000	Niger ¹		● Guarani	2,267,000	Chuvash	1,722,000	Kuranko	171,000
Mozambique		Atlantic languages		Guarani-Spanish	2,739,000	Dargin	353,000	Mende	1,720,000
Bantu languages		Fula (Fulani)	1,106,000	Portuguese	174,000	Georgian (Kartuli)	132,000	Susu	76,000
Chuabo	1,167,000	Berber languages	1,185,000	● Spanish	369,000	German	788,000	Yalunka	171,000
Lomwe	1,410,000	Tamashek (Tuareg)		Other	41,000	Inghush	253,000	Other	86,000
Makua	4,883,000	Chadic languages	6,029,000	Peru		Kabardian	367,000	Singapore ¹	
Sena	1,303,000	Hausa (lingua franca)	8,016,000	Amerindian languages		Kalmyk	166,000	Chinese	3,253,000
Tsonga (Changana)	2,120,000	Other	1,694,000	● Aymara	624,000	Karachay	150,000	● English	1,585,000
Other Bantu languages	6,128,000	● French		● Quechua	4,465,000	Komi-Permyak	569,000	● Malay	589,000
Portuguese	1,066,000	Gur (Voltaic) languages	34,000	Other	190,000	Komi-Zyryan	147,000	● Mandarin Chinese	1,837,000
Portuguese (lingua franca)	7,363,000	Saharan languages	508,000	● Spanish	21,657,000	Kumyk	286,000	● Tamil (and other Indian languages)	335,000
Other	350,000	Kanuri	45,000	Other	212,000	Lak	117,000	Other	56,000
Myanmar (Burma) ¹		Semitic languages		Philippines		Lezgi (Lezgian)	295,000	Slovakia ¹	
● Burmese	29,312,000	Arabic	34,000	Aklanon	595,000	Mari	66,000	Czech and Silesian	59,000
Burmese (lingua franca)	34,017,000	Songhai and Zerma	2,416,000	Bantoanon	74,000	Mordvin	723,000	German	5,000
Chin	927,000	Other	23,000	Bicol	4,614,000	Ossetian	463,000	Hungarian	569,000
Kachin (Ching-p'o)	581,000					Romanian	95,000	Polish	3,000
Karen	2,648,000					Romany	130,000	Romany	90,000
Kayah	173,000					● Russian	118,000,000		
Mon	1,029,000								

Language (continued)		Major languages by country		Major languages by country		Major languages by country		Major languages by country	
Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers	Major languages by country	Number of speakers
Ruthenian (Rusyn) and Ukrainian	35,000	● Swedish	8,021,000	Namba (Lamba)	166,000	Teso	1,527,000	Warrau (Warao)	21,000
● Slovak	4,626,000	Turkish	29,000	Naudemba (Losso)	223,000	Other (mostly Gujarati and Hindi)	633,000	Other	160,000
Other	15,000	Other	199,000	Tamberma	30,000			● Spanish	24,795,000
Slovenia		Switzerland		Yanga	16,000	Ukraine		Other	553,000
Hungarian	9,000	● French	1,410,000	Kwa languages		Belarusian	145,000	Vietnam¹	
Serbo-Croatian	156,000	● German	4,669,000	Adele	11,000	Bulgarian	154,000	Bahnar	177,000
● Slovene	1,732,000	● Italian	562,000	Adja (Aja)	170,000	Hungarian	145,000	Cham	125,000
Other	74,000	Romansch	41,000	Ahlo	10,000	Polish	29,000	Chinese (Hoa)	1,142,000
		Other	654,000	Akposo	145,000	Romanian	318,000	French	395,000
Solomon Islands¹		Syria¹		Ane (Basila)	307,000	Russian	15,714,000	Hre	125,000
● English	9,000	● Arabic	15,829,000	Anlo	4,300	● Ukrainian	30,937,000	Jarai	312,000
Melanesian languages	385,000	Kurdish	1,585,000	Anyaga	11,000	Other	414,000	Khmer	1,132,000
Papuan languages	39,000	Other	173,000	Ewe	1,259,000	United Arab Emirates²		Koho	114,000
Polynesian languages	16,000	Taiwan		Fon	54,000	● Arabic	1,606,000	Man (Mien, or Yao)	602,000
Solomon Island Pidgin (English Creole)	157,000	Austronesian languages		Hwe	6,500	Other ¹⁶	2,212,000	Miao (Meo, or Hmong)	716,000
Other	10,000	Ami	140,000	Kebu	63,000	United Kingdom		Mnong	83,000
Somalia¹		Atayal	91,000	Kpessi	4,300	● English	57,559,000	Muong	1,162,000
● Arabic	...	Bunun	43,000	Peda-Hula (Pla)	22,000	● Scots-Gaelic	79,000	Nung	903,000
English	...	Paiwan	69,000	Watyi (Ouatchi)	559,000	Welsh	565,000	Rade (Rhadé)	249,000
● Somali	7,892,000	Puyuma	10,000	Other	229,000	Other	961,000	Roglai	96,000
Other	133,000	Rukai	11,000	Tonga		United States		San Chay (Cao Lan)	146,000
South Africa		Saisiyat	6,000	● English	31,000	Amharic	42,000	San Diu	125,000
● Afrikaans	5,961,000	Tsou	7,000	● Tongan	100,000	Arabic	683,000	Sedang	125,000
● English	3,675,000	Yami	4,000	Other	2,000	Armenian	225,000	Stieng	62,000
● Ndebele	717,000	Chinese languages		Trinidad and Tobago		Bengali	53,000	Tai	1,329,000
● Swazi	1,210,000	Hakka	2,481,000	● English	...	Cajun	42,000	Tho (Tay)	1,515,000
● Xhosa	7,888,000	● Mandarin	4,535,000	English Creole ²¹	37,000	Chinese (including Formosan)	2,247,000	● Vietnamese	70,972,000
● Zulu	10,667,000	Min (South Fukien)	15,049,000	Hindi	45,000	Czech	117,000	Other	168,000
Sotho		Other	122,000	Trinidad English	1,195,000	Danish	42,000	Virgin Islands (U.S.)	
● North Sotho (Pedi)	4,213,000	Tajikistan		● Other	3,000	Dutch	180,000	● English	91,000
● South Sotho	3,540,000	Russian	633,000	Tunisia		English	239,407,000	French	2,800
● Tswana (Western Sotho)	3,675,000	● Tajik (Tojik)	4,066,000	● Arabic	6,911,000	English (lingua franca)	282,724,000	Spanish	15,000
● Tsonga	1,972,000	Uzbek	1,515,000	Arabic-French	2,596,000	Finnish	64,000	Other	2,800
● Venda	1,031,000	Other	322,000	Arabic-French-English	309,000	French	2,150,000	West Bank²⁴	
Other	224,000	Tanzania¹		Arabic-other	10,000	French Creole (mostly Haitian)	233,000	Arabic	2,275,000
Spain		Chaga (Chagga), Pare	1,719,000	Other-no Arabic	31,000	German	1,537,000	Hebrew	192,000
Basque (Euskera)	641,000	● English	3,775,000	Turkey¹		Greek	406,000	Western Sahara	
● Castilian Spanish	30,373,000	Gogo	1,381,000	Arabic	967,000	Gujarati	262,000	Arabic	262,000
Catalan (Català)	6,886,000	Ila	1,202,000	Kurdish ²²	7,482,000	Hebrew	217,000	Yemen¹	
Galician (Gallego)	2,604,000	Hayat	2,066,000	● Turkish	61,825,000	Hindi (including Urdu)	645,000	● Arabic	19,930,000
Other	305,000	Iramba	2,414,000	Other	323,000	Hungarian	131,000	Other	80,000
Sri Lanka		Luguru	1,003,000	Turkmenistan¹		Illocano	53,000	Zambia²⁵	
English ²⁰	10,000	Luo	288,000	Armenian	37,000	Italian	1,121,000	Bemba group	
English-Sinhala	1,051,000	Makonde	2,066,000	Azerbaijani (Azeri)	40,000	Japanese	531,000	Bemba	3,217,000
English-Sinhala-Tamil	684,000	Masai	348,000	Balochi	40,000	Korean	994,000	Bemba (lingua franca)	5,643,000
English-Tamil	218,000	Ngoni	467,000	Kazakh	96,000	Kru (Gullah)	85,000	Bisa	124,000
● Sinhala	11,510,000	Nyakusa	1,898,000	Russian	328,000	Lithuanian	74,000	Lala	260,000
Sinhala-Tamil	1,785,000	Nyamwesi (Sukuma)	7,401,000	Tatar	40,000	Malayalam	42,000	Lamba	237,000
● Tamil	3,748,000	Shambala	1,500,000	● Turkmen	3,731,000	Miao (Hmong)	187,000	Other	451,000
Other	60,000	● Swahili	3,100,000	Ukrainian	25,000	Mon-Khmer (mostly Cambodian)	202,000	● English	124,000
Sudan, The¹		Swahili (lingua franca)	31,790,000	Uzbek	446,000	Navajo	198,000	English (lingua franca)	2,032,000
● Arabic	18,818,000	Tatoga	258,000	Other	85,000	Norwegian	106,000	Lozi (Barotse) group	
Arabic (lingua franca)	22,816,000	Yao	854,000	Tuvalu		Pennsylvania Dutch	106,000	Lozi (Barotse)	688,000
Bari	934,000	Other	5,394,000	English	...	Persian	347,000	Other	124,000
Beja	2,434,000	Thailand¹		Kiribati (Gilbertese)	800	Polish	742,000	Mambwe group	
Dinka	4,400,000	Chinese	7,764,000	Tuvaluan (Elice)	940	Portuguese	627,000	Lungu	79,000
● English	...	Karen	226,000	Uganda¹		Punjābi	64,000	Mambwe	124,000
Fur	782,000	Malay	2,328,000	Bantu languages		Romanian	85,000	Mwanga (Winawanga)	148,000
Lotuko	565,000	Mon-Khmer languages		Amba	98,000	Russian	785,000	Other	11,000
Nubian languages	3,086,000	Khmer	810,000	Ganda (Luganda)	4,603,000	Samoan	42,000	North-Western group	
Nuer	1,869,000	Kuy	687,000	Gisu (Masaba)	1,145,000	Serbo-Croatian	260,000	Kaonde	248,000
Shilluk	652,000	Other	226,000	Gwere	415,000	Slovak	106,000	Lunda	214,000
Zande (Azande)	1,032,000	Tai languages		Kiga (Chiga)	2,127,000	Spanish	31,230,000	Luvale (Luena)	192,000
Other	3,542,000	Lao	17,221,000	Konjo	556,000	Swedish	95,000	Other	293,000
Suriname		● Thai (Siamese)	33,662,000	Nkole (Nyankole and Hororo)	2,727,000	Syriac	42,000	Nyanja (Maravi) group	
● Dutch	111,000	Other	441,000	Nyole	349,000	Tagalog	1,361,000	Chewa	621,000
English/English Creole	415,000	Other	656,000	Nyoro	753,000	Tai (including Laotian)	300,000	Ngoni	181,000
Sranantonga	172,000	Togo¹		Ruli	109,000	Turkish	53,000	Nsenga	463,000
Sranantonga-other	172,000	Atlantic (Mel) languages		Rundi	153,000	Ukrainian	127,000	Nyanja (Maravi)	847,000
Other (mostly Hindi, Javanese, and Saramacca)	91,000	Fula (Fulani)	74,000	Rwanda	818,000	Vietnamese	1,122,000	Nyanja (lingua franca)	2,822,000
Swaziland¹		Benue-Congo languages		Samia	338,000	Yiddish	199,000	Other	68,000
● English	50,000	Yoruba	11,000	Soga	2,094,000	Other	858,000	Tonga (Ila-Tonga) group	
● Swazi (Swati)	976,000	Chadic languages		● Swahili	...	Uruguay		Ila	102,000
Zulu	20,000	Hausa	15,000	Swahili (lingua franca)	8,944,000	● Spanish	3,235,700	Lenje	169,000
Other	81,000	● French	2,704,000	Toro	742,000	Other	114,000	Tonga	1,185,000
Sweden²		Gur (Voltaic) languages		Central Sudanic languages		Uzbekistan¹		Other	135,000
Arabic	69,000	Basari	95,000	Lugbara	1,200,000	Kazakh	1,046,000	Tumbuka group	
Danish	41,000	Chakossi (Akan)	64,000	Madi	196,000	Russian	1,542,000	Senga	79,000
English	32,000	Chamba	53,000	Ndo	251,000	Tajik	1,232,000	Tumbuka	316,000
Finnish	211,000	Dye (Gangam)	51,000	● English	2,727,000	Tatar	414,000	Other	11,000
German	46,000	Gurma	184,000	Nilotic languages		● Uzbek	19,429,000	Other	102,000
Iranian languages ¹	50,000	Kabre	748,000	Acholi	1,124,000	Other	1,977,000	Zimbabwe	
Norwegian	47,000	Konkomba	77,000	Kakwa	600,000	Vanuatu²³		● English	258,000
Polish	39,000	Kotokoli (Tem)	313,000	Karamojong	535,000	● Bislama (English Creole)	116,000	English (lingua franca)	5,477,000
South Slavic languages ¹	117,000	Moba	292,000	Kumam	175,000	● English	58,000	Ndebele (Nguni)	1,902,000
Spanish	57,000	Moore (Mossi)	14,000	Lango	1,494,000	● French	29,000	Nyanja	269,000
				Padhola	382,000	Other	1,900	Shona	8,453,000
				Sebei		Venezuela		Other	837,000
				(Kupsabiny)	164,000	Amerindian languages			
						Goajiro	170,000		

Figures given here represent ethnolinguistic groups. ¹2Da refer to nationality (usually resident aliens holding foreign passports). ³3Data are partly based on place of residence. ⁴4Majority of population speak Moore (language of the Mossi); Dyula is language of commerce. ⁵5Swahili also spoken. ⁶6English and French also spoken. ⁷7Based on "nationality" at 1982 census. ⁸8Includes naturalized citizens. ⁹9French is the universal language throughout France; traditional dialects and minority languages are retained regionally in the approximate numbers shown, however. ¹⁰10Data reflect multilingualism; 2000 population estimate is 233,000. ¹¹11Refers to Irish speakers in Gaeltacht areas. ¹²12Includes the population of the Golan Heights and East Jerusalem; excludes the Israeli population in the West Bank and Gaza Strip. ¹³13Kosovo included in Serbia. ¹⁴14English and French also spoken. ¹⁵15English and Italian also spoken. ¹⁶16Data reflect ability to speak the language, not mother tongue; 2003 population estimate is 160,000. ¹⁷17Montenegro included in Serbia. ¹⁸18Mostly Pakistanis, Indians, and Iranians. ¹⁹19Includes Montenegro and Kosovo. ²⁰20English has official status as the "link language" between Sinhala and Tamil. ²¹21Spoken on Tobago only. ²²22Other estimates of the Kurdish population range from 6 percent to 20–25 percent. ²³23Data reflect multilingualism; 2000 population is 190,000. ²⁴24Excludes East Jerusalem. ²⁵25Groups are officially defined geographic divisions; elements comprising them are named by language.

Religion

The following table presents statistics on religious affiliation for each of the countries of the world. An assessment was made for each country of the available data on distribution of religious communities within the total population; the best available figures, whether originating as census data, membership figures of the churches concerned, or estimates by external analysts in the absence of reliable local data, were applied as percentages to the estimated 2001 midyear population of the country to obtain the data shown below.

Several concepts govern the nature of the available data, each useful separately but none the basis of any standard of international practice in the collection of such data. The word "affiliation" was used above to describe the nature of the relationship joining the religious bodies named and the populations shown. This term implies some sort of formal, usually documentary, connection between the religion and the individual (a baptismal certificate, a child being assigned the religion of its parents on a census form, maintenance of one's name on the tax rolls of a state religion, etc.) but says nothing about the nature of the individual's personal religious practice, in that the individual may have lapsed, never been confirmed as an adult, joined another religion, or may have joined an organization that is formally atheist.

The user of these statistics should be careful to note that not only does the nature of the affiliation (with an organized religion) differ greatly from

country to country, but the social context of religious practice does also. A country in which a single religion has long been predominant will often show more than 90% of its population to be *affiliated*, while in actual fact, no more than 10% may actually *practice* that religion on a regular basis. Such a situation often leads to undercounting of minority religions (where someone [head of household, communicant, child] is counted at all), blurring of distinctions seen to be significant elsewhere (a Hindu country may not distinguish Protestant [or even Christian] denominations; a Christian country may not distinguish among its Muslim or Buddhist citizens), or double-counting in countries where an individual may conscientiously practice more than one "religion" at a time.

Until 1989 communist countries had for long consciously attempted to ignore, suppress, or render invisible religious practice within their borders. Countries with large numbers of adherents of traditional, often animist, religions and belief systems usually have little or no formal methodology for defining the nature of local religious practice. On the other hand, countries with strong missionary traditions, or good census organizations, or few religious sensitivities may have very good, detailed, and meaningful data.

The most comprehensive works available are DAVID B. BARRETT (ed.), *World Christian Encyclopedia* (2001); and PETER BRIERLEY, *World Churches Handbook* (1997).

Religion

Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population
Afghanistan		Azerbaijan		Botswana				Cyprus	
Sunni Muslim	23,090,000	Shi'i Muslim	5,299,000	African Christian	490,000	traditional beliefs	550,000	Greek Orthodox	630,000
Shi'i Muslim	2,310,000	Sunni Muslim	2,271,000	Protestant	170,000	Protestant	520,000	Muslim (mostly Sunni)	200,000
other	490,000	other	535,000	Roman Catholic	60,000	other	1,290,000	other (mostly Christian)	40,000
Albania		Bahamas, The		other (mostly traditional beliefs)	870,000	Chad		Czech Republic	
Muslim	1,200,000	Protestant	135,000	Brazil		Muslim	4,690,000	Roman Catholic	4,010,000
Roman Catholic	520,000	Roman Catholic	50,000	Roman Catholic		Roman Catholic	1,770,000	Evangelical Church of	
Albanian Orthodox	320,000	Anglican	32,000	(including syncretic		Protestant	1,250,000	Czech Brethren	200,000
other	1,050,000	other	77,000	Afro-Catholic cults		traditional beliefs	640,000	Czechoslovak Hussite	180,000
Algeria		Bahrain		having Spiritist		other	350,000	Silesian Evangelical	30,000
Sunni Muslim	30,550,000	Shi'i Muslim	420,000	beliefs and rituals)	124,470,000	Chile		Eastern Orthodox	20,000
Ibadiyyah Muslim	180,000	Sunni Muslim	140,000	Evangelical Protestant	39,850,000	Roman Catholic	11,810,000	atheist and	
other	90,000	other	140,000	other	7,800,000	Evangelical Protestant	1,910,000	nonreligious	4,100,000
American Samoa		Bangladesh		Brunei		other	1,690,000	other	1,730,000
Congregational	23,800	Muslim	112,660,000	Muslim	222,000	China		Denmark	
Roman Catholic	11,300	Hindu	16,260,000	other	121,000	nonreligious	661,390,000	Evangelical Lutheran	4,600,000
other	23,400	other	2,360,000	Bulgaria		Chinese folk-religionist	256,260,000	Muslim	120,000
Andorra		Barbados		Bulgarian Orthodox	5,690,000	atheist	152,990,000	other	640,000
Roman Catholic	60,000	Anglican	89,000	Muslim (mostly Sunni)	940,000	Buddhist	108,110,000	Djibouti	
other	7,000	Protestant	80,000	other	1,320,000	Christian	76,540,000	Sunni Muslim	434,000
Angola		Roman Catholic	12,000	Burkina Faso		Muslim	18,360,000	other	27,000
Roman Catholic	6,440,000	other	88,000	Muslim	5,960,000	traditional beliefs	1,280,000	Dominica	
Protestant	1,550,000	Belarus		traditional beliefs	4,180,000	Colombia		Roman Catholic	50,000
African Christian	710,000	Belarusian Orthodox	3,151,000	Christian	2,040,000	Roman Catholic	39,590,000	Protestant	12,000
other	1,660,000	Roman Catholic	1,772,000	other	80,000	other	3,480,000	other	10,000
Antigua and Barbuda		other	5,062,000	Burundi		Comoros		Dominican Republic	
Protestant	30,000	Belgium		Roman Catholic	4,050,000	Sunni Muslim	555,000	Roman Catholic	7,110,000
Anglican	23,000	Roman Catholic	8,310,000	nonreligious	1,160,000	other	11,000	Protestant	560,000
Roman Catholic	8,000	other	1,360,000	other (mostly Protestant)	1,020,000	Congo, Dem. Rep. of the		other	1,020,000
other	10,000	Belize		Cambodia		Roman Catholic	21,990,000	East Timor	
Argentina		Roman Catholic	143,000	Buddhist	10,780,000	Protestant	16,950,000	Roman Catholic	780,000
Roman Catholic	29,920,000	Protestant	67,000	Chinese folk-religionist	600,000	African Christian	7,170,000	Protestant	50,000
Protestant	2,040,000	Anglican	17,000	traditional beliefs	550,000	traditional beliefs	5,740,000	Muslim	30,000
Muslim	730,000	other	20,000	Muslim	290,000	Muslim	750,000	other	40,000
Jewish	500,000	Benin		other	500,000	other	1,040,000	Ecuador	
nonreligious	880,000	Voodoo		Cameroon		Congo, Rep. of the		Roman Catholic	11,910,000
other	3,430,000	(traditional beliefs)	3,390,000	Roman Catholic	4,180,000	Roman Catholic	1,430,000	Roman Catholic	440,000
Armenia		Roman Catholic	1,370,000	traditional beliefs	3,750,000	Protestant	490,000	Protestant	530,000
Armenian Apostolic		Muslim	1,320,000	Muslim	3,350,000	African Christian	360,000	Egypt	
(Orthodox)	2,454,000	other	500,000	Protestant	3,270,000	other	610,000	Sunni Muslim	58,060,000
other	1,353,000	Bermuda		other	1,250,000	Costa Rica		Coptic Orthodox ¹	6,520,000
Aruba		Anglican	23,700	Canada		Roman Catholic	3,380,000	other	660,000
Roman Catholic	80,000	Methodist	10,400	Roman Catholic	14,010,000	Protestant	360,000	El Salvador	
other	18,000	Roman Catholic	8,800	Protestant	8,620,000	other	190,000	Roman Catholic	4,880,000
Australia		other	20,900	Anglican	2,490,000	Côte d'Ivoire		Protestant	1,070,000
Roman Catholic	5,230,000	Bhutan		Eastern Orthodox	440,000	Muslim	6,340,000	other	290,000
Anglican	4,260,000	Lamaistic Buddhist	510,000	Jewish	360,000	Roman Catholic	3,400,000	Equatorial Guinea	
Uniting Church	1,460,000	other	40,000	Muslim	290,000	traditional beliefs	2,790,000	Roman Catholic	390,000
Presbyterian	740,000	Bolivia		Buddhist	190,000	nonreligious	2,220,000	other	110,000
other Protestant	1,400,000	Roman Catholic	7,540,000	Hindu	180,000	Protestant	870,000	Eritrea	
Orthodox	540,000	Protestant	770,000	Sikh	170,000	other	770,000	Eritrean Orthodox	1,980,000
nonreligious	3,220,000	other	210,000	nonreligious	3,880,000	Croatia		Muslim	1,920,000
other	2,510,000	Bosnia and Herzegovina		other	380,000	Roman Catholic	3,890,000	other	400,000
Austria		Sunni Muslim	1,690,000	Cape Verde		Serbian Orthodox	250,000	Estonia	
Roman Catholic	6,060,000	Serbian Orthodox	1,180,000	Roman Catholic	370,000	Sunni Muslim	100,000	Estonian Orthodox	277,000
Protestant (mostly Lutheran)	430,000	Roman Catholic	710,000	other	35,000	Protestant	30,000	Evangelical Lutheran	187,000
atheist and		other	350,000	Central African Republic		other	130,000	other	899,000
nonreligious	690,000	Botswana		Roman Catholic	660,000	Cuba			
other	890,000	other		Muslim	560,000	Roman Catholic	4,420,000		
						Protestant	270,000		
						other (mostly Santería)	6,500,000		

Religion (continued)

Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population
Ethiopia Ethiopian Orthodox other Christian Muslim (mostly Sunni) traditional beliefs other	33,110,000 7,090,000 21,710,000 3,180,000 820,000	Guatemala Roman Catholic Evangelical Protestant other	8,880,000 2,540,000 270,000	Israel Jewish ² Muslim (mostly Sunni) other	4,960,000 930,000 360,000	Lebanon Shi'i Muslim Sunni Muslim Maronite Catholic Druze Greek Orthodox Armenian Apostolic (Orthodox) Greek Catholic (Melchite) other	1,230,000 770,000 690,000 260,000 220,000 190,000 170,000 110,000	Mauritius Hindu Roman Catholic Muslim other	610,000 330,000 190,000 70,000
Faroe Islands Evangelical Lutheran other	38,000 9,000	Guernsey Anglican other	42,000 22,000	Italy Roman Catholic nonreligious and atheist Muslim other	46,260,000 9,600,000 680,000 1,350,000	Lesotho Roman Catholic Protestant African Christian traditional beliefs Anglican other	820,000 280,000 260,000 170,000 100,000 550,000	Mayotte Sunni Muslim Christian	153,000 5,000
Fiji Christian (mostly Methodist and Roman Catholic) Hindu Muslim other	437,000 316,000 65,000 9,000	Guinea Muslim Christian other	6,470,000 760,000 380,000	Jamaica Protestant Roman Catholic Anglican other	1,020,000 270,000 100,000 1,230,000	Liberia traditional beliefs Christian Muslim other	1,390,000 1,270,000 520,000 60,000	Mexico Roman Catholic Protestant other Christian other (mostly non-religious)	90,370,000 3,820,000 1,820,000 3,970,000
Finland Evangelical Lutheran other	4,420,000 770,000	Guinea-Bissau traditional beliefs Muslim Christian other	590,000 530,000 170,000 20,000	Japan Shintoist ³ Buddhist ³ Christian other	118,270,000 88,490,000 1,470,000 10,250,000	Libya Sunni Muslim other	5,040,000 200,000	Micronesia Roman Catholic Protestant other	63,600 40,100 14,200
France Roman Catholic nonreligious Muslim atheist Protestant Jewish other	38,690,000 9,230,000 4,180,000 2,380,000 720,000 590,000 3,290,000	Guyana Hindu Protestant Roman Catholic Muslim Anglican other	264,000 145,000 89,000 70,000 67,000 142,000	Jersey Anglican Roman Catholic other	55,000 21,000 14,000	Liechtenstein Roman Catholic other	26,000 7,000	Moldova Romanian Orthodox Russian (Moldovan) Orthodox other (mostly non-religious)	1,263,000 342,000 2,007,000
French Guiana Roman Catholic other	91,000 77,000	Haiti Roman Catholic Protestant other	4,770,000 1,590,000 610,000	Jordan Sunni Muslim Christian other	4,800,000 210,000 120,000	Lithuania Roman Catholic Russian Orthodox other (mostly non-religious)	2,660,000 90,000 940,000	Monaco Roman Catholic other	28,000 4,000
French Polynesia Protestant Roman Catholic other	119,000 94,000 25,000	Honduras Roman Catholic Evangelical Protestant other	5,740,000 690,000 200,000	Kazakhstan Muslim (mostly Sunni) Russian Orthodox Protestant other (mostly non-religious)	6,988,000 1,216,000 318,000 6,345,000	Luxembourg Roman Catholic other	400,000 40,000	Mongolia Tantric Buddhist (Lamaist) Muslim	2,340,000 100,000
Gabon Roman Catholic Protestant African Christian other	690,000 220,000 170,000 160,000	Hong Kong Buddhist and Taoist Protestant Roman Catholic other	4,970,000 290,000 280,000 1,200,000	Kenya Roman Catholic African Christian Protestant traditional beliefs Anglican Muslim Orthodox other	6,780,000 6,400,000 6,170,000 3,540,000 2,900,000 2,240,000 720,000 2,030,000	Macau nonreligious Buddhist other	271,000 75,000 100,000	Montenegro Orthodox Muslim Roman Catholic other	430,000 129,000 25,000 31,000
Gambia, The Muslim (mostly Sunni) other	1,340,000 70,000	Hungary Roman Catholic Protestant nonreligious other	6,120,000 2,470,000 750,000 850,000	Kiribati Roman Catholic Congregational other	50,000 36,000 9,000	Macedonia Serbian (Macedonian) Orthodox Sunni Muslim other	1,210,000 580,000 260,000	Morocco Muslim (mostly Sunni) other	28,730,000 500,000
Gaza Strip Muslim (mostly Sunni) other	1,190,000 20,000	Iceland Evangelical Lutheran other	260,000 20,000	Korea, North atheist and nonreligious traditional beliefs Ch'ŏndogyo other	15,000,000 3,430,000 3,050,000 480,000	Madagascar traditional beliefs Roman Catholic Protestant other	7,670,000 3,250,000 3,630,000 1,420,000	Mozambique traditional beliefs Roman Catholic Muslim Protestant African Christian other	9,750,000 3,060,000 2,040,000 1,720,000 1,400,000 1,400,000
Georgia Georgian Orthodox Sunni Muslim Armenian Apostolic (Orthodox) Russian Orthodox other (mostly nonreligious)	1,828,000 549,000 279,000 133,000 2,200,000	India Hindu Sunni Muslim traditional beliefs Shi'i Muslim independent Sikh Protestant Roman Catholic Buddhist Jain atheist Bahā'i Zoroastrian (Parsi) nonreligious other	759,350,000 92,380,000 34,930,000 30,790,000 30,750,000 22,290,000 15,130,000 13,940,000 7,290,000 4,160,000 1,670,000 1,190,000 210,000 12,910,000 3,000,000	Korea, South nonreligious Buddhist Protestant Roman Catholic Confucian Wonbulgyo other	23,490,000 11,040,000 9,370,000 3,160,000 230,000 90,000 290,000	Malawi Roman Catholic Protestant African Christian Muslim traditional beliefs other	2,600,000 2,070,000 1,770,000 1,560,000 820,000 1,730,000	Myanmar (Burma) Buddhist Christian Muslim traditional beliefs Hindu other	37,560,000 2,060,000 1,610,000 480,000 210,000 70,000
Germany Protestant (mostly Evangelical Lutheran) Roman Catholic Muslim atheist other (mostly nonreligious)	29,330,000 27,590,000 3,660,000 1,800,000 20,020,000	Indonesia Muslim Protestant Roman Catholic Hindu Buddhist other	185,060,000 12,820,000 7,600,000 3,880,000 2,190,000 660,000	Kosovo Muslim Orthodox Roman Catholic Protestant	1,775,000 107,300 58,500 10,000	Malaysia Muslim Chinese folk-religionist Christian Hindu Buddhist other	10,770,000 5,450,000 1,880,000 1,660,000 1,500,000 1,350,000	Namibia Protestant (mostly Lutheran) Roman Catholic African Christian other	850,000 320,000 200,000 430,000
Ghana traditional beliefs Muslim Protestant African Christian Roman Catholic other	4,860,000 3,910,000 3,310,000 2,870,000 1,890,000 3,050,000	Iran Shi'i Muslim Sunni Muslim Zoroastrian Bahā'i Christian other	57,180,000 3,460,000 1,780,000 430,000 340,000 250,000	Kuwait Sunni Muslim Shi'i Muslim other Muslim other (mostly Christian and Hindu)	1,020,000 680,000 230,000 340,000	Maldives Sunni Muslim other	273,000 2,000	Nauru Protestant Roman Catholic other	6,100 3,300 2,700
Greece Greek Orthodox Muslim other	10,010,000 360,000 500,000	Iraq Shi'i Muslim Sunni Muslim Christian other	13,890,000 8,510,000 750,000 180,000	Kyrgyzstan Muslim (mostly Sunni) Russian Orthodox other (mostly non-religious)	3,701,000 276,000 958,000	Mali Muslim traditional beliefs Christian other	9,010,000 1,760,000 220,000 10,000	Nepal Hindu traditional beliefs Buddhist Muslim Christian other	19,180,000 2,350,000 2,050,000 970,000 600,000 140,000
Greenland Evangelical Lutheran other	36,500 19,800	Israel Shi'i Muslim Sunni Muslim Christian other	13,890,000 8,510,000 750,000 180,000	Laos Buddhist traditional beliefs other	2,750,000 2,350,000 540,000	Malta Roman Catholic other	363,000 21,000	Netherlands, The Roman Catholic Dutch Reformed Church (NHK) Reformed Churches Muslim nonreligious other	4,950,000 2,240,000 1,120,000 720,000 6,550,000 400,000
Grenada Roman Catholic Anglican other	54,000 14,000 34,000	Ireland Roman Catholic other	3,500,000 320,000	Latvia Roman Catholic Evangelical Lutheran Russian Orthodox other (mostly non-religious)	350,000 345,000 181,000 1,482,000	Marshall Islands Protestant Roman Catholic other	32,800 3,700 15,700	Netherlands Antilles Roman Catholic other	152,000 54,000
Guadeloupe Roman Catholic other	350,000 82,000	Isle of Man Anglican Methodist Roman Catholic other	30,000 7,000 6,000 31,000			Martinique Roman Catholic other	336,000 52,000	New Caledonia Roman Catholic Protestant other	132,000 31,300 52,200
Guam Roman Catholic Protestant other	118,000 19,000 21,000					Mauritania Sunni Muslim other	2,720,000 20,000		

Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population	Religious affiliation	2001 population
New Zealand		Puerto Rico		traditional beliefs	2,190,000	I Kuan Tao	990,000	Anglican	26,140,000
Anglican	674,000	Roman Catholic	2,480,000	Christian	620,000	Protestant	440,000	Roman Catholic	5,590,000
Roman Catholic	505,000	Protestant	1,080,000	other	130,000	Roman Catholic	320,000	Protestant	5,020,000
Presbyterian	489,000	other	270,000			Tien Te Chiao	210,000	Eastern Orthodox	370,000
Methodist	130,000			Singapore		Tien Ti Chiao	190,000	other Christian	12,390,000
Baptist	57,000			Buddhist and Taoist	1,695,000	Confucianism (Li)	150,000	Muslim	1,220,000
Mormon	44,000	Muslim (mostly Sunni)	490,000	Muslim	495,000	Hsuan Yuan Chiao	140,000	Hindu	440,000
Ratana	39,000	Christian	60,000	Christian	485,000	Muslim	50,000	Jewish	310,000
nonreligious	954,000	other	40,000	Hindu	133,000	Shinto (Tenrikyo)	20,000	Sikh	240,000
other	969,000			nonreligious	493,000	Bahā'ī	20,000	other (mostly non-religious and atheist)	8,240,000
				other	21,000				
Nicaragua		Réunion				Tajikistan		United States	
Roman Catholic	3,590,000	Roman Catholic	599,000			Sunni Muslim	4,920,000	Christian (professing)	242,011,000
Protestant	810,000	Hindu	33,000	Slovakia		Shi'ī Muslim	310,000	Christian (affiliated)	196,929,000
other (mostly nonreligious)	520,000	other	102,000	Roman Catholic	3,270,000	Russian Orthodox	90,000	independent	80,639,000
		Romania		Slovak Evangelical	340,000	atheist	120,000	Protestant	66,287,000
Niger		Romanian Orthodox	19,460,000	other (mostly nonreligious)	1,800,000	other (mostly nonreligious)	820,000	Roman Catholic	59,542,000
Sunni Muslim	9,390,000	Roman Catholic	1,140,000					Eastern Orthodox	5,915,000
traditional beliefs	900,000	other	1,810,000	Slovenia		Tanzania		Anglican	2,464,000
other	70,000			Roman Catholic	1,650,000	Christian	18,260,000	other Christian	10,348,000
		Russia		other	340,000	Muslim	11,520,000	multi-affiliated	
Nigeria		Russian Orthodox	23,580,000			traditional beliefs	5,830,000	Christians	-28,266,000
Muslim	55,600,000	Muslim	10,980,000	Solomon Islands		other	620,000	(unaffiliated)	45,082,000
traditional beliefs	12,500,000	Protestant	1,320,000	Protestant	173,000			non-Christian	44,056,000
Christian	58,100,000	Jewish	590,000	Anglican	149,000	Thailand		nonreligious	25,745,000
other	500,000	other (mostly nonreligious)	107,960,000	Roman Catholic	83,000	Buddhist	57,920,000	Jewish	5,771,000
				other	75,000	Muslim	2,850,000	Muslim	4,242,000
Northern Mariana Islands		Rwanda				Christian	440,000	Buddhist	2,515,000
Roman Catholic	53,600	Roman Catholic	3,730,000	Somalia		other	40,000	atheist	1,181,000
other	19,700	Protestant	1,530,000	Sunni Muslim	7,364,000			Hindu	1,059,000
		traditional beliefs	660,000	other	125,000	Togo		New-Religionist	832,000
Norway		Muslim	580,000			traditional beliefs	1,940,000	Bahā'ī	773,000
Evangelical Lutheran (Church of Norway)	3,990,000	Anglican	570,000	South Africa		Roman Catholic	1,250,000	Ethnic religionist	447,000
other	530,000	other	260,000	Christian	36,220,000	Sunni Muslim	970,000	Sikh	240,000
		St. Kitts and Nevis		independents	17,040,000	Protestant	530,000	Chinese folk-religionist	80,000
Oman		Anglican	10,000	Protestant	13,860,000	other	450,000	other	1,171,000
Ibādīyāh Muslim	1,840,000	Methodist	10,000	Roman Catholic	3,090,000			Uruguay	
Sunni Muslim	350,000	Hindu	10,000	traditional beliefs	3,660,000	Tonga		Roman Catholic	2,590,000
Hindu	190,000	other	15,000	Hindu	1,050,000	Free Wesleyan	44,000	Protestant	150,000
Christian	100,000	Pentecostal	7,000	Muslim	1,050,000	Roman Catholic	16,000	Mormon	50,000
other	20,000	other	12,000	Bahā'ī	260,000	other	41,000	Jewish	30,000
		St. Lucia		Jewish	170,000			other	480,000
Pakistan		Roman Catholic	125,000	nonreligious	1,050,000	Trinidad and Tobago			
Sunni Muslim	113,950,000	Protestant	20,000	other	130,000	Roman Catholic	380,000	Uzbekistan	
Shi'ī Muslim	25,010,000	other	13,000	Spain		Hindu	308,000	Muslim (mostly Sunni)	19,156,000
Christian	3,560,000	St. Vincent and the Grenadines		Roman Catholic	36,920,000	Protestant	244,000	Russian Orthodox	195,000
Hindu	1,730,000	Anglican	20,000	Muslim	200,000	Anglican	142,000	other (mostly nonreligious)	5,804,000
other	370,000	Pentecostal	17,000	other (mostly non-religious)	3,010,000	Muslim	76,000		
		Methodist	12,000	Sri Lanka		other	149,000	Vanuatu	
Palau		Roman Catholic	52,000	Buddhist	13,270,000	Tunisia		Presbyterian	70,000
Roman Catholic	7,600	other		Hindu	2,190,000	Sunni Muslim	9,720,000	Roman Catholic	28,000
Modekne	5,200			Muslim	1,750,000	other	104,000	Anglican	27,000
Protestant	4,900	Samoa		Roman Catholic	1,300,000	Turkey		other	69,000
other	2,100	Mormon	46,200	other	900,000	Muslim (mostly Sunni)	64,360,000	Venezuela	
Panama		Congregational	44,000	Sudan, The		nonreligious	1,340,000	Roman Catholic	22,050,000
Roman Catholic	2,330,000	Roman Catholic	38,100	Sunni Muslim	25,360,000	other	530,000	other	2,590,000
Protestant	420,000	Methodist	21,800	Christian	6,020,000	Turkmenistan		Vietnam	
other	150,000	other	29,100	traditional beliefs	4,300,000	Muslim (mostly Sunni)	4,752,000	Buddhist	53,290,000
Papua New Guinea		San Marino		other	390,000	other (mostly nonreligious)	581,000	Roman Catholic	6,180,000
Protestant	3,180,000	Roman Catholic	24,000	Suriname		Tuvalu		New-Religionist	
Roman Catholic	1,500,000	other	3,000	Hindu	119,000	Congregational	9,400	Cao Dai	2,810,000
Anglican	210,000	São Tomé and Príncipe		Roman Catholic	91,000	other	1,600	Hoa Hao	1,690,000
other	420,000	Roman Catholic	111,000	Muslim	85,000	Uganda		other	16,500,000
Paraguay		African Christian	16,000	Protestant	71,000	Roman Catholic	10,050,000	Virgin Islands (U.S.)	
Roman Catholic	4,990,000	other	20,000	other	68,000	Anglican	9,450,000	Protestant	56,000
Protestant	280,000	Saudi Arabia		Swaziland		Muslim (mostly Sunni)	1,250,000	Roman Catholic	41,000
other	370,000	Sunni Muslim	20,490,000	African Christian	480,000	traditional beliefs	1,050,000	other	24,000
Peru		Shi'ī Muslim	840,000	Protestant	160,000	other	2,190,000	West Bank	
Roman Catholic	23,170,000	Christian	840,000	traditional beliefs	120,000	Ukraine		Muslim (mostly Sunni)	1,860,000
Protestant	1,730,000	Hindu	250,000	other	340,000	Ukrainian Orthodox (Russian patriarchy)	9,491,000	Jewish ⁴	230,000
other (mostly nonreligious)	1,190,000	other	330,000	Sweden		Ukrainian Orthodox (Kiev patriarchy)	4,746,000	Christian and other	180,000
		Senegal		Church of Sweden (Lutheran)	7,690,000	Ukrainian Autocephalous Orthodox	332,000	Western Sahara	
Philippines		Sunni Muslim	9,010,000	other	1,200,000	Ukrainian Catholic (Uniate)	3,417,000	Sunni Muslim	250,000
Roman Catholic	63,530,000	traditional beliefs	640,000	Switzerland		Protestant	1,736,000	other	1,000
Protestant	4,160,000	Roman Catholic	480,000	Roman Catholic	3,330,000	Roman Catholic	576,000	Yemen	
Muslim	3,500,000	other	160,000	Protestant	2,890,000	Jewish	423,000	Muslim (mostly Sunni)	18,050,000
Aglipayan	2,010,000			other	1,000,000	other (mostly nonreligious)	28,044,000	other	20,000
Church of Christ (Iglesia ni Cristo)	1,790,000	Serbia		Syria		United Arab Emirates		Zambia	
other	1,620,000	Orthodox	6,576,000	Sunni Muslim	12,380,000	Sunni Muslim	2,490,000	traditional beliefs	2,640,000
Poland		Roman Catholic	426,000	Shi'ī Muslim	2,010,000	Shi'ī Muslim	500,000	Protestant	2,240,000
Roman Catholic	35,050,000	Muslim	248,000	Christian	920,000	other	120,000	Roman Catholic	1,650,000
Polish Orthodox	550,000	Protestant	85,000	Druze	500,000	United Kingdom		other	3,240,000
other (mostly nonreligious)	3,050,000	other/unknown	402,000	other	920,000	Christian	49,510,000	Zimbabwe	
Portugal		Seychelles		Taiwan				African Christian	4,580,000
Roman Catholic	9,520,000	Roman Catholic	69,800	nonreligious	10,670,000			traditional beliefs	3,430,000
other	810,000	other	10,800	Buddhist	5,100,000			Protestant	1,400,000
		Sierra Leone		Taoist	4,040,000			Roman Catholic	1,090,000
		Sunni Muslim	2,490,000					other	870,000

¹Official 1986 census figure is 5.9 percent.²Includes the Golan Heights and East Jerusalem; excludes the West Bank and Gaza Strip.³Many Japanese practice both Shintoism and Buddhism.⁴Excludes East Jerusalem.

Vital statistics, marriage, family

This table provides some of the basic measures of the factors that influence the size, direction, and rates of population change within a country. The accuracy of these data depends on the effectiveness of each respective national system for registering vital and civil events (birth, death, marriage, etc.) and on the sophistication of the analysis that can be brought to bear upon the data so compiled.

Data on birth rates, for example, depend not only on the completeness of registration of births in a particular country but also on the conditions under which those data are collected: Do all births take place in a hospital? Are the births reported comparably in all parts of the country? Are the records of the births tabulated at a central location in a timely way with an effort to eliminate inconsistent reporting of birth events, perinatal mortality, etc.? Similar difficulties attach to death rates but with the added need to identify "cause of death." Even in a developed country such identifications are often left to nonmedical personnel, and in a developing country with, say, only one physician for every 10,000 population, there will be too few physicians to perform autopsies to assess accurately the cause of death after the fact and also too few to provide ongoing care at a level where records would permit inference about cause of death based on prior condition or diagnosis.

Calculating natural increase, which at its most basic is simply the difference between the birth and death rates, may be affected by the differing degrees of completeness of birth and death registration for a given country. The total fertility rate may be understood as the average number of children that would be borne per woman if all childbearing women lived to the end of their childbearing years and bore children at each age at the average rate for that age. Calculating a meaningful fertility rate requires analysis of changing age structure of the female population over time,

changing mortality rates among mothers and their infants, and changing medical practice at births, each improvement of natural survivorship or medical support leading to greater numbers of live-born children and greater numbers of children who survive their first year (the basis for measurement of infant mortality, another basic indicator of demographic conditions and trends within a population).

As indicated above, data for causes of death are not only particularly difficult to obtain, since many countries are not well equipped to collect the data, but also difficult to assess, as their accuracy may be suspect and their meaning may be subject to varying interpretation. Take the case of a citizen of a less developed country who dies of what is clearly a lung infection: Was the death complicated by chronic malnutrition, itself complicated by a parasitic infestation, these last two together so weakening the subject that he died of an infection that he might have survived had his general health been better? Similarly, in a developed country: Someone may die from what is identified in an autopsy as a cerebrovascular accident, but if that accident occurred in a vascular system that was weakened by diabetes, what was the actual cause of death? Statistics on causes of death seek to identify the "underlying" cause (that which sets the final train of events leading to death in motion) but often must settle for the most proximate cause or symptom. Even this kind of analysis may be misleading for those charged with interpreting the data with a view to ordering health-care priorities for a particular country. The eight groups of causes of death utilized here include most, but not all, of the detailed causes classified by the World Health Organization and would not, thus, aggregate to the country's crude death rate for the same year. Among the lesser causes excluded by the present classification are: benign neoplasms; anemias; mental disorders; kidney and genitourinary diseases not classifi-

Vital statistics, marriage, family

country	vital rates						causes of death (rate per 100,000 population)								
	year	birth rate per 1,000 popu- lation	death rate per 1,000 popu- lation	infant mortality rate per 1,000 live births	rate of natural increase per 1,000 popu- lation	total fertility rate	year	infectious and parasitic diseases	malign- ant neo- plasms (cancers)	endocrine and metabolic disorders	diseases of the nervous system	diseases of the circula- tory system	diseases of the respira- tory system	diseases of the digestive system	accidents, poisoning, and violence
Afghanistan	2005	47.0	20.7	163.1	26.3	6.75	...	...	...	...	...	...	...	...	...
Albania	2004	13.8	5.7	22.3	8.1	2.05	2003	3.0	95.5	5.9	17.9	288.5	32.9	10.1	39.2
Algeria	2005	17.1	4.6	31.0	12.5	1.92	...	...	...	...	...	...	...	...	...
American Samoa	2004	26.7	4.5	15.2	22.2	3.25	2002	...	62.0	48.0	...	147.0	18.0	...	72.0
Andorra	2004	10.9	3.9	4.1	7.0	1.29	2002	14.0	223.0	20.0	66.0	269.0	72.0	43.0	56.0
Angola	2005	45.6	24.5	185.4	21.1	6.42	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	2005	17.3	5.4	19.5	11.9	2.26	1999	11.3	111.0	53.0	14.8	296.0	93.0	28.4	52.0
Argentina	2003	18.4	8.0	16.2	10.4	2.28	2002	37.2	155.8	25.7	15.5	272.6	73.3	30.9	44.2
Armenia	2004	11.7	8.0	24.2	3.7	1.31	2004	7.3	139.9	50.2	8.7 ²	438.0	47.0	30.5	36.7
Aruba	2004	12.1	5.1	6.0	7.0	1.79	2002	24.6	126.4	28.3	4.8	181.1	26.4	13.0	45.3
Australia	2004	12.7	6.6	4.7	6.1	1.77	2004	8.6	180.7	23.9	21.5	223.0	54.7	21.5	38.8
Austria	2004	9.7	9.1	4.5	0.6	1.42	2003	2.0	238.1	22.3	33.5	432.2	50.9	44.6	53.7
Azerbaijan	2004	16.1	6.1	9.8	10.0	2.05	2002	16.8	77.2	17.2	19.3	345.5	38.7	66.5	22.4
Bahamas, The	2005	17.9	8.9	25.2	8.9	2.20	2000	9.2	73.8	37.5	12.2	145.0	26.3	29.3	71.8
Bahrain	2005	18.1	4.1	17.3	14.0	2.63	2003	11.9	39.3	24.4	5.9	86.6	20.7	13.8	26.5
Bangladesh	2005	30.0	8.4	62.6	21.6	3.13	2002	122.0	21.0	...	...	54.0	71.0	...	35.0
Barbados	2005	12.8	8.7	11.7	4.1	1.64	2000	38.3	123.3	70.2	18.8	219.6	46.6	25.2	15.0
Belarus	2004	9.0	14.3	6.9	-5.3	1.20	2003	10.8	171.2	7.6	14.9	693.5	45.0	28.4	161.6
Belgium	2004	11.1	9.8	4.3	1.3	1.64	1997	13.1	294.1	22.8	57.8	388.4	78.9	44.4	54.3
Belize	2005	29.3	5.7	25.4	23.6	3.68	2000	39.1	107.2	42.4	9.6	248.8	50.0	18.8	77.0
Benin	2005	39.6	12.5	81.3	27.1	5.32	...	...	...	...	...	...	...	...	...
Bermuda	2003	13.4	6.9	2.0	6.5	1.90	2000	14.5	117.6	37.1	16.1	336.8	67.7	27.4	37.1
Bhutan	2005	34.0	12.9	100.4	21.1	4.81	...	...	...	...	...	...	...	...	...
Bolivia	2005	23.8	7.6	53.1	16.2	2.94	2000	...	73.5	...	...	370.3	...	...	109.7
Bosnia and Herzegovina	2003	9.2	8.3	7.7	0.9	1.18	2003	6.1	149.8	25.2	6.4	441.0	22.7	21.1	24.7
Botswana	2005	23.3	29.4	54.6	-6.1	2.85	...	...	...	...	...	...	...	...	...
Brazil	2004	18.1	6.1	30.7	12.0	1.97	2002	26.2 ³	95.7	27.6	10.5 ³	204.1	52.0 ³	25.3 ³	79.2
Brunei	2004	20.0	2.8	8.8	17.2	2.33	2002	...	52.3	26.5	...	98.8	31.2	...	48.2
Bulgaria	2004	9.0	14.2	11.6	-5.2	1.29	2005	8.4	231.7	25.6	10.7	968.1	57.7	42.8	50.8
Burkina Faso	2005	46.0	15.9	92.9	30.1	6.54	...	...	...	...	...	...	...	...	...
Burundi	2005	42.5	13.8	64.4	28.7	6.63	...	...	...	...	...	...	...	...	...
Cambodia	2005	26.9	9.1	68.8	17.8	3.44	...	...	...	...	...	...	...	...	...
Cameroon	2005	34.3	13.6	64.9	20.7	4.47	...	...	...	...	...	...	...	...	...
Canada	2005	10.5	7.3	4.8	3.2	1.61	2002	10.1	207.5	27.8	30.7	240.6	56.6	26.5	44.1
Cape Verde	2005	25.3	6.6	47.8	18.7	3.48	...	...	...	...	...	...	...	...	...
Cayman Islands	2005	14.4	3.5	8.2	10.9	1.90	2000	...	99.5	...	...	136.8	24.9	...	34.8
Central African Republic	2005	34.3	18.8	87.3	15.5	4.50	...	...	...	...	...	...	...	...	...
Chad	2005	46.2	16.7	93.1	29.5	6.32	...	...	...	...	...	...	...	...	...
Chile	2005	15.4	5.8	8.8	9.6	2.02	2003	13.0 ⁴	123.5	20.3 ⁴	12.3 ⁴	148.6	46.6	41.4	30.6
China	2005	12.4	6.5	24.2	5.9	1.72	2002 ⁵	16.7	119.7	17.2	5.4	162.5	78.1	17.1	43.5
Colombia	2005	20.8	5.6	21.0	15.2	2.56	2002	37.8	79.9	20.0	5.1 ⁷	150.2	41.3 ⁷	17.0 ⁷	132.4
Comoros	2005	37.5	8.4	74.9	29.1	5.09	...	...	...	...	...	...	...	...	...
Congo, Dem. Rep. of the	2005	44.1	13.5	90.7	30.6	6.54	...	...	...	...	...	...	...	...	...
Congo, Rep. of the	2005	43.0	13.3	81.5	29.7	6.14	...	...	...	...	...	...	...	...	...
Costa Rica	2005	16.5	3.7	9.8	12.8	2.00	2003	9.4 ⁸	78.1	14.0 ⁸	8.8 ⁸	105.0	31.0 ⁸	26.0 ⁸	46.0
Côte d'Ivoire	2005	35.1	14.9	89.1	20.2	4.50	...	...	...	...	...	...	...	...	...
Croatia	2005	9.4	11.1	6.1	-1.7	1.35	2002	12.8	276.1	21.0	11.2	499.6	41.1	42.7	57.7
Cuba	2004	11.3	7.2	5.8	4.1	1.54	2001	6.7	149.7	15.6	9.7	295.4	88.7	26.4	51.8
Cyprus	2005	10.9	6.7	3.5	4.2	1.83	...	...	...	...	...	...	...	...	...
Czech Republic	2005	10.0	10.5	3.7	-0.5	1.23	2004	3.2	287.1	13.9	19.3	539.3	46.6	44.5	68.5

able under the main groups; maternal deaths (for which data are provided, however, in the "Health services" table); diseases of the skin and musculoskeletal systems; congenital and perinatal conditions; and general senility and other ill-defined (ill-diagnosed) conditions, a kind of "other" category.

Expectation of life is probably the most accurate single measure of the quality of life in a given society. It summarizes in a single number all of the natural and social stresses that operate upon individuals in that society. The number may range from as few as 40 years of life in the least developed countries to as much as 80 years for women in the most developed nations. The lost potential in the years separating those two numbers is prodigious, regardless of how the loss arises—wars and civil violence, poor public health services, or poor individual health practice in matters of nutrition, exercise, stress management, and so on.

Data on marriages and marriage rates probably are less meaningful in terms of international comparisons than some of the measures mentioned above because the number, timing, and kinds of social relationships that substitute for marriage depend on many kinds of social variables—income, degree of social control, heterogeneity of the society (race, class, language communities), or level of development of civil administration (if one must travel for a day or more to obtain a legal civil ceremony, one may forgo it). Nevertheless, the data for a single country say specific things about local practice in terms of the age at which a man or woman typically marries, and the overall rate will at least define the number of legal civil marriages, though it cannot say anything about other, less formal arrangements (here the figure for children born within marriage in the next section may identify some of the societies in which economics or social constraints may operate to limit the number of marriages that are actually confirmed on

civil registers). The available data usually include both first marriages and remarriages after annulment, divorce, widowhood, or the like.

The data for families provide information about the average size of a family unit (individuals related by blood or civil register) and the average number of children under a specified age (set here at 15 to provide a consistent measure of social minority internationally, though legal minority depends on the laws of each country). When well-defined family data are not collected as part of a country's national census or vital statistics surveys, data for households have been substituted on the assumption that most households worldwide represent families in some conventional sense. But increasing numbers of households worldwide are composed of unrelated individuals (unmarried heterosexual couples, aged [or younger] groups sharing limited [often fixed] incomes for reasons of economy, or homosexual couples). Such arrangements do not yet represent great numbers overall. Increasing numbers of census programs, however, even in developing countries, are making more adequate provision for distinguishing these nontraditional, often nonfamily households.

Internet resources for further information:

- World Health Organization Mortality Database (World)
http://www3.who.int/whosis/mort/table1_process.cfm
- Pan American Health Organization (the Americas)
<http://www.paho.org>
- National Center for Health Statistics (U.S.)
<http://www.cdc.gov/nchs>
- U.S. Census Bureau: International Data Base (World)
<http://www.census.gov/ipc/www/idbprint.html>

	expectation of life at birth (latest year)		nuptiality, family, and family planning														country		
			marriages			age at marriage (latest)						families (F), households (H) (latest)							
	year	total number	rate per 1,000 population	groom (percent)			bride (percent)			families (households)		children		induced abortions					
				19 and under	20–29	30 and over	19 and under	20–29	30 and over	total ('000)	size	number under age 15	percent within marriage	number	ratio per 100 live births				
	43.2	43.5	...	...	...	...	...	...	...	...	...	...	H 2,774	H 8.0	H 2.8 ¹	...	...	...	Afghanistan
	74.8	80.3	2004	20,949	6.7	0.9	63.7	35.4	22.4	67.5	10.1	F 729	F 4.2	F 1.6	...	12,087	25.7	...	Albania
	71.7	74.9	2002	218,620	7.0	0.7	67.1	32.2	29.8	61.4	8.8	H 5,072	H 6.2	H 3.0	...	...	...	...	Algeria
	72.5	79.8	2004	287	4.5	...	...	...	...	...	...	H 9	H 6.0	H 2.7	71.7	...	...	...	American Samoa
	80.6	86.6	2004	218	2.9	...	...	...	...	...	...	...	...	...	...	...	...	...	Andorra
	36.5	38.2	...	...	...	...	...	...	...	...	...	H 2,787	H 5.0	...	...	...	...	...	Angola
	69.8	74.7	2001	1,787	23.6	1.2	38.4	60.4	2.8	53.1	44.1	H 24	H 3.1	H 1.2	25.7	...	...	...	Antigua and Barbuda
	72.4	80.1	2003	129,049	3.4	5.6	71.5	22.9	26.0	58.6	15.4	H 10,106	H 3.6	H 1.0	67.5	...	...	...	Argentina
	68.3	76.0	2004	16,975	5.3	0.9	72.3	26.8	16.9	73.3	9.8	H 841	H 4.5	H 1.8	88.6	10,487	28.0	...	Armenia
	76.0	82.8	2004	1,184	12.1	0.8	27.4	71.8	3.0	37.9	59.1	H 29	H 3.1	...	54.3	...	...	...	Aruba
	78.1	83.0	2003	106,394	5.4	0.5	42.4	57.1	2.4	52.7	44.9	H 7,488	H 2.6	H 0.6	67.8	84,460	33.6	...	Australia
	76.4	82.1	2004	38,528	4.7	1.1	34.0	64.9	3.8	46.2	50.0	H 3,337	H 2.4	H 0.5	64.1	2,380	3.0	...	Austria
	69.6	75.2	2004	62,177	7.5	0.9	67.5	31.6	22.4	65.5	12.1	H 1,740	H 4.7	H 1.7	89.5	19,798	15.0	...	Azerbaijan
	62.1	69.0	2001	1,787	5.8	0.6	41.6	57.8	4.6	50.6	44.8	H 87	H 3.5	...	43.2	...	...	...	Bahamas, The
	71.7	76.8	2004	4,667	6.7	1.6	66.9	31.5	20.5	64.4	15.1	H 109	H 6.2	H 2.2	100.0	1,749	12.9	...	Bahrain
	63.6	61.5	1998	1,154,000	9.2	...	...	...	...	...	...	H 25,673	H 5.2	...	...	...	...	...	Bangladesh
	70.6	74.6	2000	3,516	13.1	0.1	40.2	59.7	1.4	53.6	44.9	H 97	H 2.8	H 1.5	26.9	723	19.6	...	Barbados
	63.2	76.0	2004	60,265	6.1	3.1	67.3	29.6	14.8	62.9	22.3	H 3,210	H 3.1	H 0.8	76.0	71,700	80.6	...	Belarus
	75.9	81.7	2004	43,326	4.2	0.5	51.3	48.2	3.1	61.2	35.7	F 4,319	F 2.4	F 0.5	69.0	15,595	13.9	...	Belgium
	66.5	70.4	2003	1,713	6.3	7.1	56.4	36.5	24.9	51.5	23.6	H 55	H 5.0	H 2.2	40.3	990	15.1	...	Belize
	51.5	53.8	...	...	...	...	...	...	...	...	...	H 1,068	H 6.4	...	...	...	...	...	Benin
	75.7	79.9	2003	861	13.8	—	22.2	77.8	1.0	29.7	69.3	H 28	H 2.3	H 0.5	64.2	92	11.0	...	Bermuda
	62.0	64.0	...	...	...	...	...	...	...	...	...	H 147	H 4.6	...	...	...	...	...	Bhutan
	62.9	68.2	...	...	...	...	...	...	...	...	...	H 1,923	H 4.3	H 1.6	80.9	...	...	...	Bolivia
	65.0	70.0	2004	21,470	5.6	1.3	61.8	36.9	15.2	64.0	20.8	H 1,203	H 3.4	H 1.1	88.8	...	...	...	Bosnia and Herzegovina
	33.9	33.8	...	...	...	...	...	...	...	...	...	H 414	H 4.3	H 2.0	28.8	...	...	...	Botswana
	67.7	75.9	2004	806,968	6.2	4.3	57.9	37.8	18.8	55.2	26.0	F 48,514	F 3.5	H 1.2	...	...	...	...	Brazil
	72.1	77.1	2004	2,027	5.8	2.3	55.0	42.7	11.7	62.2	26.1	H 57	H 6.1	H 2.0	99.6	...	...	...	Brunei
	68.9	76.0	2003	30,645	3.9	1.2	61.9	36.9	10.0	70.8	19.2	H 2,913	H 2.7	...	48.7	48,035	71.3	...	Bulgaria
	47.0	50.0	...	...	...	...	...	...	...	...	...	H 1,759	H 6.8	...	...	...	...	...	Burkina Faso
	49.6	51.0	...	...	...	...	...	...	...	...	...	H 1,398	H 5.0	...	...	...	...	...	Burundi
	57.0	60.9	...	...	...	...	...	...	...	...	...	H 2,418	H 5.7	...	...	...	...	...	Cambodia
	50.7	51.1	...	...	...	...	...	...	...	...	...	H 2,880	H 5.5	...	...	...	...	...	Cameroon
	76.7	83.6	2004	146,377	4.7	0.7	43.4	55.9	2.5	52.9	44.6	H 12,021	H 2.6	H 0.6	72.3	103,768	30.9	...	Canada
	67.1	73.9	1994	1,200	3.2	...	...	...	...	...	...	H 95	H 4.7	...	28.9	...	...	...	Cape Verde
	77.3	82.6	2005	810	1.7	...	...	...	...	...	...	...	H 2.6	...	...	...	...	...	Cayman Islands
	43.3	43.5	...	...	...	...	...	...	...	...	...	H 646	H 6.1	...	...	...	...	...	Central African Republic
	45.6	48.9	...	...	...	...	...	...	...	...	...	H 1,574	H 5.0	...	...	...	...	...	Chad
	73.5	80.2	2003	56,659	3.6	2.6	58.0	39.4	10.5	62.2	27.3	H 4,141	H 3.6	...	65.7	...	...	...	Chile
	70.4	73.7	2004	8,672,000	6.7	...	...	...	...	...	...	H 348 ⁶	H 3.7	H 1.1	...	6,340,000	37.1	...	China
	67.9	75.7	...	...	...	...	...	...	...	...	...	H 8,835	H 4.9	F 2.5	75.2	...	...	...	Colombia
	59.6	64.3	...	...	...	...	...	...	...	...	...	H 94	H 6.3	...	...	...	...	...	Comoros
	49.7	52.6	...	...	...	...	...	...	...	...	...	H 18,326	H 2.3	...	...	...	...	...	Congo, Dem. Rep. of the
	51.2	53.4	...	...	...	...	...	...	...	...	...	H 326	H 4.7	H 2.0	...	...	...	...	Congo, Rep. of the
	76.6	81.0	2004	25,370	6.0	4.4	52.4	43.2	16.8	51.6	31.6	H 960	H 4.3	...	39.6	...	...	...	Costa Rica
	46.2	51.5	...	...	...	...	...	...	...	...	...	H 2,027	H 8.1	...	...	...	...	...	Côte d'Ivoire
	72.0	79.0	2004	22,700	5.1	1.0	59.1	39.9	8.4	68.0	23.6	H 1,877	H 2.3	H 0.6	89.6	5,232	13.0	...	Croatia
	74.9	79.7	2004	50,878	4.5	2.8	30.7	66.5	11.8	34.7	53.5	F 3,121	F 3.6	H 1.6	...	67,277	52.9	...	Cuba
	77.0	81.4	2004	5,349	7.3	0.7	49.8	49.5	3.9	63.2	32.9	H 233	H 3.0	H 1.1	96.7	...	...	...	Cyprus
	72.6	79.4	2004	51,447	5.0	0.5	51.8	47.7	2.9	66.6	30.5	H 3,828	H 2.6	...	69.4	27,574	28.2	...	Czech Republic

country	vital rates	causes of death (rate per 100,000 population)
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	year	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births	rate of natural increase per 1,000 population	total fertility rate	year	infectious and parasitic diseases	malignant neoplasms (cancers)	endocrine and metabolic disorders	diseases of the nervous system	diseases of the circulatory system	diseases of the respiratory system	diseases of the digestive system	accidents, poisoning, and violence
Denmark	2005	11.8	10.3	4.4	1.5	1.78	2001	8.7	298.2	34.4	20.8	394.7	105.6	54.1	64.6
Djibouti	2005	40.0	19.4	104.1	20.6	5.40	...	...	...	...	...	...	...	...	...
Dominica	2005	15.3	6.7	13.7	8.5	1.94	1999	18.3	154.2	90.2	9.2	283.7	66.7	26.1	36.6
Dominican Republic	2005	23.5	5.7	29.4	17.8	2.86	1998	30.6	38.0	15.9	4.7	102.7	19.0	17.2	42.1
East Timor	2005	27.2	6.3	47.1	20.9	3.61	...	...	...	...	...	...	...	...	...
Ecuador	2005 ¹	22.7	4.2	23.7	18.5	2.72	2002	26.8 ³	82.3	30.6 ³	8.0 ³	153.1	36.2 ³	22.6 ³	46.7
Egypt	2005	25.5	6.4	32.6	19.1	2.88	2000	32.3	25.7	11.5	5.4	230.3	49.5	45.8	26.3
El Salvador	2004	17.7	4.4	10.5	13.3	3.20	1999	32.8	44.4	19.5	12.3	88.3	40.5	28.6	118
Equatorial Guinea	2005	36.0	15.0	91.2	21.0	4.62	...	...	...	...	...	...	...	...	...
Eritrea	2005	34.8	9.9	47.4	24.9	5.20	...	...	...	...	...	...	...	...	...
Estonia	2005	10.6	12.9	5.5	-2.3	1.47	2005	8.0	258.5	19.0	18.8	685.8	35.1	51.3	123.2
Ethiopia	2005	38.6	15.1	95.3	23.5	5.33	...	...	...	...	...	...	...	...	...
Faroe Islands	2005	14.0	8.7	6.4	5.3	1.80	1999	4.1	257.2	16.8	...	339.2	48.8	20.1	39.9
Fiji	2005	22.7	5.7	12.6	17.0	2.75	2001	45.8	38.0	23.7	0.5	330.0	50.2	14.1	31.7
Finland	2004	11.0	9.1	3.1	1.9	1.80	2005	7.0	202.0	12.0	19.2	374.7	47.0	26.3	71.5
France	2005	12.8	8.7	3.6	4.1	1.94	2001	17.9	185.0	20.5	33.8	272.8	32.3	29.7	55.6
French Guiana	2004	28.4	4.0	12.1	24.4	3.01	1999	c. 33	c. 54	c. 16	...	c. 100	...	c. 16	c. 71
French Polynesia	2005	17.6	5.0	6.3	12.6	2.04	2002	12.0	103.0	16.0	11.0	113.0	46.0	13.0	54.0
Gabon	2005	36.3	12.0	55.4	24.3	4.77	...	...	...	...	...	...	...	...	...
Gambia, The	2005	39.9	12.5	73.1	27.4	5.13	...	...	...	...	...	...	...	...	...
Gaza Strip	2005	40.0	3.9	22.9	36.1	5.91	...	...	...	...	...	...	...	...	...
Georgia	2004	11.5	11.3	23.8	0.2	1.44	2004	9.3	128.3	19.8	4.0	707.9	92.8	39.7	44.5
Germany	2005	8.4	10.1	4.1	-1.7	1.36	2003	12.6 ⁴	253.6	29.6 ⁴	20.2 ⁴	384.0	70.3	51.2	38.8
Ghana	2005	31.1	9.9	56.4	21.2	4.10	...	...	...	...	...	...	...	...	...
Greece	2005	9.4	9.2	5.5	0.2	1.29	2003	5.9 ⁴	160.5	9.3 ⁴	11.7 ⁴	326.5	46.0	16.2	32.5
Greenland	2005	15.9	7.8	15.8	8.1	2.41	1996-98	64.9	181.5	3.9 ¹⁰	1.8 ¹⁰	187.5	51.8	5.7 ¹⁰	110.1
Grenada	2005	22.3	7.2	14.6	15.1	2.37	1996	18.3	125.2	89.5	11.2	235.1	38.7	18.3	43.8
Guadeloupe	2005	15.4	6.1	8.6	9.3	1.91	2002	23.8 ¹¹	148.3	31.5	...	207.5	32.1 ¹¹	31.4 ¹¹	75.6
Guam	2005	19.0	4.4	6.9	14.6	2.60	2002	1.7	77.0	28.5	6.9	162.7	32.6	16.9	69.7
Guatemala	2004	31.0	5.4	26.2	25.6	4.04	1999	59.3	44.9	48.2	8.9	74.7	110.8	33.5	71.6
Guernsey	2004	9.7	8.9	4.8	0.8	1.38	1996	5.3	282.3	15.9	15.9	441.1	150.0	49.4	24.7
Guinea	2005	42.0	15.6	91.5	26.4	5.83	...	...	...	...	...	...	...	...	...
Guinea-Bissau	2005	37.6	16.7	107.2	20.9	4.93	...	...	...	...	...	...	...	...	...
Guyana	2005	18.5	8.3	33.3	10.2	2.05	1996	41.4	40.7	79.6	9.8	190.8	40.0	29.7	64.8
Haiti	2005	36.6	12.3	73.5	24.3	5.02	2002	...	55.3	31.1	...	227.9	...	...	59.3
Honduras	2005	28.5	6.0	26.5	22.5	3.50	...	...	...	...	...	...	...	...	...
Hong Kong	2005	8.2	5.5	2.4	2.7	0.97	2005	10.8 ²	174.9	13.1 ²	4.1 ²	136.3	87.1 ²	21.5 ²	33.6
Hungary	2005	9.7	13.4	7.3	-3.7	1.32	2002	1.9	325.2	24.8	16.8	668.1	46.3	90.5	94.0
Iceland	2005	14.5	6.2	2.3	8.3	2.05	2005	4.1	173.2	10.5	46.1	222.4	61.4	19.7	35.3
India	2005	22.3	8.3	56.3	14.0	2.78	2002	...	71.0	...	...	268.0	58.0	...	100.0
Indonesia	2005	20.7	6.3	35.6	14.4	2.44	...	...	...	...	...	...	...	...	...
Iran	2005	13.9	4.3	41.6	9.6	1.82	2002	67.0	65.0	18.0	29.0	232.0	23.0	41.0	104.0
Iraq	2005	32.5	5.5	50.3	27.0	4.28	2002	...	54.0	...	...	187.0	...	...	115.0
Ireland	2005	14.9	6.8	4.7	8.1	1.87	2005	4.1	184.3	37.0 ²	8.5 ²	241.7	95.7	24.0	31.5
Isle of Man	2005	11.6	9.9	2.3	1.7	1.65	2004	—	244.8	14.3 ²	29.8 ²	454.9	144.3	54.4 ²	33.5
Israel	2004	21.3	5.5	4.5	15.8	2.90	2003	15.0	143.0	42.0	7.0	168.0	39.0	27.0	31.0
Italy	2005	9.7	9.8	5.9	-0.1	1.34	2003	6.4	282.9	30.7	24.1	429.5	73.0	42.9	45.5
Jamaica	2005	15.8	5.9	19.2	9.9	2.50	2002	12.0	130.0	81.0	13.0	321.0	61.0	43.0	38.0
Japan	2005	8.4	8.5	2.7	-0.1	1.25	2005	14.5	232.1	9.5	8.2 ⁶	228.1	94.9	28.9	49.6
Jersey	2005	11.0	8.5	5.2	2.5	1.57	2000-03	...	255.0	...	...	328.0	136.0	48.0	35.0
Jordan	2004	28.1	3.2	18.1	24.9	2.86	...	...	...	...	...	...	...	...	...
Kazakhstan	2005	15.8	9.5	29.2	6.3	1.90	2003	32.7	179.8	14.2	16.3	867.9	98.7	65.6	165.2
Kenya	2005	40.1	14.7	61.5	25.4	4.96	...	...	...	...	...	...	...	...	...
Kiribati	2005	30.9	8.4	48.5	22.5	4.20	2002	65.2	...	52.6	...	80.0	40.0	67.5	...
Korea, North	2005	16.1	7.1	24.0	9.0	2.15	2002	...	90.0	...	...	288.0	62.0	...	62.0
Korea, South	2004	9.8	5.1	6.4	4.7	1.25	2004	10.7	135.1	25.6	8.5	120.4	29.4	25.0	63.0
Kosovo	2007	15.6	3.1	11.1	12.5	3.0	...	...	...	...	...	...	...	...	...
Kuwait	2004	19.8	2.0	8.9	17.8	3.00	2002	5.0	22.4	11.0	3.3	72.3	9.3	4.7	27.2
Kyrgyzstan	2005	21.4	7.2	29.7	14.2	2.69	2002	7.6	60.5	6.5	11.8	338.4	83.6	42.3	26.1
Laos	2005	36.0	11.8	85.2	24.2	4.77	2002	...	73.0	...	...	210.0	58.0	...	112.0
Latvia	2005	9.3	14.2	7.8	-4.9	1.29	2005	12.8	256.6	11.0	16.4	785.7	40.3	47.1	139.7
Lebanon	2005	18.9	6.2	24.5	12.7	1.92	2002	...	67.0	...	...	305.0	33.0	...	87.0
Lesotho	2005	25.1	28.7	88.8	-3.6	3.35	...	...	...	...	...	...	...	...	...
Liberia	2005	45.6	23.9	162.0	21.7	6.09	...	...	...	...	...	...	...	...	...
Libya	2005	26.8	3.5	24.6	23.3	3.34	...	...	...	...	...	...	...	...	...
Liechtenstein	2005	10.8	6.4	4.7	4.4	1.51	2003	5.8	148.7	...	...	233.3	32.1	8.7	26.3
Lithuania	2005	8.9	12.8	6.8	-3.9	1.26	2005	13.7 ⁸	235.7	9.8 ⁸	10.5 ⁸	697.7	162.5	43.6 ⁸	50.8
Luxembourg	2005	11.7	7.9	2.6	3.8	1.70	2005	24.5	205.0	15.5	32.2	306.6	60.0	33.3	46.2
Macau	2005	7.7	3.4	3.3	4.3	1.00	2004	9.1	102.5	3.5	2.2	96.1	52.2	11.2	26.0
Macedonia	2005	11.0	9.0	12.8	2.0	1.57	2005	4.9	157.6	34.2	5.9	527.7	28.8	16.3	35.4
Madagascar	2005	41.7	11.4	76.8	30.3	5.66	...	...	...	...	...	...	...	...	...
Malawi	2005	43.5	19.6	96.1	23.9	5.98	...	...	...	...	...	...	...	...	...
Malaysia	2005	19.6	4.4	5.1	15.2	3.07	2002	101.0	83.0	...	...	149.0	40.0	...	43.0
Maldives	2005	35.4	7.2	15.0	28.2	5.02	2002	...	54.0	...	...	196.0	43.0	23.0	44.0
Mali	2005	50.0	17.2	109.5	32.8	7.47	2002	1,487.0	54.0	...	...	135.0	36.0	...	120.0
Malta	2004	9.5	7.5	5.9	2.0	1.37	2002	4.5	185.6	26.3	12.6	335.4	88.0	26.3	31.4
Marshall Islands	2005	33.5	4.9	29.5	28.6	3.93	2003-04	83.7	41.9	...	...	...	...	...	23.7
Martinique	2005	13.4	7.2	7.3	6.2	1.90	2002	52.3	164.8	36.1	...	234.2	...	...	55.7
Mauritania	2005	41.4	12.4	70.9	29.0	5.94	2002	...	71.0	...	...	178.0	44.0	26.0	...
Mauritius	2005	15.1	7.0	14.8	8.1	1.96	2003	8.5	78.9	45.0	10.4	357.9	60.0	34.8	38.9
Mayotte	2005	41.6	7.9	62.4	33.7	5.89	...	...	...	...	...	...	...	...	...
Mexico	2004	18.8	4.5	12.6	14.3	2.49	2001	18.2	58.3	62.2	7.4	98.5	36.9	42.3	51.3
Micronesia	2005	25.1	4.9	30.2	20.2	3.25	2003	40.0	57.1	54.4	...	116.1	55.3	...	86.8
Moldova	2004	14.8	12.8	41.0	2.0	1.22	2004	17.4	127.9	8.3 ⁸	8.5 ⁸	598.0	63.4	106.4	92.9
Monaco	2005	9.3	12.7	5.4	-3.4	1.76	...	...	...	...	...	...	...	...	...

	expectation of life at birth (latest year)		nuptiality, family, and family planning														country	
			marriages			age at marriage (latest)						families (F), households (H) (latest)						
	male	female	year	total number	rate per 1,000 population	groom (percent)			bride (percent)			families (households)		children		induced abortions		
						19 and under	20–29	30 and over	19 and under	20–29	30 and over	total ('000)	size	number under age 15	percent within marriage	number	ratio per 100 live births	
	75.2	79.9	2004	37,711	7.2	0.2	26.5	73.3	1.0	37.1	61.9	H 2,467	H 2.2	...	54.6	14,674	22.7	Denmark
	41.8	44.4	1999	3,808	6.1	...	...	...	...	...	...	H 98	H 5.6	...	96.8	...	...	Djibouti
	72.0	77.9	1999	339	4.7	—	37.0	63.0	2.7	56.2	41.1	H 19	H 3.6	H 2.2	24.1	...	...	Dominica
	69.9	73.0	2001	24,470	2.9	...	...	...	...	...	...	H 2,195	H 3.9	...	32.8	31,068	17.3	Dominican Republic
	63.6	68.3	...	...	...	...	...	...	...	...	...	H 197	H 4.7	...	...	...	...	East Timor
	73.4	79.2	2004	63,299	4.7	10.2	58.6	31.2	25.6	53.7	20.7	H 2,876	H 4.5	...	67.9	...	...	Ecuador
	68.8	73.2	2003	537,092	7.9	2.9	58.8	38.3	10.4	56.3	33.3	H 14,476	H 4.6	H 2.1	100.0	10 ⁹	...	Egypt
	67.6	75.0	2002	25,996	4.0	3.9	50.7	45.4	13.4	52.9	33.7	H 1,467	H 4.3	...	27.2	...	...	El Salvador
	48.0	51.4	...	...	...	...	...	...	...	...	...	...	H 4.5	...	...	...	...	Equatorial Guinea
	57.4	60.7	...	...	...	...	...	...	...	...	...	H 792	H 5.0	...	...	...	...	Eritrea
	66.3	77.8	2003	5,699	4.2	1.5	49.7	48.8	7.1	57.4	35.5	H 567	H 2.4	H 0.8	42.0	10,074	72.0	Estonia
	47.7	50.0	1999	630,290	9.1	...	...	...	...	...	...	H 12,874	H 5.2	...	...	...	...	Ethiopia
	75.8	82.7	2004	235	4.9	...	...	...	...	...	...	F 14	F 3.0	F 0.9	62.0	...	...	Faroe Islands
	67.1	72.1	1998	8,058	10.1	...	...	...	...	...	...	F 137	F 6.0	F 2.5	82.7	...	...	Fiji
	75.3	82.3	2004	29,342	5.6	0.9	37.5	61.6	2.7	46.7	50.6	H 2,373	H 2.2	...	59.2	11,091	19.2	Finland
	76.7	83.8	2004	258,342	4.3	0.2	38.2	61.6	1.6	50.6	47.8	H 24,643	H 2.4	H 1.0	53.6	205,600	27.0	France
	73.8	80.6	2003	524	2.9	0.8	25.6	73.6	4.8	41.6	53.6	H 33	H 3.4	H 1.2	16.1	388	16.8	French Guiana
	73.5	78.4	2004	1,148	4.5	...	...	...	...	...	...	H 55	H 4.4	H 1.7	29.9	...	...	French Polynesia
	53.6	56.5	...	...	...	...	...	...	...	...	...	H 260	H 5.0	...	...	...	...	Gabon
	52.3	56.0	...	...	...	...	...	...	...	...	...	H 154	H 8.6	...	...	...	...	Gambia, The
	70.7	73.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gaza Strip
	67.8	74.9	2004	14,866	3.4	5.8	58.0	36.2	21.9	59.9	18.2	H 1,225	H 4.0	H 1.1	54.1	13,908	29.8	Georgia
	75.8	82.0	2004	395,992	4.8	0.7	44.6	54.7	3.7	56.3	40.0	H 38,720	H 2.1	H 0.3	70.8	129,650	18.4	Germany
	57.7	59.3	...	...	...	...	...	...	...	...	...	H 4,463	H 4.9	H 2.2	...	...	...	Ghana
	76.6	81.4	2004	51,377	4.6	0.8	46.3	52.9	7.0	65.4	27.6	H 3,600	H 2.9	H 0.7	95.1	12,289	12.1	Greece
	66.1	73.3	1999	250	4.5	1.1	44.6	54.3	2.7	59.6	37.7	F 31	F 1.8	F 0.5	29.2	869	97.1	Greenland
	62.7	66.3	2001	509	5.0	0.3	28.6	71.1	2.6	40.1	57.3	H 29	H 3.3	H 2.2	18.1	...	...	Grenada
	74.7	81.2	2003	1,701	3.9	0.2	21.7	78.1	1.6	38.2	60.2	H 146	H 2.9	H 0.9	34.7	561	8.7	Guadeloupe
	75.3	81.6	2003	1,334	8.2	3.0	55.5	41.5	9.2	59.3	31.5	H 44	H 3.7	H 1.3	42.8	...	...	Guam
	64.3	71.6	2003	51,247	3.9	18.1	55.9	26.0	41.0	40.8	18.2	H 2,600	H 4.5	...	34.8	...	...	Guatemala
	77.3	83.4	2000	343	5.7	...	...	...	...	...	...	H 21	H 2.6	H 0.5	65.2	...	...	Guernsey
	48.2	50.6	...	...	...	...	...	...	...	...	...	H 1,161	H 6.6	...	...	...	...	Guinea
	44.8	48.5	...	...	...	...	...	...	...	...	...	H 179	H 7.0	H 2.8	11.3	...	...	Guinea-Bissau
	62.9	68.3	...	...	...	...	...	...	...	...	...	H 196	H 4.5	H 2.1	...	...	...	Guyana
	51.6	54.3	...	...	...	...	...	...	...	...	...	H 1,732	H 4.7	H 1.8	...	...	...	Haiti
	66.5	70.7	...	...	...	...	...	...	...	...	...	H 1,520	H 4.4	H 2.8	...	...	...	Honduras
	78.8	84.4	2004	41,376	6.0	0.5	33.1	66.4	2.0	55.6	42.4	H 2,298	H 3.1	...	94.5	15,880	31.9	Hong Kong
	68.6	76.9	2005	44,234	4.4	0.9	53.0	46.1	4.2	67.8	26.5	F 4,104	F 2.5	F 0.8	66.0	48,689	49.9	Hungary
	78.9	82.8	2005	1,607	5.4	0.2	30.7	69.1	0.7	44.9	54.4	H 104	H 2.8	H 1.3	36.3	951	23.0	Iceland
	63.6	65.2	...	...	...	...	...	...	...	...	...	H 194,736	H 5.4	H 2.4	...	723,142	2.8	India
	67.1	72.1	2003	1,588,000	7.7	...	...	...	...	...	...	H 53,972	H 3.9	...	...	...	...	Indonesia
	68.6	71.4	2004	602,347	8.9	...	...	...	...	...	...	H 14,456	H 4.5	H 2.2	100	...	...	Iran
	67.5	70.0	2000	171,134	7.3	...	...	...	...	...	...	H 3,965	H 6.4	H 4.1	...	...	...	Iraq
	75.0	80.3	2005	20,723	5.0	0.7	62.2	37.1	1.6	74.7	23.7	H 1,328	H 3.0	H 1.3	68.0	6,320	10.3	Ireland
	75.0	81.9	2004	399	5.1	0.3	30.8	68.9	1.5	39.8	58.7	H 29,377	H 2.4	...	63.9	152	17.6	Isle of Man
	77.6	81.8	2003	39,154	6.1	3.4	69.3	27.3	18.3	68.2	13.5	H 1,856	H 3.6	H 1.1	96.6	20,378	14.0	Israel
	77.6	83.2	2004	250,764	4.3	0.4	47.6	52.0	3.3	41.2	55.5	F 21,488	F 2.7	F 0.5	85.1	124,118	22.1	Italy
	69.2	72.7	2004	21,670	8.3	0.3	33.1	66.6	1.6	43.8	54.6	H 753	H 3.5	H 1.4	14.9	...	...	Jamaica
	78.6	85.6	2004	720,417	5.6	1.2	50.4	48.4	2.8	62.5	34.7	H 47,043	H 2.6	...	99.0	301,673	27.2	Japan
	76.8	81.9	2001	660	7.6	...	...	...	...	...	...	H 36	H 2.4	H 0.4	88.1	296	28.0	Jersey
	70.6	72.4	2004	53,754	10.0	2.8	66.7	30.5	33.0	56.6	10.4	H 919	H 5.3	H 3.4	100	...	...	Jordan
	61.2	72.2	2004	114,685	7.6	3.2	68.3	28.5	15.3	68.2	16.5	H 3,984	H 3.8	H 1.4	76.1	135,000	61.2	Kazakhstan
	48.9	47.1	...	...	...	...	...	...	...	...	...	H 6,848	H 4.5	H 2.7	...	...	...	Kenya
	58.7	64.9	...	...	...	...	...	...	...	...	...	H 13	H 6.5	H 2.5	...	...	...	Kiribati
	68.7	74.2	...	...	...	...	...	...	...	...	...	H 4,565	H 4.6	H 1.7	...	...	...	Korea, North
	71.7	79.3	2004	310,944	6.5	0.4	41.7	57.9	1.6	64.4	34.0	H 14,852	H 3.2	H 1.0	99.5	...	...	Korea, South
	69.8	71.4	...	...	...	...	...	...	...	...	...	...	H 6.5	...	...	...	...	Kosovo
	75.9	77.9	2004	12,359	5.2	5.6	66.4	28.0	22.4	53.5	24.1	H 472	H 4.8	H 1.6	100.0	19 ⁹	...	Kuwait
	64.3	72.2	2004	34,542	6.8	2.1	73.2	24.7	18.5	69.7	11.8	H 1,145	H 4.3	H 1.9	83.2	19,984	18.2	Kyrgyzstan
	53.1	57.2	...	...	...	...	...	...	...	...	...	H 891	H 6.2	...	...	...	...	Laos
	67.1	77.2	2005	12,544	5.5	1.2	54.9	43.9	6.1	61.7	32.2	H 907	H 2.5	H 0.8	55.0	13,723	67.5	Latvia
	70.2	75.2	2005	29,705	7.8	...	...	...	...	...	...	H 727	H 4.3	H 2.2	...	...	...	Lebanon
	45.1	54.2	...	...	...	...	...	...	...	...	...	H 439	H 4.1	H 2.0	...	...	...	Lesotho
	37.0	40.8	...	...	...	...	...	...	...	...	...	H 474	H 5.0	...	...	...	...	Liberia
	74.3	78.8	2002	33,323	5.9	...	...	...	...	...	...	H 794	H 6.3	F 2.9	...	...	...	Libya
	76.0	83.2	2004	164	4.8	—	54.5	44.5	0.0	66.3	29.2	H 14	H 2.5	H 0.7	82.7	...	...	Liechtenstein
	66.4	77.8	2005	19,938														

Vital statistics, marriage, family (continued)

country	vital rates						causes of death (rate per 100,000 population)								
	year	birth rate per 1,000 population	death rate per 1,000 population	infant mortality rate per 1,000 live births	rate of natural increase per 1,000 population	total fertility rate	year	infectious and parasitic diseases	malignant neo-plasms (cancers)	endocrine and metabolic disorders	diseases of the nervous system	diseases of the circulatory system	diseases of the respiratory system	diseases of the digestive system	accidents, poisoning, and violence
Mongolia	2005	17.6	6.0	22.2	11.6	2.26	2003	...	121.6	...	...	244.1	34.2	49.0	84.0
Montenegro	2004	12.6	9.2	7.8	3.4	1.82	2004	...	156.5	...	...	477.5	37.2	...	34.5
Morocco	2005	22.3	5.6	41.6	16.7	2.73	2002	120.0	41.0	...	...	201.0	23.0	...	40.0
Mozambique	2005	35.8	21.0	130.8	14.8	4.70	...	...	...	...	...	...	...	...	...
Myanmar (Burma)	2004	23.2	11.2	81.0	12.0	2.08	2002	477.0	74.0	...	...	258.0	57.0	...	92.0
Namibia	2005	25.2	18.4	49.0	6.8	3.18	...	...	...	...	...	...	...	...	...
Nauru	2005	25.1	6.8	10.0	18.3	3.19	2003	...	79.5	159.0	...	119.2	149.0	...	79.5
Nepal	2005	31.5	9.5	67.0	22.0	4.19	2002	472.0	63.0	...	...	203.0	...	...	86.0
Netherlands, The	2005	11.5	8.4	4.9	3.1	1.70	2005	11.2	247.4	27.5	21.8	268.8	87.7	33.0	32.8
Netherlands Antilles	2004	14.2	7.7	10.4	6.5	2.02	1995 ¹²	16.7	149.0	61.7	9.9	71.6	40.8	21.4	47.6
New Caledonia	2005	17.2	4.9	6.4	12.3	2.20	2004	11.6	120.5	13.8	12.1	110.5	49.0	13.9	91.4
New Zealand	2004	14.3	7.0	5.6	7.3	2.01	2000	4.6	201.8	26.7	21.2	289.3	54.4	19.1	42.8
Nicaragua	2005	24.9	4.5	29.1	20.4	2.81	2000	15.0	31.9	17.4	5.9	66.9	18.4	16.6	39.4
Niger	2005	51.3	21.2	119.7	30.1	7.55	2002	1,697.0	50.0	...	...	121.0	34.0	...	...
Nigeria	2005	40.7	17.2	98.8	23.5	5.53	...	...	...	...	...	...	...	...	...
Northern Mariana Islands	2005	19.5	2.3	7.1	17.2	1.27	2000 ¹³	...	...	...	...	...	...	...	30.8
Norway	2005	12.3	8.9	3.1	3.4	1.84	2004	12.8	228.5	18.1	29.3	345.5	76.1	30.3	55.6
Oman	2005	36.7	3.9	19.5	32.8	5.84	2002	39.0	37.0	17.0	...	126.0	...	...	35.0
Pakistan	2003	26.5	7.0	76.2	19.5	4.44	2003	104.0	41.8	...	...	96.5	67.0	...	42.6
Palau	2004	12.6	6.9	16.2	5.7	1.82	2002	138.0	61.0	...	...	244.0	45.0	...	34.0
Panama	2005	22.0	5.3	16.7	16.7	2.70	2004	31.0 ⁸	74.6	26.1	4.1 ⁸	122.2	41.2	11.2 ⁸	44.7
Papua New Guinea	2005	30.0	7.4	51.5	22.6	3.96	2002	436.0	50.0	...	...	153.0	36.0	...	...
Paraguay	2005	29.4	4.5	25.6	24.9	3.93	2000	16.8	43.1	20.9	2.7	80.5	24.1	11.8	38.2
Peru	2005	20.9	6.3	31.9	14.6	2.56	2002	...	112.0	14.0	...	113.0	27.0	...	60.0
Philippines	2005	24.1	5.6	23.5	18.5	3.41	2001	...	48.4	...	...	143.7	65.1	...	34.3
Poland	2005	9.6	9.7	6.4	-0.1	1.24	2004	6.2 ⁹	235.2	14.8	11.0	441.8	44.2	41.0	65.4
Portugal	2005	10.5	9.7	4.0	0.8	1.42	2003	19.7 ⁹	217.2	48.2 ⁹	19.6 ⁹	391.7	91.3	43.8	54.7
Puerto Rico	2005	13.3	7.3	8.2	6.0	1.91	2004	40.4 ³	124.0	66.0	32.3 ³	230.9	74.4 ³	40.9 ³	63.4 ³
Qatar	2004	17.4	1.8	8.6	15.6	2.95	2004	...	18.1	12.2	...	33.8	11.4	...	33.8
Réunion	2005	19.0	5.6	6.8	13.4	2.42	2002	...	111.7	...	...	164.5	41.1	48.4 ³	54.5
Romania	2005	10.2	12.3	16.8	-2.1	1.29	2004	13.5	204.1	10.5	8.7	739.0	63.5	70.2	62.5
Russia	2004	10.5	15.9	11.5	-5.4	1.37	2004	25.0	201.0	16.9 ⁸	20.2 ⁸	892.0	64.0	59.0	221.0
Rwanda	2005	40.4	15.8	89.1	24.6	5.49	...	...	...	...	...	...	...	...	...
St. Kitts and Nevis	2005	18.1	8.5	14.5	9.6	2.33	2002	104.6	110.4	...	...	404.9	...	...	42.9
St. Lucia	2004	14.6	6.9	19.0	7.7	2.25	2002	19.0 ⁴	101.8	77.4	13.9 ⁴	192.7	43.1 ⁴	17.7 ⁴	50.1 ⁴
St. Vincent and the Grenadines	2003	18.5	7.6	18.1	10.9	1.95	2003	49.0	114.2	115.2	7.1	252.4	42.2	20.4	34.5
Samoa	2003	28.6	5.5	29.7	23.1	3.21	2002	89.0	54.0	39.0	8.0	222.0	43.0	29.0	35.0
San Marino	2004	10.3	6.2	3.4	4.1	1.32	2005	...	288.2	...	...	331.8	...	...	26.8
São Tomé and Príncipe	2005	40.8	6.7	43.1	34.1	5.71	...	...	...	...	...	...	...	...	...
Saudi Arabia	2005	29.6	2.6	13.2	27.0	4.05	2002	...	44.0	20.0	...	144.0	...	...	...
Senegal	2005	39.2	11.4	62.7	27.8	5.26	...	...	...	...	...	...	...	...	...
Serbia ¹⁴	2005	10.4	14.3	6.7	-3.9	1.60	2003	6.9	254.0	35.5	14.1	763.1	51.8	42.5	51.6
Seychelles	2004	17.4	7.4	11.8	10.0	2.00	2004	...	131.0	...	...	268.0	74.0	43.7	...
Sierra Leone	2005	46.1	23.4	162.8	22.7	6.15	...	...	...	...	...	...	...	...	...
Singapore	2005	10.0	4.3	2.1	5.7	1.24	2005	...	120.33	14.3	...	146.1	83.7	...	22.2
Slovakia	2005	10.1	9.9	6.8	0.2	1.25	2001	3.5	220.6	14.9	8.6	533.4	50.7	48.4	56.5
Slovenia	2005	9.1	9.4	4.1	-0.3	1.26	2005	5.4 ²	259.6	36.3 ²	13.6 ²	382.2	69.9	52.7	71.7
Solomon Islands	2005	30.7	4.0	21.3	26.7	4.04	2002	...	43.0	...	...	157.0	45.0	...	...
Somalia	2005	45.6	17.0	116.7	28.6	6.84	...	...	...	...	...	...	...	...	...
South Africa	2005	18.5	21.3	53.6	-2.8	2.73	1996	92.9	65.2	29.5	14.7	149.8	67.0	20.3	131.3
Spain	2005	10.5	8.8	4.4	1.7	1.32	2004	16.0 ⁸	230.2	23.5 ⁸	30.3 ⁸	283.8	89.7	44.3	39.0
Sri Lanka	2004	18.5	5.8	11.2	12.7	2.11	2002	...	101.0	...	...	252.0	82.0	...	81.0
Sudan, The	2005	35.2	9.2	62.5	26.0	4.85	...	...	...	...	...	...	...	...	...
Suriname	2005	17.9	5.5	21.5	12.4	2.07	2002	...	87.0	32.0	...	265.0	...	...	76.0
Swaziland	2005	27.9	28.8	71.8	-0.9	3.62	...	...	...	...	...	...	...	...	...
Sweden	2005	11.2	10.2	3.1	1.0	1.75	2001	12.4	243.0	25.3	24.0	479.9	68.3	33.0	53.3
Switzerland	2005	9.7	8.1	4.2	1.6	1.42	2004	9.9 ³	207.0	25.0 ³	31.8 ³	301.1	51.6	33.1 ³	44.9
Syria	2005	28.3	4.9	29.5	23.4	3.50	2002	...	56.0	...	...	156.0	...	...	38.0
Taiwan	2005	9.1	6.1	5.9	3.0	1.18	2005	...	141.2	39.4	...	104.2	21.0	21.3	50.6
Tajikistan	2005	26.4	4.6	46.4	21.8	3.19	2001	30.5	28.3	6.8	7.8	186.3	58.3	20.3	25.8
Tanzania	2005	38.2	16.7	98.5	21.5	5.06	...	...	...	...	...	...	...	...	...
Thailand	2005	14.0	7.0	20.2	7.0	1.63	2000	51.7	63.4	13.0	17.3	52.6	34.1	14.6	60.6
Togo	2005	37.2	10.0	62.2	27.2	5.01	...	...	...	...	...	...	...	...	...
Tonga	2005	25.2	5.4	15.7	19.8	3.80	2002	...	77.2	43.6	...	190.1	49.5	...	...
Trinidad and Tobago	2005	12.7	10.4	25.8	2.3	1.75	2000	55.8	99.1	110.7	14.7	278.7	32.5	25.1	80.6
Tunisia	2005	15.5	5.1	24.8	10.4	1.75	2002	...	57.0	...	...	267.0	...	...	62.0
Turkey	2005	18.9	6.2	23.6	12.7	2.19	2003	21.0	91.0	15.0	2.0	340.0	11.0	14.0	24.0
Turkmenistan	2005	27.7	8.8	73.1	18.9	3.41	1998	99.1	43.9	9.2	5.8	314.6	101.1	30.2	59.3
Tuvalu	2005	21.9	7.2	20.0	14.7	3.00	2002	...	...	...	...	35.0	7.0	...	...
Uganda	2005	48.0	13.5	69.8	34.5	6.92	...	...	...	...	...	...	...	...	...
Ukraine	2005	9.0	16.6	10.0	-7.6	1.20	2002	24.4	166.9	7.2	11.2	799.7	56.7	48.4	153.5
United Arab Emirates	2004	14.6	1.4	8.7	13.2	2.39	2002	17.6	34.1	...	...	119.6	...	...	61.9
United Kingdom	2005	12.0	9.7	5.1	2.3	1.79	2003	8.6	229.0	13.5	28.1	346.2	126.2	42.0	34.3
United States	2005	14.0	8.2	6.4	5.8	2.07	2004	20.9 ³	187.4	24.8	32.2 ³	293.8	78.6	29.8 ³	47.8
Uruguay	2005	14.3	9.4	14.3	4.9	2.04	2002	20.1 ³	236.3	26.9 ³	27.6 ³	327.1	50.6	38.8 ³	33.0
Uzbekistan	2005	20.3	5.5	71.1	14.8	2.94	2004	15.2	42.1	29.5	12.3	276.9	43.4	32.2	38.0
Vanuatu	2005	23.1	7.9	55.2	15.2	2.77	2002	112.6	50.3	...	...	194.5	65.3	26.1	...
Venezuela	2005	22.0	5.1	16.8	16.9	2.69	2002	31.7	67.8	29.9 ³	7.5 ³	137.4	25.9 ³	18.2 ³	83.9
Vietnam	2005	17.1	6.2	26.0	10.9	1.94	2002	93.6	80.4	...	...	200.7	64.3	...	60.8
Virgin Islands (U.S.)	2005	14.2	6.3	8.0	7.9	2.19	2002	27.5	114.6	25.6	19.3 ³	15	19.3 ³	24.9 ³	31.6
West Bank	2005	32.4	4.0	19.6	28.4	4.40	...	...	...	...	...	...	...	...	...
Western Sahara	2005	41.2	12.6	75.7	28.6	5.94	...	...	...	...	...	...	...	...	...
Yemen	2005	43.1	8.5	61.5	34.6	6.67	...	...	...	...	...	...	...	...	...
Zambia	2005	41.3	22.3	100.3	19.0	5.47	...	...	...	...	...	...	...	...	...
Zimbabwe	2005	28.2	21.9	52.3	6.3	3.18	1990	64.7	28.4	4.9	9.4	40.8	39.5	12.1	44.9

	expectation of life at birth (latest year)		nuptiality, family, and family planning															country
			marriages			age at marriage (latest)						families (F), households (H) (latest)						
	male	female	year	total number	rate per 1,000 population	groom (percent)			bride (percent)			families (households)		children		induced abortions		
						19 and under	20–29	30 and over	19 and under	20–29	30 and over	total ('000)	size	number under age 15	percent within marriage	number	ratio per 100 live births	
	61.6	67.8	2004	11,200	4.4	3.8	73.1	23.1	9.5	73.8	16.7	H 607	H 4.2	...	82.2	12,870	25.9	Mongolia
	70.0	75.2	2004	3,440	5.5	0.1	52.7	47.2	1.3	63.2	35.5	H 191	H 3.3	...	...	...	...	Montenegro
	68.4	73.1	...	...	...	...	...	...	...	...	...	H 5,760	H 5.3	H 2.5	...	...	...	Morocco
	39.9	40.8	...	...	...	...	...	...	...	...	...	F 4,270	F 4.2	F 2.0	73.1	...	...	Mozambique
	59.4	64.0	...	...	...	...	...	...	...	...	...	H 8,550	H 5.0	...	...	...	...	Myanmar (Burma)
	44.7	43.1	...	...	...	...	...	...	...	...	...	H 396	H 4.9	...	...	...	...	Namibia
	59.2	66.5	1995	57	5.3	...	...	...	...	...	...	H 2	H 6.1	H 2.6	...	...	...	Nauru
	60.1	59.5	...	...	...	...	...	...	...	...	...	H 4,600	H 5.3	H 2.3	...	...	...	Nepal
	76.7	81.2	2004	73,441	4.5	0.2	30.5	69.3	1.8	46.2	52.0	H 6,794	H 2.4	H 0.4	64.9	29,450	14.6	Netherlands, The
	73.6	78.2	2004	710	3.9	...	...	...	...	...	...	H 62	H 2.9	H 2.1	51.6	...	...	Netherlands Antilles
	71.9	78.6	2004	895	4.0	0.1	30.2	69.7	2.7	45.9	51.4	H 62	H 3.6	...	34.1	1,466	33.7	New Caledonia
	76.2	82.0	2004	21,006	5.2	1.0	39.1	59.9	2.8	48.3	48.9	H 1,550	H 2.6	H 0.7	55.2	17,531	30.4	New Zealand
	68.3	72.5	2003	20,411	3.9	...	...	...	...	...	...	H 1,044	H 4.9	...	...	...	...	Nicaragua
	43.5	43.5	...	...	...	...	...	...	...	...	...	H 1,883	H 6.2	...	...	...	...	Niger
	46.2	47.3	...	...	...	...	...	...	...	...	...	H 24,554	H 4.9	...	...	...	...	Nigeria
	73.3	78.6	...	...	...	...	...	...	...	...	...	H 19	H 3.7	H 1.5	40.2	...	...	Northern Mariana Islands
	77.7	82.5	2005	22,392	4.8	0.4	28.1	71.5	2.0	44.6	53.4	H 1,981	H 2.3	...	48.2	13,989	24.6	Norway
	70.9	75.5	...	...	...	...	...	...	...	...	...	H 343	H 6.8	...	...	...	...	Oman
	64.7	65.5	...	...	...	...	...	...	...	...	...	H 21,350	H 7.1	...	...	...	...	Pakistan
	67.8	75.7	...	...	...	...	...	...	...	...	...	H 5	H 3.9	...	...	44	...	Palau
	72.7	77.9	2003	10,310	3.3	1.2	41.0	57.8	6.1	49.8	44.1	H 770	H 4.1	H 1.5	18.5	11	0.02	Panama
	62.8	67.2	...	...	...	...	...	...	...	...	...	H 1,138	H 4.8	...	...	...	...	Papua New Guinea
	72.4	77.6	2002	17,400	3.0	4.2	64.8	31.0	30.4	50.2	19.4	H 1,368	H 4.1	H 1.9	68.7	...	...	Paraguay
	67.8	71.4	2003	51,500	1.9	...	...	...	...	...	...	H 5,855	H 4.5	...	57.8	...	...	Peru
	67.0	72.9	2003	593,553	7.3	3.3	63.6	33.1	13.5	65.4	21.1	F 15,967	F 5.0	F 2.4	93.9	2,315	...	Philippines
	70.8	79.4	2005	206,900	5.4	1.3	73.3	25.4	7.2	77.6	15.2	H 13,337	H 2.8	...	82.8	199	0.06	Poland
	74.9	81.4	2004	49,178	4.7	1.4	60.2	38.4	6.9	65.3	27.8	H 3,474	H 3.0	H 0.8	70.9	906	0.8	Portugal
	74.4	82.4	2003	25,236	6.5	5.1	50.1	44.8	13.1	50.0	36.9	H 1,278	H 3.0	H 1.0	59.6	...	...	Puerto Rico
	71.1	76.3	2004	2,649	3.5	1.1	60.0	38.9	13.5	69.0	17.5	H 100	H 7.4	...	...	172	1.3	Qatar
	72.3	80.1	2003	3,212	4.2	0.5	39.9	59.6	4.5	53.1	42.4	H 250	H 3.0	...	33.0	4,385	29.7	Réunion
	67.7	75.1	2003	133,953	6.2	1.1	66.8	32.1	15.3	65.2	19.5	H 7,320	H 3.0	...	70.6	224,807	106	Romania
	59.9	73.3	2004	979,667	6.8	6.5	64.5	29.0	28.5	47.7	23.8	H 51,209	H 2.8	H 0.8	70.2	1,797,567	120	Russia
	46.5	48.4	...	...	...	...	...	...	...	...	...	H 2,400	H 3.4	H 2.3	94.9	...	...	Rwanda
	69.3	75.2	2001	325	7.1	9.8	42.5	47.7	15.6	50.8	33.6	H 23	H 2.0	H 1.4	19.2	...	...	St. Kitts and Nevis
	70.0	77.4	2004	459	2.8	0.2	29.2	70.6	2.5	41.3	56.2	H 49	H 3.2	H 2.0	14.0	...	...	St. Lucia
	68.8	74.4	2003	491	4.7	1.0	37.0	62.0	4.8	46.3	48.9	H 27	H 3.9	H 2.0	15.6	...	...	St. Vincent and the Grenadines
	67.9	73.7	1998	935	4.6	0.5	51.0	48.5	8.0	65.0	27.0	H 25	H 7.2	...	43.5	...	...	Samoa
	78.6	85.0	2006	216	7.2	—	31.4	68.6	—	38.2	61.8	H 12	H 2.5	H 0.4	91.2	...	...	San Marino
	65.4	68.6	...	...	...	...	...	...	...	...	...	H 26	H 5.5	...	...	...	...	São Tomé and Príncipe
	73.5	77.6	2003	98,343	4.1	...	...	...	...	...	...	H 3,900	H 6.3	...	100.0	5 ⁹	...	Saudi Arabia
	54.6	57.3	...	...	...	...	...	...	...	...	...	H 1,157	H 8.7	...	...	...	...	Senegal
	69.9	75.4	2004	42,030	5.3	1.2	53.3	45.5	10.2	61.3	28.5	H 2,521	H 3.2	...	77.8	26,645	34.1	Serbia ¹⁴
	69.0	76.4	2004	408	4.9	0.9	27.2	71.9	3.3	42.3	54.4	H 23	H 3.5	H 1.9	24.7	440	29.4	Seychelles
	37.7	42.1	...	...	...	...	...	...	...	...	...	H 860	H 6.0	...	...	...	...	Sierra Leone
	77.9	81.6	2004	22,789	5.2	0.6	50.2	49.2	2.8	70.3	26.9	H 1,170	H 3.6	H 1.3	...	12,070	32.5	Singapore
	70.3	77.8	2005	26,149	4.9	2.6	64.8	32.6	8.4	73.4	18.2	H 2,100	H 2.5	...	75.2	15,307	28.5	Slovakia
	74.1	81.3	2005	5,769	2.9	0.4	50.0	49.6	2.7	66.0	31.3	H 685	H 2.9	...	53.3	6,403	35.3	Slovenia
	70.2	75.3	...	...	...	...	...	...	...	...	...	H 67	H 6.9	...	...	...	...	Solomon Islands
	46.4	49.9	...	...	...	...	...	...	...	...	...	...	H 5.8	...	...	...	...	Somalia
	49.0	52.5	2005	180,657	3.9	0.2	33.2	66.6	2.0	49.9	48.1	H 11,400	H 4.0	...	75.9	82,686	10.8	South Africa
	76.7	83.2	2004	216,149	5.1	0.3	47.5	52.2	1.4	62.1	36.5	H 15,600	H 2.8	...	76.8	84,985	18.7	Spain
	72.5	76.5	2002	190,618	9.5	1.3	64.3	34.4	16.7	67.1	16.2	H 4,450	H 4.3	...	96.3	...	...	Sri Lanka
	57.3	59.8	...	...	...	...	...	...	...	...	...	H 6,300	H 6.2	...	...	...	...	Sudan, The
	70.0	75.6	2004	1,951	4.0	1.1	48.0	50.9	19.4	46.3	34.3	H 109	H 4.0	...	...	...	...	Suriname
	32.5	34.0	...	...	...	...	...	...	...	...	...	H 169	H 6.4	...	...	...	...	Swaziland
	78.4	82.8	2004	43,088	4.8	0.1	20.0	79.9	1.8	34.2	64.0	H 4,320	H 2.1	H 0.5	44.6	34,454	34.1	Sweden
	78.7	83.9	2005	40,139	5.4	0.1	20.0	79.9	1.8	34.2	64.0	H 3,182	H 2.3	H 0.4	86.7	11,792	16.3	Switzerland
	68.7	71.4	2002	174,449	9.5	...	...	...	...	...	...	H 3,460	H 5.2	F 2.4	...	...	...	Syria
	73.6	79.4	2005	142,082	6.3	1.5	62.3	36.2	6.0	77.7	16.3	H 7,083	H 3.5	H 1.0	95.9	42,282	14.9	Taiwan
	60.9	67.0	2005	52,352	7.6	8.6	80.0	11.4	39.2	56.0	4.8	H 1,265	H 5.2	H 2.7	90.8	18,822	10.6	Tajikistan
	44.6	45.9	...	...	...	...	...	...	...	...	...	H 7,150	H 5.0	H 2.3	...	...	...	Tanzania
	69.7	74.4	2003	328,356	5.2	...	...	...	...	...	...	H 17,853	H 3.5	...	...	...	...	Thailand
	55.0	59.1	...	...	...	...	...	...	...	...	...	H 812	H 6.0	...	...	...	...	Togo
	66.7	71.8	2003	697	6.9	8.3	63.5	28.2	22.6	59.0	18.4	F 18	F 5.5	F 2.7	80.6	...	...	Tonga
	65.6	67.9	2002	7,434	5.8	1.5	46.6	51.9	10.5	53.9	35.6	H 347	H 3.8	H 1.3	...	...	—	Trinidad and Tobago
	73.2	76.7	2001	61,800	6.4	...	43.3	56.7	13.2	65.8	21.0	H 2,210	H 4.5	H 1.9	99.8	19,000	10.6	Tunisia
	68.9	73.8																

National product and accounts

This table furnishes, for most of the countries of the world, breakdowns of (1) gross national income (GNI)—its global and per capita values, and purchasing power parity (PPP), (2) growth rates (2000–05) and principal industrial and accounting components of gross domestic product (GDP), and (3) principal elements of each country's balance of payments, external public debt outstanding, including international goods trade, invisibles, and tourism payments.

Measures of national output. The two most commonly used measures of national output are GDP and GNI. Each of these measures represents an aggregate value of goods and services produced by a specific country. The GDP, the more basic of these, is a measure of the total value of goods and services produced entirely within a given country. The GNI, the more comprehensive value, is composed of both domestic production (GDP) and the net income from current (short-term) transactions with other countries. When the income received from other countries is greater than payments to them, a country's GNI is greater than its GDP. In theory, if all national accounts could be equilibrated, the global summation of GDP would equal GNI.

In the first section of the table, data are presented for the nominal GNI, the nominal GNI per capita, and the GNI purchasing power parity per capita. "Nominal" refers to value in current prices for the year indicated. Purchasing power parity (PPP) is an economic theory used to determine the number of units in a country's currency that are required to buy the same amount of goods and services in another country. PPP is expressed in a common currency, usually U.S. dollars, and as such it is often used

to compare the standards of living between countries. PPPs per capita in this table are nearly always values calculated by the World Bank. Beside the GNI are given figures for annual growth of total and per capita "real" GDP ("real" figures being adjusted to eliminate the effect of recent inflation [most often] or, occasionally, of deflation between two given dates) along with average annual population growth rates for the same span of years. Values should be compared cautiously, as they are subject to a number of distortions, notably of exchange rate, but also of PPP and in the existence of elements of national production that do not enter the monetary economy in such a way as to be visible to fiscal authorities (*e.g.*, food, clothing, or housing produced and consumed within families or communal groups or services exchanged). "Real" GDP data in this section are taken from the World Bank *World Development Indicators* whereas population growth rates are based on EB calculations.

The internal structure of the national product. GDP/GNI values allow comparison of the relative size of national economies, but further information is provided when these aggregates are analyzed according to their industrial sectors of origin and component kinds of expenditure.

The distribution of GDP for ten industrial sectors, usually compiled from national sources, is aggregated into three major industrial groups:

1. The primary sector, composed of agriculture (including forestry and fishing) and mineral production (including fossil fuels).
2. The secondary sector, composed of manufacturing, construction, and public utilities.

National product and accounts

country	gross national income (GNI), 2006			gross domestic product (GDP), 2000-05			origin of gross domestic product (GDP) by economic sector, 2005 (%)											
	nominal ('000,000 U.S.\$)	per capita		average annual growth rates, 2000-05			primary		secondary			tertiary					other	
		nominal (U.S.\$)	purchasing power parity (PPP; U.S.\$)	real GDP (%)	popula- tion (%)	real GDP per capita (%)	agri- culture	mining	manu- factur- ing	con- struction	public utilities	transp., commu- nications	trade	finan- cial svcs.	other svcs.	govern- ment		
Afghanistan	8,309	319	700 ¹	12.0	3.3	8.7	—	38	—	15	—	9	9	8	6	4	7	4
Albania	9,542	3,010	5,840	5.3	0.4	4.9	—	21	—	8 ¹	13 ¹	—	8 ¹	20 ¹	1, 2	10 ¹	20 ^{1, 2}	—
Algeria	111,547	3,350	6,900	5.2	1.5	3.7	8	45	—	5	—	7	—	19	—	—	9	7
American Samoa	334 ³	5,800 ³	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Andorra	3,337	44,960	39,000 ³	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Angola	43,088	2,600	2,360	9.9	2.5	7.4	8 ⁴	53 ⁴	—	4 ⁴	4 ⁴	—	—	15 ⁴	—	14 ⁴	—	2 ⁴
Antigua and Barbuda	916	10,890	13,490	3.8	0.9	2.9	3	1	—	2	14	3	17	17	14	6	14	9
Argentina	208,992	5,340	15,390	2.2	1.0	1.2	10 ⁴	6 ⁴	—	23 ⁴	3 ⁴	2 ⁴	8 ⁴	13 ⁴	15 ⁴	10 ⁴	5 ⁴	5 ⁴
Armenia	6,151	2,040	5,880	12.4	-0.4	12.8	23 ¹	5	—	19 ^{1, 5}	15 ¹	4 ¹	6 ¹	11 ¹	5 ¹	7 ¹	3 ¹	7 ¹
Aruba	2,244	21,600	22,500 ³	—	—	—	—	—	—	3 ⁶	6 ⁶	6 ⁶	9 ⁶	24 ⁶	26 ⁶	11 ⁶	12 ⁶	3 ⁶
Australia	747,304	36,400	31,860	3.2	1.2	2.0	3 ⁴	2 ⁴	—	11 ⁴	6 ⁴	2 ⁴	8 ⁴	13 ⁴	27 ⁴	14 ⁴	4 ⁴	10 ⁴
Austria	318,478	38,200	36,300	1.5	0.4	1.1	3	—	—	18 ¹	7 ¹	2 ¹	7 ¹	16 ¹	20 ¹	13 ¹	5 ¹	10 ¹
Azerbaijan	18,676	2,200	5,960	12.7	0.8	11.9	9	5	—	47 ⁵	10	1	9	7	—	14	—	3
Bahamas, The	6,077	18,600	21,500	—	—	—	5 ⁷	8 ⁷	—	3 ⁷	2 ⁷	—	10 ⁷	20 ⁷	—	—	—	—
Bahrain	15,229	20,600	18,770 ³	—	—	—	—	26	—	13	4	1	1	12	32	4	13	-6
Bangladesh	72,050	460	2,340	5.4	1.4	4.0	20 ¹	1 ¹	—	15 ¹	8 ¹	1 ¹	11 ¹	14 ¹	10 ¹	14 ¹	3 ¹	3 ¹
Barbados	3,307	11,300	12,240	3.5	0.3	3.2	3	1	—	6	5	3	5	24	16	5	13	19
Belarus	36,838	3,800	8,810	7.5	-0.5	8.0	10	5	—	31 ⁵	8	—	11	12	—	28	—	—
Belgium	395,886	38,000	34,460	1.5	0.3	1.2	1	—	—	15	4	2	8	13	25	15	6	11
Belize	1,003	3,600	6,640	4.0	3.1	0.9	12	1	—	8	4	3	11	20	16	7	10	8
Benin	4,649	530	1,160	4.0	2.9	1.1	33	—	—	8	4	1	8	17	—	21	—	8
Bermuda	5,056	78,500	—	—	—	—	1	5	—	8 ⁵	—	2	6	13	57	9	5	—
Bhutan	921	1,400	1,400	8.8	2.8	6.0	25 ¹	1 ¹	—	7 ¹	19 ¹	9 ¹	8 ¹	10 ¹	6 ¹	12 ¹	—	3 ¹
Bolivia	10,163	1,100	2,890	3.0	1.7	1.3	15 ¹	10 ¹	—	17 ¹	3 ¹	2 ¹	11 ¹	11 ¹	12 ¹	5 ¹	9 ¹	5 ¹
Bosnia and Herzegovina	11,566	3,000	—	5.0	0.4	4.6	9 ¹	2 ¹	—	10 ¹	4 ¹	6 ¹	9 ¹	14 ¹	6 ¹	11 ¹	10 ¹	19 ¹
Botswana	8,153	4,400	8,500	5.9	0.1	5.8	2	33	—	4	5	3	4	12	12	4	16	5
Brazil	1,041,609	5,500	8,800	2.2	1.5	0.7	9 ⁴	4 ⁴	—	22 ⁴	7 ⁴	3 ⁴	5 ⁴	7 ⁴	16 ⁴	14 ⁴	9 ⁴	4 ⁴
Brunei	11,481	30,100	—	—	—	—	1	49	—	12	3	1	9	3	9	1	12	—
Bulgaria	30,782	4,000	10,140	5.0	-0.6	5.6	8	5	—	17 ⁵	4	4	12	7	4	—	29	15
Burkina Faso	6,226	430	1,330	5.1	3.6	1.5	29 ⁴	1 ⁴	—	15 ⁴	4 ⁴	—	6 ⁴	18 ⁴	—	22 ⁴	—	5 ⁴
Burundi	903	110	710	2.2	3.3	-1.1	32	1	—	12	5	—	5	—	—	30	—	15
Cambodia	6,177	440	2,920	8.9	1.7	7.2	32	—	—	18	6	1	7	13	7	9	2	5
Cameroon	17,707	970	2,370	3.7	2.2	1.5	20 ¹	7 ¹	—	18 ¹	3 ¹	1 ¹	7 ¹	20 ¹	1 ¹	—	17 ¹	6 ¹
Canada	1,249,635	38,400	34,610	2.5	1.0	1.5	2	4	—	16	6	3	5	15	24	20	6	-1
Cape Verde	1,089	2,100	5,980	5.5	1.8	3.7	9	5	—	8 ⁵	9	—	19	21	9	2	12	11
Cayman Islands	1,443	32,100	—	—	—	—	—	4	—	2	10	—	11	23	—	49	—	1
Central African Republic	1,416	330	1,280	-1.4	1.3	-2.7	54 ⁴	7 ⁴	—	2 ⁴	4 ⁴	1 ⁴	4 ⁴	10 ⁴	—	6 ⁴	—	5 ⁴
Chad	3,509	340	1,230	14.5	3.0	11.5	21	43	—	5	2	—	—	13	—	8	—	7
Chile	126,436	7,700	11,260	4.3	1.1	3.2	6 ¹	8 ¹	—	16 ¹	8 ¹	3 ¹	8 ¹	11 ¹	20 ¹	11 ¹	4 ¹	5 ¹
China	2,641,846	2,000	7,730 ³	9.6	0.6	9.0	14 ⁴	5	—	45 ^{4, 5}	7 ⁴	—	6 ⁴	8 ⁴	8 ⁴	9 ⁴	3 ⁴	—4
Colombia	125,898	2,800	7,620	3.5	1.6	1.9	12 ¹	7 ¹	—	14 ¹	5 ¹	5 ¹	7 ¹	11 ¹	15 ¹	—	20 ¹	—1
Comoros	397	490	2,010	3.0	2.2	0.8	51	—	—	4	5	2	9	17	6	—	10	-4
Congo, Dem. Rep. of the	7,784	130	720	4.4	2.8	1.6	47 ¹	10 ¹	—	5 ¹	4 ¹	3 ¹	4 ¹	16 ¹	—	7 ¹	—	2 ¹
Congo, Rep. of the	5,787	1,600	940	3.9	3.0	0.9	6 ¹	52 ¹	—	6 ¹	4 ¹	1 ¹	6 ¹	9 ¹	—	7 ¹	—	2 ¹
Costa Rica	21,367	4,900	10,770	4.2	1.5	2.7	8	—	—	20	4	3	9	18	13	17	4	4
Côte d'Ivoire	17,052	900	1,550	-0.1	2.1	-2.1	23 ¹	1 ¹	—	16 ¹	3 ¹	2 ¹	5 ¹	14 ¹	—	28 ¹	—	8 ¹
Croatia	40,251	8,800	13,670	4.7	0.3	4.4	6	—	—	20	6	—	8	15	15	—	17	13
Cuba	51,504	4,600	—	3.4	0.3	3.1	4	1	—	11	7	1	8	24	6	—	36	2
Cyprus ⁹	18,191	23,700	21,480 ³	3.8	1.4	2.4	3	—	—	9	8	2	8	19	23	13	10	5
Czech Republic	134,001	13,200	21,160	3.5	-0.1	3.6	3	2	—	26	7	4	10	12	17	13	6	—
Denmark	278,800	51,300	36,110	1.2	0.3	0.9	2	3	—	11	5	2	8	11	20	18	5	15
Djibouti	792	970	2,540	3.2	2.0	1.2	3	—	—	3	7	5	24	15	12	14	18	-1
Dominica	287	4,200	6,490	3.1	-0.7	4.8	15	1	—	7	7	5	10	13	12	1	16	13
Dominican Republic	29,890	3,100	8,290	2.8	1.5	1.3	11	1	—	13	10	2	19	19	7	7	7	4
East Timor	847	760	—	—	—	—	32 ¹	1 ¹	—	4 ¹	9 ¹	1 ¹	9 ¹	8 ¹	9 ¹	1 ¹	27 ¹	-1 ¹

3. The tertiary sector, which includes transportation and communications, trade (wholesale and retail, including restaurants and hotels), financial services (including banking, real estate, insurance, and business services), other services (community, social, and personal), and government services.

The category "other" contains adjustments such as import duties and bank service charges that are not distributed by sector.

There are three major domestic components of GDP expenditure: private consumption (analyzed in greater detail in the "Household budgets and consumption" table), government spending, and gross domestic investment. The fourth, nondomestic, component of GDP expenditure is net foreign trade; values are given for both exports (a positive value) and imports (a negative value, representing obligations to other countries). The sum of these five percentages, excluding statistical discrepancies and rounding, should be 100% of the GDP.

External public debt. Because the majority of the world's countries are in the less developed bloc, and because their principal financial concern is often external debt and its service, data are given for outstanding external public and publicly guaranteed long-term debt rather than for total public debt, which is the major concern in the developed countries. For comparability, the data are given in U.S. dollars. The data presented in the table come from the World Bank's *Global Development Finance* (annual).

Balance of payments (external account transactions). The external account records the sum (net) of all economic transactions of a current nature

between one country and the rest of the world. The account shows a country's net of overseas receipts and obligations, including not only the trade of goods and merchandise but also such invisible items as services, interest and dividends, short- and long-term investments, tourism, transfers to or from overseas residents, etc. Each transaction gives rise either to a foreign claim for payment, recorded as a deficit (e.g., from imports, capital outflows), or a foreign obligation to pay, recorded as a surplus (e.g., from exports, capital inflows) or a domestic claim on another country. Any international transaction automatically creates a deficit in the balance of payments of one country and a surplus in that of another. Values are given in U.S. dollars for comparability. The data in this section are taken from *International Financial Statistics* (monthly) published by the International Monetary Fund.

Tourist Trade. Net income or expenditure from tourism (in U.S. dollars for comparability) is often a significant element in a country's balance of payments. Receipts from foreign nationals reflect payments for goods and services from foreign currency resources by tourists in the given country. Expenditures by nationals abroad are also payments for goods and services, but in this case made by the residents of the given country as tourists abroad. The majority of the data in this section are compiled by the World Tourism Organization.

	gross domestic product (GDP) by type of expenditure, 2006 (%)					external public debt outstanding (long-term, disbursed only), 2005					balance of payments, 2006 (current external transactions; '000,000 U.S.\$)			tourist trade, 2006 ('000,000 U.S.\$)		country	
	consumption		gross domestic	foreign trade		total ('000,000 U.S.\$)	creditors (%)		debt service		net transfers		current balance of payments	receipts from foreign nationals	expendi- tures by nationals abroad		
	private	government	invest- ment	exports	imports		offi- cial	private	total ('000,000 U.S.\$)	repayment (%)		goods, merchan- dise					invisibles
										princi- pal	inter- est						
	121	10	17	33	-81	8,000	...	...	...	...	...	...	...	...	...	Afghanistan	
	63	10	51	23	-47	1,375	93	7	66	62.1	37.9	2,123	1,452	-670.9	854	786	Albania
	29	12	32	50	-23	15,476	78.9	21.1	5,079	83.0	17.0	1,749	-1,723	25.8	184	370	Algeria
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	35	American Samoa
	58	18	30	26	-32	...	...	...	...	...	...	...	...	...	...	...	Andorra
	39	20	13	74	-47	9,428	33.8	66.2	2,183	88.9	11.1	15,756 ³	-10,618 ³	5,138 ³	88	74	Angola
	36	20	54	61	-71	...	...	...	...	...	...	-358,0 ⁶	222,2 ⁶	-135,8 ⁶	327	40	Antigua and Barbuda
	64	12	16	23	-15	61,952	32.8	67.2	3,232	48.3	51.7	13,976	-5,923	8,053	2,753	3,572	Argentina
	72	11	29	22	-34	923	99.8	0.2	25.0	64.0	36.0	-902.7	815.4	-87.3	141	146	Armenia
	52	27	33	63	-75	478.6	...	...	...	...	...	-52.6	-206.2	-258.8	1,096	241	Aruba
	56	18	27	21	-22	...	...	...	...	...	...	-9,684	-31,460	-41,144	14,940	15,076	Australia
	56	18	21	55	-50	...	...	...	...	...	...	641.0	9,618	10,259	15,589	10,994	Austria
	36	8	32	70	-46	1,344	95.5	4.5	76.0	72.4	27.6	7,745	-4,037	3,708	78	164	Azerbaijan
	68	14	33	46	-61	...	...	...	...	...	...	-852.0 ³	87.3	-764.7 ³	2,069	184	Bahamas, The
	34	14	21	97	-67	...	...	...	...	...	...	3,137	-1,219	1,918	925	414	Bahrain
	73	6	29	18	-26	17,938	97.1	2.9	754	73.6	26.4	-3,199 ³	3,023 ³	-176.2 ³	70	371	Bangladesh
	67	20	19	50	-56	660	52.4	47.6	96.3	56.8	43.2	-1,086 ³	699.3 ³	-386.7 ³	897	96	Barbados
	52	20	30	62	-64	783	72.3	27.7	215	82.3	17.7	-2,398	886	-1,512	253	672	Belarus
	53	23	21	90	-87	...	...	...	...	...	...	3,915	3,940	7,855	9,842	14,814	Belgium
	75	13	19	60	-67	970	32.2	67.8	226	69.0	31.0	-49.8	25.1	-24.7	204	42	Belize
	76	12	21	19	-28	1,762	100.0	—	60	68.3	31.7	-273.5 ¹	-431 ¹	-316.5 ¹	119 ¹	29 ¹	Benin
	59	11	19	47	-36	...	...	...	...	...	...	...	...	...	393	294	Bermuda
	49	22	54	40	-65	636.7	100.0	—	6.6	69.7	30.3	...	...	...	19	...	Bhutan
	69	16	13	31	-28	4,564	99.5	0.5	284	64.8	35.2	481.0 ³	17.4 ³	498.4 ³	239	186	Bolivia
	86	23	21	27	-57	2,560	93.9	6.1	108	50.9	49.1	-1,237	2,976	-1,261	565	123	Bosnia and Herzegovina
	29	37	20	48	-34	438	97.3	2.7	50.1	77.2	22.8	1,604 ³	-135 ³	1,469 ³	562	282	Botswana
	60	20	17	15	-12	94,497	27.0	73.0	16,053	57.2	42.8	46,115	-32,839	13,276	3,861	4,720	Brazil
	25	22	13	71	-32	...	...	...	...	...	...	1,600 ⁷	-1,972 ⁷	-372 ⁷	...	...	Brunei
	71	18	30	64	-83	4,587	66.2	33.8	2,099	83.9	16.1	-6,810	1,800	-5,010	2,383	1,299	Bulgaria
	68	22	24	10	-24	1,920	100.0	—	41	61.0	39.0	-392.0 ⁸	11.2 ⁸	-380.8 ⁸	25 ⁸	22 ⁸	Burkina Faso
	84	26	23	6	-39	1,228	99.8	0.2	39	69.2	30.8	-190.8	-134.3	-325.1	1.5	60	Burundi
	92	0	19	69	-79	3,155	100.0	—	20	40.0	60.0	-1,056.1	718.6	-337.4	840	97	Cambodia
	67	11	21	27	-26	5,521	98.1	1.9	548	67.0	33.0	307.7 ⁴	-982.9 ⁴	-675.2 ⁴	114 ⁴	214 ⁴	Cameroon
	56	19	22	37	-34	...	...	...	...	...	...	45,146	-24,349	20,797	13,590	18,341	Canada
	76	20	39	16	-52	482.3	100.0	—	31.8	79.9	20.1	-441.5	401.5	-40	122	67	Cape Verde
	63	15	22	62	-61	207.5	...	...	...	...	...	...	...	...	...	...	Cayman Islands
	98	7	6	12	-23	871	96.6	3.4	—	—	—	...	...	...	4 ¹	32 ¹	Central African Republic
	24	23	24	56	-27	1,537	97.9	2.1	47	61.7	38.3	...	...	...	25 ⁷	80 ⁷	Chad
	55	10	20	45	-31	9,096	12.2	87.8	1,925	76.2	23.8	2,078	3,178	5,256	1,256	1,057	Chile
	36	13	43	41	-33	82,853	63.0	37.0	8,765	75.0	25.0	217,746	32,120	249,866	29,296	27,759	China
	62	19	21	23	-24	22,491	46.7	53.3	6,589	70.9	29.1	322	-3,383	-3,061	1,218	1,127	Colombia
	94	13	14	12	-33	259.3	100.0	—	3.9	66.7	33.3	...	...	...	14	...	Comoros
	87	8	17	31	-43	9,412	96.1	3.9	209	53.6	46.4	...	...	...	...	...	Congo, Dem. Rep. of the
	24	8	25	91	-47	5,161	59.2	40.8	100	65.0	35.0	3,374	-2,471	903.2	34	103	Congo, Rep. of the
	66	14	28	50	-57	3,470	41.3	58.7	484	75.2	24.8	-2,604	1,527	-1,077	1,666	470	Costa Rica
	67	16	12	47	-42	9,007	73.8	26.2	164	73.2	26.8	3,151.9	-2,623	529.2	50 ⁴	192 ⁴	Côte d'Ivoire
	55	20	27	46	-48	9,782	22.4	77.6	1,926	74.8	25.2	-10,511	7,336	-3,175	7,370	754	Croatia
	51	39	9	15	-15	...	...	...	...	...	...	...	...	...	1,920	...	Cuba
	66	18	21	50	-54	...	...	...	...	...	...	-5,023	3,944	-1,079	2,318	932	Cyprus ⁹
	49	22	26	74	-72	...	...	...	...	...	...	2,979	-7,565	-4,586	4,623	2,405	Czech Republic
	48	25	22	53	-49	...	...	...	...	...	...	2,906	3,790	6,696	4,493	5,469	Denmark
	62	29	20	42	-53	389	100.0	—	17.1	77.8	22.2	-280.5	181.4	-99.1	7.1	2.8	Djibouti
	71	18	27	44	-60	231.5	70.1	29.9	16.5	67.9	32.1	-103.5 ³	21.9 ³	-81.6 ³	56	10	Dominica
	75	10	24	33	-42	6,093	45.8	54.2	831	66.4	33.6	-4,750	3,964	-786.1	3,508	352	Dominican Republic
	68	50	19	3	-40	...	...	...	...	...	...	...	...	...	...	...	East Timor

National product and accounts (continued)

country	gross national income (GNI), 2006			gross domestic product (GDP), 2000–05			origin of gross domestic product (GDP) by economic sector, 2005 (%)												
	nominal ('000,000 U.S.\$)	per capita		average annual growth rates, 2000–05			primary		secondary			tertiary					other		
		nominal (U.S.\$)	purchasing power parity (PPP; U.S.\$)	real GDP (%)	popu- lation (%)	real GDP per capita (%)	agri- culture	mining	manu- factur- ing	con- struc- tion	public util- ities	transp., commu- nications	trade	finan- cial svcs.	other svcs.	govern- ment			
Ecuador	36,796	2,800	4,400	5.1	1.3	3.8	7	16	10	7	2	15	14	10	7	5	7		
Egypt	111,348	1,500	4,680	3.7	1.8	1.9	14	5	32 ⁵	4	2	10	14	10	3	10	1		
El Salvador	15,553	2,300	5,340	2.2	1.8	0.4	9 ¹	1 ¹	22 ¹	4 ¹	2 ¹	10 ¹	19 ¹	16 ¹	7 ¹	7 ¹	3 ¹		
Equatorial Guinea	3,023	6,100	10,150	18.6	2.3	16.3	3 ¹	86 ¹	5 ¹	1 ¹	— ¹	— ¹	1 ¹	— ¹	1 ¹	1 ¹	2 ¹		
Eritrea	1,360	290	1,090	3.5	2.3	1.2	14 ⁴	1 ⁴	10 ⁴	10 ⁴	— ⁴	12 ⁴	18 ⁴	—	27 ⁴	—	8 ⁴		
Estonia	15,183	11,300	17,530	7.5	–0.4	7.9	4	1	16	7	3	12	15	18	11	5	8		
Ethiopia	13,278	160	1,190	4.2	2.5	1.7	48	1	5	5	2	5	14	9	7	5	–1		
Faroe Islands	1,472 ⁴	30,680 ⁴	31,000 ⁴	2.4	1.1	1.3	22 ⁸	6 ⁸	3 ⁸	6 ⁸	2 ⁸	8 ⁸	11 ⁸	14 ⁸	4 ⁸	21 ⁸	3 ⁸		
Fiji	2,929	3,500	6,200	3.1	0.9	2.2	14	1	13	5	3	17	20	12	—	18	–3		
Finland	210,516	40,000	34,810	2.4	0.3	2.1	3 ¹	— ¹	19 ¹	5 ¹	2 ¹	9 ¹	11 ¹	18 ¹	—	20 ¹	13 ¹		
France	2,256,465	35,700	32,136	1.5	0.6	0.9	2	—	12	6	2	3	9	31	18	7	10		
French Guiana	1,610 ¹	9,040 ¹	...	...	...	...	5 ⁶	2 ⁶	10 ⁶	9 ⁶	1 ⁶	— ⁶	15 ⁶	14 ⁶	28 ⁶	16 ⁶	— ⁶
French Polynesia	5,643	21,800	17,500	5.1	1.6	3.5	...	...	...	...	...	...	...	...	...	...	...
Gabon	6,828	5,200	5,310	1.7	1.7	0.0	6 ¹	45 ¹	5 ¹	2 ¹	1 ¹	5 ¹	6 ¹	2 ¹	13 ¹	8 ¹	7 ¹		
Gambia, The	485	300	1,970	3.7	2.9	0.8	30	—	5	6	1	18	16	5	3	7	9		
Gaza Strip ¹⁰	5,530	1,400	...	...	...	...	9	—	14	2	3	11	11	—	50	—	—
Georgia	8,296	1,900	3,690	7.4	–0.7	8.1	15	11	16 ¹¹	8	11	12	15	7	10	7	10		
Germany	2,901,482	35,100	31,280	0.7	0.1	0.6	14	4, 11	214, 11	44	4, 11	64	114	284	234	64	–4		
Ghana	12,000	520	2,640	5.1	2.2	2.9	37	5	9	8	3	5	7	4	3	11	8		
Greece	307,364	27,600	24,570	4.4	0.3	4.1	5 ¹	1 ¹	10 ¹	8 ¹	2 ¹	9 ¹	19 ¹	19 ¹	—	20 ¹	7 ¹		
Greenland	1,618	28,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grenada	419	4,000	7,810	0.9	0.5	0.4	5	1	6	22	6	23	15	13	3	17	–11		
Guadeloupe	9,136	20,040	...	...	...	...	77	7, 11	87, 11	77	7, 11	77	187	—	527	—	17
Guam	2,500 ^{3, 12}	15,000 ^{3, 12}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guatemala	30,030	2,300	4,800	2.5	2.4	0.1	23	1	12	2	5	12	25	10	6	6	–2		
Guernsey ¹³	2,886 ³	45,370 ³	...	...	...	...	2	—	3	8	...	—	—	64	—	—	23
Guinea	2,815	300	2,410	2.9	2.2	0.7	23 ¹	14 ¹	4 ¹	10 ¹	1 ¹	6 ¹	—	24 ¹	—	5 ¹	6 ¹		
Guinea-Bissau	306	190	830	–0.5	2.0	–2.5	60	11	9 ¹¹	3	11	3	17	—	8	—	—		
Guyana	857	1,200	4,680	4.5	0.2	4.3	30	8	3	5	1	9	4	7	2	15	16		
Haiti	4,619	490	1,490	–0.5	1.4	–1.9	25	—	8	8	1	6	26	12	—	11	3		
Honduras	8,989	1,290	3,540	3.6	2.5	1.1	12	2	18	4	5	6	11	15	16	7	4		
Hong Kong	190,156	26,700	38,180	4.3	0.8	3.5	—	—	3	3	3	10	28	22	—	17	—		
Hungary	104,036	10,300	17,920	4.1	–0.3	4.4	4	—	19	4	3	7	11	19	13	8	12		
Iceland	15,096	50,600	35,980	2.6	0.9	1.7	10 ¹	—	10 ¹	9 ¹	3 ¹	8 ¹	13 ¹	22 ¹	—	25 ¹	3 ¹		
India	887,483	770	3,800	7.0	1.6	5.4	19	3	15	6	2	22	13	—	13	—	7		
Indonesia	308,964	1,350	3,950	4.7	1.3	3.4	13	10	28	6	1	7	15	8	5	4	3		
Iran	238,669	3,400	8,480	5.8	0.9	4.9	11	25	11	4	2	7	11	16	3	10	—		
Iraq	46,919	1,700	...	–11.4	2.9	–14.3	11	60	2	1	—	11	10	2	2	1	—		
Ireland	185,955	44,000	35,540	5.2	1.8	3.4	2 ⁴	4	28 ⁴	7 ⁴	14 ⁴	5 ⁴	11 ⁴	19 ⁴	22 ⁴	4 ⁴	–4		
Isle of Man	2,719 ³	34,000 ³	...	...	...	...	1	—	9	9	2	7	12	64	4	5	–4
Israel	138,986	20,400	25,470 ³	1.9	1.8	0.1	2	—	13	4	2	7	9	23	13	17	10		
Italy	1,843,325	31,400	29,840	0.6	0.4	0.2	2	—	16	5	2	7	14	24	13	6	11		
Jamaica	9,448	3,500	4,030	1.8	0.9	0.9	5	4	13	10	4	11	20	12	7	11	3		
Japan	4,520,998	35,300	33,730	1.4	0.2	1.2	2 ¹	—	20 ¹	6 ¹	3 ¹	7 ¹	13 ¹	18 ¹	22 ¹	9 ¹	–1		
Jersey	5,800 ³	66,000 ³	...	...	...	...	1	—	2	5	1	4	10	69	—	7	1
Jordan	14,595	2,540	6,200	6.1	2.2	3.9	2	2	17	4	2	14	7	16	5	16	15		
Kazakhstan	72,388	4,700	7,780	10.1	0.2	9.9	6	11	33 ¹¹	11	11	13	13	—	37	—	–13		
Kenya	23,564	650	1,300	3.4	2.4	1.0	25	1	11	3	2	11	12	9	4	15	7		
Kiribati	130	1,400	8,970	0.3	1.8	–1.5	6	—	1	5	1	6	13	12	—	48	8		
Korea, North	25,600	1,108	...	...	...	...	27 ¹	9 ¹	19 ¹	9 ¹	4 ¹	—	—	10 ¹	—	23 ¹	–11
Korea, South	856,565	18,150	23,800	4.6	0.5	4.1	3	—	25	8	2	6	8	14	14	11	9		
Kosovo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait	111,464	40,100	...	7.3	4.9	2.4	—	54	7	2	1	5	5	14	—	13	–1		
Kyrgyzstan	2,712	520	1,980	4.0	1.2	2.8	29	1	11	3	3	6	21	3	7	4	12		
Laos	3,270	570	2,050	6.2	2.3	3.9	44	3	21	3	3	6	10	—	5	4	1		
Latvia	19,531	8,530	15,340	7.9	–0.6	8.5	3	—	10	6	2	11	20	19	11	6	12		
Lebanon	21,662	5,340	5,460	4.0	1.0	3.0	107	— ⁷	107	27	77	37	327	187	107	87	–7		
Lesotho	1,748	880	4,340	2.9	–0.1	3.0	16	2	17	14	4	4	12	10	9	6	6		
Liberia	546	150	...	–6.8	1.5	–8.3	64	—	12	2	1	7	6	3	1	3	–2		
Libya	50,107	8,300	...	5.3	2.0	3.3	3	73	1	3	1	3	5	2	5	3	1		
Liechtenstein	2,893	82,800	...	...	...	...	7 ¹	— ¹	40 ¹	...	...	...	...	26 ¹	—	26 ¹	1 ¹
Lithuania	28,630	8,400	14,930	7.8	–0.5	8.3	5	1	19	7	4	11	17	11	9	5	11		
Luxembourg	32,911	71,300	55,970	6.2	0.9	5.3	—	—	9	5	1	—	—	44	—	15	8		
Macau	14,902	31,200	24,300	6.7	1.8	4.9	—	—	6 ⁴	4 ⁴	3 ⁴	6 ⁴	12 ⁴	19 ⁴	9 ⁴	8 ⁴	33 ^{4, 14}		
Macedonia	6,251	3,070</																	

		gross domestic product (GDP) by type of expenditure, 2006 (%)			external public debt outstanding (long-term, disbursed only), 2005					balance of payments, 2006 (current external transactions; '000,000 U.S.\$)			tourist trade, 2006 ('000,000 U.S.\$)		country		
		consumption		gross domestic invest- ment	foreign trade		total ('000,000 U.S.\$)	creditors (%)		debt service		net transfers		current balance of payments	receipts from foreign nationals	expendi- tures by nationals abroad	
		private	govern- ment		exports	imports		offi- cial	private	total ('000,000 U.S.\$)	repayment (%)		goods, merchan- dise					invisibles
										princi- pal	inter- est						
64	11	24	34	-33	10,662	54.2	45.8	1,525	56.3	43.7	712 ³	-771 ³	-59 ³	486	401	Ecuador	
75	13	20	28	-36	24,892	94.2	5.8	2,000	73.2	26.8	-8,438	11,073	2,635	6,851	1,629	Egypt	
94	10	16	26	-46	4,760	59.3	40.7	521	42.8	57.2	-3,008 ³	2,222 ³	-786.5 ³	543	347	El Salvador	
6	3	33	95	-38	223.9	93.2	6.8	3.9	76.9	23.1	...	...	...	...	...	Equatorial Guinea
82	37	18	5	-42	723	95.4	4.6	20.2	58.4	41.6	-434.6 ⁶	329.9 ⁶	-104.7 ⁶	66	...	Eritrea	
53	16	38	84	-92	435	16.6	83.4	82.0	68.3	31.7	-2,739	293	-2,446	948	448	Estonia	
80	12	20	15	-27	5,897	93.8	6.2	80.0	38.8	61.2	-3,081	1,295	-1,786	168	77	Ethiopia	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Faroe Islands
78	16	20	56	-70	119.6	96.0	4.0	12.0	67.5	32.5	...	...	...	436	106	Fiji
51	22	21	45	-38	...	...	...	...	...	...	11,553	795	12,348	2,147	2,968	Finland
57	23	21	28	-29	...	...	...	...	...	...	-37,690	9,390	-28,300	42,167	31,180	France
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	French Guiana
49	44	13	21	-27	...	...	...	...	...	...	...	...	...	550	303	French Polynesia
26	8	21	74	-30	3,582	93.7	6.3	82	53.7	46.3	2,856 ¹	-1,932 ¹	924.5 ¹	10 ¹	214 ¹	Gabon	
84	10	24	51	-70	626.4	100.0	—	25.9	63.3	36.7	-114.5 ³	64.1 ³	-50.4 ³	56	5	Gambia, The	
98	31	24	12	-64	...	...	...	...	...	...	-2,366 ¹	883 ¹	-1,483 ¹	56 ¹	286 ¹	Gaza Strip ¹⁰
74	16	28	33	-51	1,494	99.9	0.1	103	77.7	22.3	-915.5	-327.5	-1,243	242	169	Georgia	
59	19	18	45	-40	...	...	...	...	...	...	197,330	-49,510	147,820	29,151	80,276	Germany
76	14	27	35	-52	5,734	94.5	5.5	229	68.6	31.4	-2,543 ³	1,731 ³	-811.6 ³	796	303	Ghana	
68	14	25	19	-27	...	...	...	...	...	...	-44,285	14,620	-29,665	13,578	3,039	Greece
32	54	30	24	-40	...	...	...	...	...	...	...	...	...	...	...	Greenland
68	17	50	39	-75	390	44.2	55.8	10.7	67.3	32.7	-241.1 ³	111.7 ³	-129.4 ³	71	11	Grenada	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	246	...	Guadeloupe
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Guam
86	9	20	26	-41	3,688	66.5	33.5	402	49.5	50.5	-5,044	3,452	-1,592	846	444	Guatemala	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Guernsey ¹³
85	4	22	26	-36	2,931	99.0	1.0	89	67.9	32.1	37.2 ¹	-212 ¹	-174.8 ¹	30 ¹	25 ¹	Guinea	
82	16	16	35	-50	671.3	100.0	—	29.4	70.7	29.3	-7.1 ¹	-6.1 ¹	-13.2 ¹	1 ¹	13 ¹	Guinea-Bissau	
65	25	46	80	-116	1,021	99.1	0.9	25	60.0	40.0	-174.3 ³	78.1 ³	-96.2 ³	35	40	Guyana	
92	8	29	14	-43	1,276	100.0	—	52	63.5	36.5	-849.6 ³	903.7 ³	54.1 ³	110	54	Haiti	
79	14	33	41	-66	4,152	98.6	1.4	200	68.5	31.5	-1,540 ³	1,454 ³	-85.6 ³	472	248	Honduras	
58	8	22	206	-194	...	...	...	...	...	...	-14,033	34,608	20,575	10,179	13,307	Hong Kong
54	23	22	78	-77	21,216	11.9	88.1	4,215	80.0	20.0	-508	-5,704	-6,212	4,279	2,925	Hungary	
60	24	30	34	-47	...	...	...	...	...	...	-2,239	-2,218	-4,457	409	975	Iceland
57	12	32	22	-23	80,281	63.5	36.5	17,140	72.1	27.9	-32,526 ³	24,691 ³	-7,835 ³	3,887 ⁴	3,510 ⁴	India	
63	9	25	30	-26	72,335	81.6	18.4	7,193	73.7	22.7	22,323 ³	-21,394 ³	929 ³	4,522	3,584	Indonesia	
46	12	28	37	-23	10,493	17.3	82.7	2,133	80.4	19.6	13,138 ⁶	-657 ⁶	12,481 ⁶	992	4,380	Iran	
53	28	22	90	-93	...	...	...	...	...	...	...	...	...	...	...	Iraq
45	16	28	81	-69	...	...	...	...	...	...	34,165	-41,373	-7,208	4,723	6,056	Ireland
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Isle of Man
55	27	17	45	-44	...	...	...	...	...	...	-3,564	10,405	6,841	2,853	2,895	Israel
59	20	21	28	-28	...	...	...	...	...	...	-11,690	-35,622	-47,312	35,319	22,371	Italy
72	15	31	40	-58	5,508	38.7	61.3	902	60.0	40.0	-2,581	1,502	-1,079	1,545	250	Jamaica	
57	18	24	16	-15	...	...	...	...	...	...	81,300	89,220	170,520	12,430	37,565	Japan
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Jersey
97	20	26	51	-94	6,878	93.6	6.4	501	68.1	31.9	-5,056	3,084	-1,972	1,441	585	Jordan	
49	10	31	54	-44	2,184	81.8	18.2	1,236	88.2	11.8	14,642	-16,439	-1,797	701	753	Kazakhstan	
80	16	18	23	-38	5,520	93.3	6.7	199	72.4	27.6	-2,168 ³	1,673 ³	-495 ³	579	124	Kenya	
62	36	44	30	-72	...	...	...	...	...	...	...	...	...	3.2 ⁸	...	Kiribati
...	...	...	...	...	12,500 ⁸	...	...	...	...	...	...	...	...	...	...	Korea, North
55	15	30	44	-44	...	...	...	...	...	...	29,214	23,122	6,092	5,660	15,314	Korea, South
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Kosovo
28	13	17	68	-26	...	...	...	...	...	...	44,288	6,708	50,996	165	4,277	Kuwait
97	19	21	39	-76	1,670	100.0	—	28	57.1	42.9	-981.5	564.3	-417.2	73	58	Kyrgyzstan	
59	8	31	32	-29	1,971	100.0	—	49	71.4	28.6	-216.8 ⁸	134.4 ⁸	-82.4 ⁸	146	...	Laos	
65	17	38	44	-64	1,318	25.6	74.4	157	61.1	38.9	-3,018	-1,262	-4,280	341	584	Latvia	
82	15	22	16	-35	17,912	9.1	90.9	2,996	61.2	38.8	-5,755	4,271	-1,484	5,432	2,878	Lebanon	
83	19	41	42	-85	647	91.7	8.3	53.8	74.5	25.5	-609.8 ³	566.2 ³	-43.6 ³	30	36	Lesotho	
91	9	12	34	-47	1,115	82.2	17.8	—	—	—	...	...	...	...	...	Liberia
19	14	14	83	-31	3,900	...	...	...	...	...	17,675 ³	-2,730 ³	14,945 ³	250	680	Libya
60	11	22	54	-47	...	...	...	...	...	...	...	...	...	...	...	Liechtenstein
67	16	26	63	-72	1,511	29.7	70.3	873	91.5	8.5	-4,169	925	-3,244	921	744	Lithuania	
39	17	19	180	-156	...	...	...	...	...	...	-4,290	8,677	4,387	3,614	2,976	Luxembourg
24	8	34	92	-58	...	...	...	...	...	...	-2,792	6,159	3,367	7,757	295	Macao
79	19	21	48	-66	1,613	73.2	26.8	122	66.4	33.6	-1,285	1,261	-23.7	84	60	Macedonia	
83	8	22	27	-40	3,178	99.7	0.3	66	57.6	42.4	-592 ³	-33 ³	-625 ³	62	25	Madagascar	
104	16	10	24	-55	3,040	99.4	0.6	79	64.6	35.4	-150.8 ⁷	-49.9 ⁷	-200.7 ⁷	23	47	Malawi	
44	13	20	122	-99	22,449	29.1	70.9										

National product and accounts (continued)

country	gross national income (GNI), 2006			gross domestic product (GDP), 2000–05			origin of gross domestic product (GDP) by economic sector, 2005 (%)										
	nominal ('000,000 U.S.\$)	per capita		average annual growth rates, 2000–05			primary		secondary			tertiary					other
		nominal (U.S.\$)	purchasing power parity (PPP; U.S.\$)	real GDP (%)	population (%)	real GDP per capita (%)	agri- culture	mining	manu- factur- ing	con- struc- tion	public util- ities	transp., commu- nications	trade	finan- cial svcs.	other svcs.	govern- ment	
Namibia	6,428	3,140	8,110	4.6	1.3	3.3	11	9	11	3	4	7	12	13	1	20	9
Nauru	79	7,840	...	...	...	...	10	4	1	8	...	15	13	...	49	...	...
Nepal	7,476	270	1,630	2.8	2.1	0.7	37	...	7	10	2	10	10	11	...	9	4
Netherlands, The	670,483	40,940	35,600	0.7	0.5	0.2	2	3	13	5	1	6	13	24	11	11	11
Netherlands Antilles	3,341	17,700	...	...	...	...	11	...	61	51	51	101	161	291	141	81	61
New Caledonia	4,743	19,930	15,000 ⁴	...	...	...	24	104, 16	6	64	4, 16	64	234	...	484	...	-14
New Zealand	98,383	23,770	26,470	3.7	1.2	2.5	71	11	151	51	21	101	161	241	121	41	41
Nicaragua	5,233	950	4,010	3.0	2.0	1.0	17	1	17	6	2	6	13	12	7	11	8
Niger	3,361	250	830	3.7	3.0	0.7	41	2	6	3	1	7	13	8	3	10	6
Nigeria	116,374	800	1,050	5.9	2.3	3.6	301	331	41	11	...	41	151	71	21	11	31
Northern Mariana Is.	1,000 ^{3, 12}	13,400 ^{3, 12}	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Norway	335,314	71,800	43,920	2.0	0.6	1.4	117	2517	817	417	217	617	817	1217	1817	417	1217
Oman	28,710	11,280	14,570 ³	3.0	1.6	1.4	3	49	9	3	3	3	11	6	7	7	-1
Pakistan	149,784	930	2,500	4.8	1.9	2.9	20	2	17	2	2	14	17	6	8	5	7
Palau	162	8,000	...	5.5	1.9	3.6	4	...	...	5	3	9	31	8	17	23	...
Panama	15,536	4,730	7,680	4.3	1.7	2.6	7	1	7	4	3	18	17	23	6	9	5
Papua New Guinea	5,523	890	2,410	1.6	2.1	-0.5	391	211	61	81	21	21	21	61	31	101	11
Paraguay	9,281	1,540	5,070	2.6	2.2	0.4	21	...	14	5	2	8	21	6	6	9	8
Peru	86,579	3,140	6,070	4.3	1.5	2.8	7	9	15	5	2	8	16	16	6	7	9
Philippines	127,832	1,480	5,980	4.7	1.9	2.8	14	1	23	4	4	8	1	5	8	8	1
Poland	324,482	8,510	14,530	3.2	-0.2	3.4	4	2	16	5	3	7	17	...	46	...	...
Portugal	188,263	17,800	20,850	0.5	0.3	0.2	217	...	1417	517	217	617	1517	1317	...	2917	1417
Puerto Rico	58,418	14,700	19,300	0.5	0.5	0.0	1	...	40	2	...	7	13	17	16	2	2
Qatar	54,259	66,100	...	7.1	4.6	2.5	...	60	8	6	1	3	4	10	2	8	-2
Réunion	14,910 ^{3, 12}	19,130 ^{3, 12}	...	...	...	...	54	5	44, 5	74	14	64	124	...	574	...	-54
Romania	118,368	5,500	9,820	5.8	-0.4	6.2	131	11	251, 11	61	11	101	111	141	51	51	111
Russia	956,557	6,680	11,620	6.2	-0.5	6.7	417	917	1717	517	317	817	1817	1217	717	617	1117
Rwanda	2,295	240	1,270	5.1	2.1	3.0	451	...	91	81	11	71	91	31	111	71	71
St. Kitts	453	9,110	12,680	4.9	0.4	4.5	2	...	8	12	21	13	17	17	4	16	9
St. Lucia	872	5,350	6,960	5.1	0.9	4.2	3	...	4	6	4	16	22	15	4	12	14
St. Vincent	424	3,540	7,000	4.9	0.5	4.4	7	...	5	10	5	16	18	9	3	16	11
Samoa	409	2,210	6,400	5.5	0.9	4.6	13	...	15	9	4	12	23	9	7	9	-1
San Marino	1,257	41,040	...	4.6	2.4	2.2	...	...	424	74	...	24	94	164	...	244	...
São Tomé and Príncipe	55	360	...	4.4	2.3	2.1	161	...	41	101	...	...	281	111	11	301	...
Saudi Arabia	365,786	15,130	13,600	4.2	2.9	1.3	3	48	10	5	1	3	5	8	2	14	1
Senegal	9,335	770	1,830	4.7	2.5	2.2	141	11	141	41	21	91	181	131	71	71	111
Serbia	40,747	3,310	4,400 ³	5.1	-0.2	5.3	13	2	15	3	3	10	11	15	...	11	17
Seychelles	659	7,660	16,590	-1.0	0.4	-0.6	3	...	15	12	3	18	3	3	2	2	-1
Sierra Leone	1,791	310	850	13.7	1.9	11.8	484	154	34	34	...	74	64	74	34	44	44
Singapore	127,980	29,210	31,700	4.2	1.3	2.9	...	...	27	4	2	12	17	28	...	11	-1
Slovakia	52,921	9,820	16,910	4.9	-0.1	5.0	417	...	2017	617	517	917	1717	417	917	517	2117
Slovenia	36,477	18,230	23,960	3.4	0.1	3.3	2	1	21	5	3	7	12	18	13	5	13
Solomon Islands	411	850	2,170	4.4	2.5	1.9	324	...	44	14	44	34	184	84	...	314	-14
Somalia	2,313	270	...	...	...	...	651	-1	31	61	-1	71	81	...	91	...	21
South Africa	241,635	5,000	11,710	3.7	1.0	2.7	2	6	17	2	2	9	13	19	13	6	11
Spain	1,208,184	27,530	28,420	3.1	1.8	1.3	3	2	14	10	1	...	47	...	...	13	11
Sri Lanka	27,026	1,410	5,000	4.2	0.9	3.3	12	2	20	7	2	12	24	9	4	9	-1
Sudan, The	33,882	900	2,160	6.1	1.9	4.2	464	104	84	54	...	...	254	...	...	64	...
Suriname	2,039	4,480	8,120	...	...	...	51	1217	1317	317	517	817	1117	1017	117	917	2317
Swaziland	2,775	2,450	5,170	2.3	0.2	2.1	717	...	211	51	11	31	61	31	21	111	411
Sweden	381,786	42,100	34,780	2.3	0.3	2.0	117	...	1817	417	317	617	1117	2017	617	1817	1417
Switzerland	394,522	52,900	40,630	0.9	0.8	0.1	1	-11	2111	6	11	...	22	25	...	26	-1
Syria	28,697	1,480	3,920	3.7	2.4	1.3	254	194	44	34	14	134	174	34	34	104	24
Taiwan	333,422 ¹	14,700 ¹	...	...	...	...	21	...	221	21	21	71	201	111	41	121	181
Tajikistan	3,478	520	1,410	9.5	2.1	7.4	21	11	1911	4	11	6	22	1	4	2	11
Tanzania	13,098	330	740	6.9	2.1	4.8	414	24	74	54	24	44	114	54	94	84	64
Thailand	202,098	3,190	9,140	5.4	0.7	4.7	1117	317	3517	317	317	717	1917	617	817	517	...
Togo	2,254	350	1,490	2.7	2.8	-0.1	404	34	74	34	44	64	114	74	...	114	84
Tonga	230	2,300	8,580	2.4	0.1	2.3	211	...	41	81	21	71	141	131	51	111	151
Trinidad and Tobago	17,542	13,210	16,250	8.3	0.5	7.8	117	4517	617	817	117	517	1217	1217	417	717	-117
Tunisia	28,905	2,830	8,490	4.5	1.0	3.5	12	1	18	5	5	10	6	22	...	13	8
Turkey	397,699	5,380	9,060	5.2	1.3	3.9	10	1	21	4	3	15	21	9	4	10	2
Turkmenistan	6,047	1,230	8,500	6.0	1.4	4.6	244	11	354, 11	74	11	64	44	...	244	...	...
Tuvalu	26	2,440	...	...	...	...	177	17	47	57	57	137	147	157	77	277	-87
Uganda	9,702	320	1,490	5.6	3.2	2.4	2917	117	817	1017	117	917	1317	617	1117	417	817
Ukraine	105,253	2,260	7,510	8.0	-0.9	8.9	9	4	20	4	3	11	13	...	26	...	10
United Arab Emirates	174,536	41,080	...	8.2	7.6	0.6	2	36	13	7	2	7	13	13	2	7	-2
United Kingdom	2,425,690	40,090	35,690	2.4	0.4	2.0	11	31	131	61	11	71	141	281	161	51	61
United States	13,150,600	43,420	43,420	2.6	1.0	1.6	117	217	1217	517	217	317	1517	2517	2317	1217	...
Uruguay	18,801	5,640	11,150	0.9	0.3	0.6	917	...	2317	517	417	1017	1317	1917	917	817	...
Uzbekistan	16,108	600	2,240	5.3	1.5	3.8	25	11	2111	5	11	11	9	...	18	...	11
Vanuatu	344	1,560	3,200	2.9	2.0	0.9	154	...	44	34	24	134	384	144	24	154	-64
Venezuela	177,866	6,540	7,440	1.3	1.8	-0.5	18	1517	1717	717	217	417	1017, 18	1417	517	1117	1517, 18
Vietnam	56,583	660	3,300	7.5	1.3	6.2	21	11	21	6	3	4	17	6	8	3	...
Virgin Islands (U.S.)	3,080 ¹⁹	27,300 ¹⁹	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
West Bank ¹⁰	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Western Sahara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yemen	17,083	790	920	3.3	3.1	0.2	13	32	6	4	1	11	13	8	2	10	...
Zambia	10,339	880	1,000	4.7	2.2	2.5	21	3	11	11	3	4	21	15	5	3	3
Zimbabwe	1,734	130	1,940 ³	-5.9	0.7	-6.6	15	8	17	1	...	8	12	...	39	...	...

	gross domestic product (GDP) by type of expenditure, 2006 (%)					external public debt outstanding (long-term, disbursed only), 2005					balance of payments, 2006 (current external transactions; '000,000 U.S.\$)			tourist trade, 2006 ('000,000 U.S.\$)		country
	consumption		gross domestic invest- ment	foreign trade		total ('000,000 U.S.\$)	creditors (%)		debt service		net transfers		current balance of payments	receipts from foreign nationals	expendi- tures by nationals abroad	
	private	government		exports	imports		offi- cial	private	total ('000,000 U.S.\$)	repayment (%)		goods, merchan- dise					invisibles
									princi- pal	inter- est						
	55	24	26	42	-47	...	...	...	...	...	-282.8 ¹	855.4 ¹	572.6 ¹	348	108	Namibia
	62	36	44	30	-72	...	...	...	...	...	...	...	...	...	...	Nauru
	79	10	30	19	-38	3,217	99.9	0.1	115	73.9	-1,374 ³	1,375 ³	1 ¹³	131	163	Nepal
	47	25	19	76	-67	...	...	...	...	...	47,972	9,476	57,448	10,383	16,082	Netherlands, The
	55	22	25	92	-93	478 ¹	...	...	...	...	-1,314 ³	1,462 ³	-148.3 ³	992 ⁶	339 ⁶	Netherlands Antilles
	56	33	24	15	-29	...	...	...	...	...	...	...	...	253	171	New Caledonia
	60	19	24	28	-31	...	...	...	...	...	-2,118	-7,255	-9,373	4,984	2,657	New Zealand
	80	20	29	30	-59	4,113	92.5	7.5	107	58.9	-1,444	589.6	-854.4	207	90	Nicaragua
	73	18	23	19	-32	1,771	100.0	—	24	50.0	-153 ¹	-77.9 ¹	-230.9 ¹	34	32	Niger
	68	7	12	32	-19	20,342	89.3	10.7	8,817	43.9	30,781 ³	-6,579 ³	24,202 ³	18	1,109	Nigeria
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Northern Mariana Is.
	41	20	21	46	-27	...	...	...	...	...	59,721	-4,508	55,213	3,278	9,753	Norway
	46	21	15	64	-45	842	100.0	—	473	89.0	10,663 ³	-5,946 ³	4,717 ³	481	643	Oman
	82	6	20	17	-25	29,490	95.6	4.4	1,127	65.9	-9,702	2,907	-6,795	181	1,275	Pakistan
	41	46	21	76	-84	...	...	...	...	...	...	...	...	97 ¹	2 ¹	Palau
	66	10	21	36	-33	7,514	17.7	82.3	1,720	67.0	-1,801	1,423	-378.2	780	271	Panama
	63	12	18	40	-33	1,266	96.0	4.0	152	75.0	1,753 ³	-1,330 ³	422.7 ³	3.6	56	Papua New Guinea
	66	10	20	34	-30	2,264	79.6	20.4	301	68.7	-492.3 ³	469.9 ³	-22.4 ³	76	79	Paraguay
	63	10	18	28	-19	22,222	60.8	39.2	4,218	67.4	8,853	-6,397	2,456	1,241	680	Peru
	70	10	15	47	-42	35,233	52.9	47.1	5,693	58.9	-7,546 ³	9,884 ³	2,338 ³	2,130	1,279	Philippines
	63	18	20	41	-42	35,094	26.9	73.1	8,760	88.7	-4,953	-3,020	-7,973	853	4,341	Poland
	66	21	21	31	-39	...	...	...	...	...	-4,898	-13,383	-18,281	7,893	3,073	Portugal
	56	12	15	80	-63	...	...	...	...	...	...	...	...	3,239	1,143	Puerto Rico
	17	13	35	65	-30	...	...	...	...	...	...	...	...	760	1,759	Qatar
	...	...	...	...	...	...	...	...	...	...	...	...	...	384	...	Réunion
	67	20	24	34	-46	13,341	46.2	53.8	2,372	71.6	-14,836	2,000	-12,836	1,044	878	Romania
	49	18	20	34	-21	75,359	46.0	54.0	28,326	81.6	139,234	-43,911	95,323	5,466	17,804	Russia
	90	14	21	10	-35	1,420	100.0	—	20	55.0	-343	163	-180	...	...	Rwanda
	57	18	46	45	-67	299.3	54.7	45.3	47.8	57.1	-135.8 ³	28.8 ³	-107 ³	107	11	St. Kitts
	52	18	41	62	-73	248.9	64.6	35.4	27.2	52.2	-345.3 ³	162.7 ³	-182.6 ³	345	40	St. Lucia
	68	20	32	48	-68	248.3	46.2	53.8	22.6	63.7	-169.7 ³	59.6 ³	-110.1 ³	105	14	St. Vincent
	92	22	10	30	-54	177	100.0	—	6.1	73.8	-175.2 ³	150.7 ³	-24.5 ³	77	9	Samoa
	35	14	57	181	-188	...	...	...	...	...	...	...	...	...	...	San Marino
	79	45	68	31	-123	326.7	100.0	—	9.6	62.5	-22.9 ⁷	0.17	-22.8 ⁷	147	0.87	São Tomé and Príncipe
	27	20	19	65	-31	...	...	...	...	...	123,308 ³	-36,177 ³	87,131 ³	5,181	4,764	Saudi Arabia
	75	17	26	27	-44	3,467	99.7	0.3	119	63.9	-986.4 ¹	473.3 ¹	-513.1 ¹	212 ¹	57 ¹	Senegal
	70	21	28	27	-46	7,972	86.5	13.5	303	16.8	...	...	...	201 ⁴	...	Serbia
	50	22	16	108	-96	401.7	57.1	42.9	48.2	77.6	-287.2	111.7	-175.5	192	39	Seychelles
	91	15	17	16	-40	1,420	99.9	0.1	21	47.6	-176.6 ³	8.0 ³	-168.6 ³	64	34	Sierra Leone
	40	11	18	253	-221	...	...	...	...	...	37,890 ³	4,678 ³	33,212 ³	5,736	9,853	Singapore
	57	18	29	80	-84	3,340	29.4	70.6	1,593	86.3	-649 ⁴	367 ⁴	-282 ⁴	1,210	846	Slovakia
	55	19	26	69	-69	...	...	...	...	...	-1,419	460	-959	1,795	950	Slovenia
	48	32	20	59	-59	148.1	99.7	0.3	7.5	77.3	...	...	...	2	5	Solomon Islands
	72	9	20	0	-2	1,882	98.1	1.9	—	—	...	...	...	...	...	Somalia
	64	20	19	28	-31	11,662	2.7	97.3	1,051	54.0	-6,175	-10,101	-16,276	7,335	3,374	South Africa
	58	18	31	26	-32	...	...	...	...	...	-100,729	-5,615	-106,344	47,681	15,046	Spain
	70	13	27	33	-44	9,812	94.1	5.9	285	70.9	-1,630 ³	-110 ³	-740 ³	429	315	Sri Lanka
	57	17	24	27	-24	11,163	80.4	19.6	359	81.1	-1,448	-3,662	-5,110	89	668	Sudan, The
	18	5	85	54	-62	504.3	...	...	...	...	22.4 ³	-166 ³	-143.6 ³	45	17	Suriname
	62	27	17	90	-97	450.5	85.4	14.6	40	53.3	73 ³	-27.1 ³	45.9 ³	69	15	Swaziland
	48	27	18	51	-43	...	...	...	...	...	19,701 ³	3,942 ³	23,643 ³	7,361	10,776	Sweden
	60	11	22	54	-47	...	...	...	...	...	4,663	58,831	63,494	11,063	9,262	Switzerland
	65	13	19	40	-37	5,640	81.3	18.7	186	77.4	-1,940 ³	875 ³	-1,065 ³	2,175	550	Syria
	83 ¹	17 ¹	27 ¹	63 ¹	-27 ¹	...	...	...	...	...	16,128 ¹	2,530 ¹	18,658 ¹	5,040	8,682	Taiwan
	78	23	11	59	-72	785	98.7	1.3	47	83.9	-442.8	421.4	-21.4	1 ¹	3 ¹	Tajikistan
	81	8	22	24	-35	6,183	98.4	1.6	66	42.4	-2,141	699	-1,442	824	554	Tanzania
	56	12	28	74	-70	13,483	59.9	40.1	3,166	86.3	14,813	-11,583	3,230	10,104	4,995	Thailand
	88	9	21	39	-56	1,469	100.0	—	5	60.0	-512.2 ³	9,729 ³	460.7 ³	19 ¹	8 ¹	Togo
	117	13	11	21	-62	83.2	100.0	—	4.0	72.5	-55,247 ⁷	51,928 ⁷	-3,319 ⁷	11	3	Tonga
	37	14	15	69	-35	1,197	47.7	52.3	340	71.5	1,509 ¹	-62 ¹	1,447 ¹	453	222	Trinidad and Tobago
	64	15	23	50	-52	12,982	64.9	35.1	1,747	66.1	-1,968 ³	1,665 ³	-303 ³	2,124	365	Tunisia
	70	12	24	26	-32	62,580	19.9	80.1	12,686	65.5	-40,186	8,422	-31,764	18,152	2,872	Turkey
	55	13	24	63	-55	912	71.2	28.8	226	84.1	...	...	...	...	...	Turkmenistan
	91	54	56	13	-114	57	...	...	...	...	...	...	...	...	...	Tuvalu
	78	14	25	14	-32	4,250	99.4	0.6	133	75.2	-1,245	1,114	-130.8	355	133	Uganda
	60	19	24	47	-50	10,458	49.0	51.0	1,779	68.4	-5,194	3,557	-1,617	3,125	2,805	Ukraine
	40	8	24	82	-55	...	...	...	...	...	...	...	...	2,200	5,300	United Arab Emirates
	64	22	18	30	-34	...	...	...	...	...	-153,850	65,750	-88,100	30,577	59,593	United Kingdom
	70	16	20	11	-17	...	...	...	...	...	-832,250	-24,430	-856,670	102,014	73,558	United States
	73	12	15	30	-30	7,866	40.7	59.3	1,487	73.0	-473.7	17.1	-456.6	594	328	Uruguay
	53	17	23	39	-31											

¹2004. ²Government services include financial services. ³2005. ⁴2003. ⁵Manufacturing includes mining. ⁶2000. ⁷2002. ⁸2001. ⁹Republic of Cyprus only. ¹⁰Gaza Strip includes West Bank. ¹¹Manufacturing includes mining and public utilities. ¹²GDP. ¹³Excludes Alderney and Sark. ¹⁴Gaming activities. ¹⁵Manufacturing includes mining, construction, and public utilities. ¹⁶Mining includes public utilities. ¹⁷2006. ¹⁸Other includes agriculture and hotels and restaurants. ¹⁹Gross territorial income.

Employment and labour

This table provides international comparisons of the world's national labour forces—giving their size; composition by demographic component and employment status; and structure by industry.

The table focuses on the concept of “economically active population,” which the International Labour Organisation (ILO) defines as persons of all ages who are either employed or looking for work. In general, the economically active population does not include students, persons occupied solely in domestic duties, retired persons, persons living entirely on their own means, and persons wholly dependent on others. Persons engaged in illegal economic activities—smugglers, prostitutes, drug dealers, bootleggers, black marketeers, and others—also fall outside the purview of the ILO definition. Countries differ markedly in their treatment, as part of the labour force, of such groups as members of the armed forces, inmates of institutions, the unemployed (both persons seeking their first job and those previously employed), seasonal and international migrant workers, and persons engaged in informal, subsistence, or part-time economic activities. Some countries include all or most of these groups among the economically active, while others may treat the same groups as inactive.

Three principal structural comparisons of the economically active total are given in the first part of the table: (1) participation rate, or the proportion of the economically active who possess some particular character-

istic, is given for women and for those of working age (usually ages 15 to 64), (2) activity rate, the proportion of the total population who *are* economically active, is given for both sexes and as a total, and (3) employment status, grouped as employers and self-employed; employees; family workers (usually unpaid); and others (excluding unemployed).

Each of these measures indicates certain characteristics in a given national labour market; none should be interpreted in isolation, however, as the meaning of each is influenced by a variety of factors—demographic structure and change, social or religious customs, educational opportunity, sexual differentiation in employment patterns, degree of technological development, and the like. Participation and activity rates, for example, may be high in a particular country because it possesses an older population with few children, hence a higher proportion of working age, or because, despite a young population with many below working age, the economy attracts eligible immigrant workers, themselves almost exclusively of working age. At the same time, low activity and participation rates might be characteristic of a country having a young population with poor employment possibilities or of a country with a good job market distorted by the presence of large numbers of “guest” or contract workers who are not part of the domestic labour force. An illiterate woman in a strongly sex-differentiated labour force is likely to begin and end as a family or

Employment and labour

country	year	economically active population										distribution by economic sector			
		total (⁰ 000)	participation rate (%)		activity rate (%)			employment status (%)				agriculture, forestry, fishing		manufacturing; mining, quarrying; public utilities	
			female	ages 15–64	total	male	female	employers, self- employed	employees	unpaid family workers	other	number (⁰ 000)	% of econ. active	number (⁰ 000)	% of econ. active
Afghanistan	1994	5,557	9.0	49.1 ¹	29.4	54.2 ¹	4.9 ¹	52.2 ¹	33.8 ¹	14.0 ¹	—	4,276 ²	76.9 ²	299 ²	5.4 ²
Albania	2002	1,318	43.7	65.9	42.4	48.8	36.2	...	...	...	...	767 ^{4, 5}	72.2 ^{4, 5}	564 ⁵	5.3 ^{4, 5}
Algeria	2000	8,154	12.2	48.46 ⁷	27.0	47.0	6.6	16.8 ⁸	61.7 ⁸	2.6 ⁸	18.9 ⁸	898	11.0	721	8.8
American Samoa	2000	17.7	41.5	52.0 ¹⁰	30.8	35.3	26.2	3.4	96.4	0.2	—	0.5	2.9	5.9	33.4
Andorra	2000	34	45.6 ¹¹	72.6	...	...	...	...	...	...	...	0.1	0.4	1.0	3.0
Angola	1996	4,581	37.3	65.1 ¹²	40.0	50.8	29.5	...	...	...	...	3,170	69.2	528 ¹³	11.5 ¹³
Antigua and Barbuda	1991	26.8	45.6	69.7	45.1	50.9	39.6	12.1	82.8	0.7	4.4	1.0	3.9	1.9	7.3
Argentina	2001	15,265	40.9	57.2 ¹⁶	42.1	51.1	33.5	21.3	68.6	2.4	1.4	911	6.0	1,374	9.0
Armenia	2003	1,232	49.5	72.1 ⁵	49.5 ⁵	54.5 ⁵	44.9 ⁵	5.0	84.9	...	15.2	509	41.3	139 ¹⁷	11.3 ¹⁷
Aruba	2000	45.0	46.6	70.9	49.8	55.4	44.6	2.6 ²⁰	96.8 ²⁰	0.5 ²⁰	0.1 ²⁰	0.2	0.5	3.0	6.7
Australia	2003	10,067	44.8	74.2	50.6	56.3	45.0	13.1	86.5	0.4	...	395	3.9	1,282	12.7
Austria	2003	3,967	44.6	71.8	49.2	56.2	42.6	10.6	87.3	2.1	—	215	5.4	808	20.4
Azerbaijan	2003	3,801	47.8	...	46.0	48.9	43.2	...	...	...	...	1,500	39.5	252	6.6
Bahamas, The	2000	154	47.5	76.6	50.9	54.8	47.1	11.6 ²²	85.1 ²²	0.3 ²²	3.0 ²²	5.1	3.3	8.3	5.4
Bahrain	2001	308	21.7	65.7 ²³	47.4	64.6	24.1	3.6	96.3	0.1	—	4	1.5	55	18.0
Bangladesh	1999–2000	60,291	37.8	73.8	47.3	56.3	37.5	35.3	12.6	33.7	18.4	36,217	60.1	4,799	8.0
Barbados	2002 ²⁴	143	48.5	68.2 ²³	52.7	56.5	49.2	14.0	85.6	0.1	0.5	5.2	3.6	10.9	7.6
Belarus	2003	4,446	53.4	69.7 ²⁵	45.5	45.2	45.7	...	...	...	...	493	11.1	987	22.2
Belgium	2002	4,402	43.0	64.8	42.6	49.6	35.9	14.7 ²⁵	82.1 ²⁵	3.2 ²⁵	...	72	1.6	823	18.7
Belize	2002	94.2	32.8	57.3	35.9	48.4	23.4	31.5 ²⁵	65.0 ²⁵	3.4 ²⁵	0.1 ²⁵	19.1	20.3	7.5	8.0
Benin	1992 ²⁶	2,085	42.6	73.4	43.0	50.6	35.7	58.4	5.3	30.5	5.8	1,148	55.0	162	7.8
Bermuda	2000	37.9	48.3	84.8 ²⁷	61.0	65.8	56.7	10.0	89.6	0.2	0.3	0.6 ²⁸	1.5 ²⁸	1.6 ²⁹	4.2 ²⁹
Bhutan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bolivia	2000	3,637	44.6	71.8	46.2	52.1	40.5	42.2	49.6	7.8	0.4	1,415	38.9	436	12.0
Bosnia and Herzegovina	2001	1,038	...	...	57.6	71.8	43.1	...	...	...	...	21 ²⁵	2.0 ²⁵	224 ²⁵	21.6 ²⁵
Botswana	2001 ²⁴	588	43.8	57.6	35.0	40.6	29.7	15.9	82.7	1.3	0.1	55	9.9	56	10.0
Brazil	2000	77,467	39.9	69.1 ⁷	45.6	55.7	35.8	26.3 ³²	62.3 ³²	7.7 ³²	3.7 ³²	12,119	15.6	9,320	12.0
Brunei	2001	158	41.2	66.6 ³⁰	45.2	52.5	37.7	4.6 ³⁰	95.0 ³⁰	0.4 ³⁰	— ³⁰	2.0	1.3	19.0	12.1
Bulgaria	2003 ^{34, 31}	3,283	46.8	60.9	47.0	52.0	42.4	13.1	84.7	1.9	0.3	286	8.7	778	23.7
Burkina Faso	1996	5,076	48.2	70.0 ³²	49.2	52.9	46.0	2.6 ³⁰	96.8 ³⁰	0.5 ³⁰	0.1 ³⁰	4,514	88.9	78	1.5
Burundi	1990	2,780	52.6	91.4	52.5	51.2	53.8	62.8	5.1	30.3	1.8	2,574	92.6	37	1.3
Cambodia	1998	5,119	51.6	79.0	44.8	44.9	44.6	41.2 ³³	12.9 ³³	45.7 ³³	0.2 ³³	4,480 ³⁴	70.0 ³⁴	572 ³⁴	8.9 ³⁴
Cameroon	1991	4,740	33.2	58.9 ¹²	40.0	53.9	26.3	60.2 ³²	14.6 ³²	18.0 ³²	7.1 ³²	...	...	...	...
Canada	2004	17,269	46.6	65.9 ²³	54.1	58.3	49.9	15.1 ³⁵	84.7 ³⁵	0.2 ³⁵	— ³⁵	334	1.9	2,712	15.7
Cape Verde	2000	175	39.0	75.7 ³⁶	40.6	42.6	38.9	24.7 ³²	53.7 ³²	2.0 ³²	19.6 ³²	29.9 ³²	24.8 ³²	6.8 ³²	5.7 ³²
Central African Republic	1988	1,187	46.8	78.3	48.2	52.2	44.3	75.3	8.0	8.1	8.6	881	74.2	31	2.6
Chad	1993	2,294	48.4	71.1 ²³	37.0	39.5	34.7	...	...	...	...	1,903	83.0	37	1.6
Chile	2003 ³⁴	6,128	34.3	58.8	38.7	51.3	26.3	29.7	68.2	2.0	—	796	13.0	966	15.8
China	2002	753,600	37.8 ⁵	77.7 ^{5, 10}	58.5	61.8 ²²	53.7 ²²	...	...	...	...	324,870	43.1	91,550	12.1
Colombia	2003 ³⁴	20,408	42.6	48.1 ³⁸	47.2	56.1	38.9	43.9	49.8	6.0	0.3	3,941 ³⁹	19.4 ³⁹	2,924 ³⁹	14.4 ³⁹
Comoros	1996	252	38.9	59.2	37.2	44.8	29.3	...	...	...	...	...	...	...	...
Congo, Dem. Rep. of the	1996	14,082	35.0	47.9 ¹²	31.1	40.9	21.6	...	...	...	...	...	...	...	...
Congo, Rep. of the	1984	563	45.6	54.0	29.5	33.0	26.2	64.3	31.4	1.2	3.1	294	52.2	50	8.8
Costa Rica	2003	1,758	35.4	59.4 ⁴⁰	43.0	56.3	30.1	27.9	69.5	2.6	—	261	14.8	270	15.3
Côte d'Ivoire	1988	4,263	32.3	66.6	39.4	52.2	26.0	...	...	...	...	2,628	61.6	100	2.3
Croatia	2004	1,836	45.3	58.9	40.8	46.5	35.6	20.5 ³⁵	75.9 ³⁵	3.6 ³⁵	—	269	14.7	339	18.5
Cuba	2002 ⁴	4,024	37.7	45.4 ²³	35.8	44.7	27.0	...	...	...	...	1,065	26.5	644	16.0
Cyprus ⁴¹	2003	341	44.7	70.6	49.6	56.7	42.9	20.2	76.3	3.5	—	17	5.0	40	11.7
Czech Republic	2004	5,138	44.1	70.9 ³⁴	50.3	57.7	43.3	16.1	82.7	0.7	0.5	208	4.0	1,413	27.5
Denmark	2002	2,893	46.9	77.8 ⁴²	53.9	57.9	49.9	8.2	91.0	0.8	—	102	3.5	468	16.2
Djibouti	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dominica	1997	33.4	45.8	65.6 ²³	45.8	49.4	42.1	31.9	65.6	1.9	0.6	6.1	18.3	2.5	7.6
Dominican Republic	2002	3,702	38.7	55.1 ²	43.1	52.0	33.9	42.9 ³³	55.2 ³³	1.9 ³³	— ³³	512	13.8	562	15.2
East Timor	2001	250 ^{4, 23}	31.6 ^{4, 23}	56.0 ^{4, 23}	31.4 ^{4, 23}	42.7 ^{4, 23}	20.0 ^{4, 23}	61.0	17.4	21.2	0.4	...	73 ²⁴	...	4.8 ^{4, 43}
Ecuador	2003 ³⁴	3,992	41.1	70.4	46.6	55.4	37.9	34.3	61.3	4.4	—	349	8.7	578	14.5
Egypt	2001 ²⁴	19,253	21.9	46.9	30.0	45.8	13.5	29.4 ³⁴	60.2 ³⁴	10.4 ³⁴	— ³⁴	4,922 ³⁴	24.8 ³⁴	2,377 ³⁴	12.0 ³⁴
El Salvador	2003	2,707	40.3	64.4	40.8	51.1	31.4	32.6	53.5	8.7	5.2	516	19.1	477	17.6
Equatorial Guinea	1983	103	35.7	66.7	39.2	52.5	26.9	29.0	16.0	29.9	25.1	59.4	57.9	1.8	1.8
Eritrea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Estonia	2003	661	49.0	69.8	48.7	53.9	44.3	8.5	91.1	0.4	—	37	5.6	150	22.7

traditional agricultural worker. Loss of working-age men to war, civil violence, or emigration for job opportunities may also affect the structure of a particular labour market.

The distribution of the economically active population by employment status reveals that a large percentage of economically active persons in some less developed countries falls under the heading "employers, self-employed." This occurs because the countries involved have poor, largely agrarian economies in which the average worker is a farmer who tills his own small plot of land. In countries with well-developed economies, "employees" will usually constitute the largest portion of the economically active.

Caution should be exercised when using the economically active data to make intercountry comparisons, as countries often differ in their choices of classification schemes, definitions, and coverage of groups and in their methods of collection and tabulation of data. The population base containing the economically active population, for example, may range, in developing countries, from age 9 or 10 with no upper limit to, in developed countries, age 18 or 19 upward to a usual retirement age of from 55 to 65, with sometimes a different range for each sex. Data on female labour-force participation, in particular, often lack comparability. In many less developed countries, particularly those dominated by the Islamic faith,

a cultural bias favouring traditional roles for women results in the undercounting of economically active women. In other less developed countries, particularly those in which subsistence workers are deemed economically active, the role of women may be overstated.

The second major section of the table provides data on the distribution by economic (also conventionally called industrial) sector of the economically active population. The data usually include such groups as unpaid family workers, members of the armed forces, and the unemployed, the last distributed by industry as far as possible.

The categorization of industrial sectors is based on the divisions listed in the *International Standard Industrial Classification of All Economic Activities*. The "other" category includes persons whose activities were not adequately defined and the unemployed who were not distributable by industrial sector.

A substantial part of the data presented in this table is summarized from the online database of the ILO, which compiles its statistics both from official publications and from information submitted directly by national census and labour authorities. The editors have supplemented and updated ILO statistical data with information from Britannica's holdings of relevant official publications.

												country		
construction		transportation, communications		trade, hotels, restaurants		finance, real estate		public administration, defense		services			other	
number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active	number ('000)	% of econ. active		number ('000)	% of econ. active
	81 ² 134.5	1.5 ² 1.24 ⁵	140 ² 244.5	2.5 ² 2.34 ⁵	421 ² 554.5	7.6 ² 5.24 ⁵	3 3	3 3	3 3	929 ² 1473.4.5	16.7 ² 15.93 ^{4.5}	214 ² ...4.5	3.9 ² ...4.5	Afghanistan Albania
	669	8.2	9	9	9	9	9	9	1,773	1,665 ⁹	20.59	2,428	29.8	Algeria
	1.1	6.0	1.0	5.9	1.8	10.1	0.3	1.8	1.6	4.6	25.7	0.9	5.4	American Samoa
	5.7	16.6	...	...	12.5	36.2	1.4	4.1	4.4	6.6	19.1	2.7	7.9	Andorra
	13	13	14	14	14	14	14	14	14	883 ¹⁴	19.3 ¹⁴	—	—	Angola
	3.1	11.6	2.4	9.0	8.5	31.9	1.5	5.4	15	6.4 ¹⁵	23.9 ¹⁵	1.9	7.0	Antigua and Barbuda
	639	4.1	718	4.7	2,213	14.5	898	5.9	969	2,762	18.1	4,781	31.3	Argentina
	37	3.0	42	3.4	105	8.5	38 ¹⁸	3.1 ¹⁸	37	193	15.7	132 ¹⁹	10.7 ¹⁹	Armenia
	3.9	8.7	2.9	6.5	14.8	33.0	5.2	11.7	3.5	8.0	18.0	3.2 ¹⁹	7.1 ¹⁹	Aruba
	786	7.8	622	6.2	2,574	25.6	1,537	15.3	566	2,144	21.3	162	1.6	Australia
	363	9.2	247	6.2	861	21.7	460	11.6	241	759	19.1	13	0.3	Austria
	180	4.7	179	4.7	630	16.6	111	2.9	330	566	14.9	542 ¹	1.4 ²¹	Azerbaijan
	17.0	11.0	10.8	7.0	46.9	30.4	15.9	10.3	13.1	29.3	19.2	7.8 ¹⁹	5.0 ¹⁹	Bahamas, The
	26	8.6	14	4.5	48	15.5	25	8.1	52	61	19.9	22 ¹⁹	7.0 ¹⁹	Bahrain
	1,144	1.9	2,672	4.4	7,045	11.7	415	0.7	15	5,775 ¹⁵	9.6 ¹⁵	2,224 ¹⁹	3.7 ¹⁹	Bangladesh
	13.2	9.3	4.7	3.3	33.8	23.7	10.9	7.6	15	49.5 ¹⁵	34.7 ¹⁵	14.5	10.2	Barbados
	231	5.2	265	5.9	257	5.8	57	1.3	84	1,033	23.2	1,039	23.4	Belarus
	276	6.3	327	7.4	777	17.7	553	12.6	406	1,038	23.6	130	3.0	Belgium
	7.1	7.5	3.1	3.3	22.9	24.3	3.1	3.3	15	20.0 ¹⁵	21.3 ¹⁵	11.3 ¹⁹	12.0 ¹⁹	Belize
	52	2.5	53	2.5	433	20.7	3	0.1	15	165 ¹⁵	7.9 ¹⁵	71	3.4	Benin
	3.8	10.0	2.8	7.5	9.1	23.9	6.4	17.0	2.5	6.8	17.9	4.3	11.2	Bermuda
	...	...	...	...	...	...	...	...	...	...	...	...	...	Bhutan
	240	6.6	156	4.3	724	19.9	120	3.3	80	324	8.9	142	3.9	Bolivia
	36 ²⁵	3.5 ²⁵	45 ²⁵	4.3 ²⁵	91 ²⁵	8.8 ²⁵	42 ²⁵	4.1 ²⁵	73 ²⁵	96 ²⁵	9.3 ²⁵	409 ^{21, 25}	39.4 ^{21, 25}	Bosnia and Herzegovina
	59	10.5	15	2.7	74	13.2	30	5.4	70	86	15.5	113 ¹⁹	20.3 ¹⁹	Botswana
	4,568	5.9	3,319	4.3	13,971	18.0	4,586	5.9	3,523	13,383	17.3	12,676	16.4	Brazil
	12.3	7.8	4.8	3.0	20.0	12.7	8.2	5.2	15	79.9 ¹⁵	50.7 ¹⁵	11.3 ²¹	7.2 ²¹	Brunei
	151	4.6	215	6.6	552	16.8	146	4.5	230	474	14.4	451	13.7	Bulgaria
	21	0.4	21	0.4	225	4.4	13	0.3	...	104	2.0	100	2.0	Burkina Faso
	20	0.7	9	0.3	26	0.9	2.0	0.1	15	85 ¹⁵	3.1 ¹⁵	27 ¹⁹	1.0 ¹⁹	Burundi
	100 ³⁴	1.6 ³⁴	175 ³⁴	2.7 ³⁴	661 ³⁴	10.3 ³⁴	16 ³⁴	0.3 ³⁴	144 ³⁴	252 ³⁴	3.9 ³⁴	— ³⁴	— ³⁴	Cambodia
	...	...	...	...	...	...	...	...	...	...	...	...	...	Cameroon
	984	5.7	800	4.6	3,514	20.4	2,634	15.3	820	4,222	24.5	1,249 ²¹	7.2 ²¹	Canada
	22.7 ²²	18.8 ²²	6.1 ²²	5.1 ²²	12.7 ²²	10.6 ²²	0.8 ²²	0.7 ²²	15	17.4 ^{15, 22}	14.4 ^{15, 22}	24.1 ²²	20.0 ²²	Cape Verde
	6	0.5	7	0.6	92	7.8	0.7	0.1	15	70 ¹⁵	5.9 ¹⁵	100 ¹⁹	8.5 ¹⁹	Central African Republic
	11	0.5	13	0.6	212	9.2	1	—	62	46	2.0	9	0.4	Chad
	493	8.0	519	8.5	1,145	18.7	494	8.1	15	1,643 ¹⁵	26.8 ¹⁵	7137	1.2 ³⁷	Chile
	38,930	5.2	20,840	2.8	49,690	6.6	4,580	0.6	10,750	33,150	4.4	179,240	3.8	China
	998 ³⁹	4.9 ³⁹	1,271 ³⁹	6.2 ³⁹	4,971 ³⁹	24.4 ³⁹	1,087 ³⁹	5.3 ³⁹	15	4,578 ^{15, 39}	2.5 ^{15, 39}	575 ^{19, 39}	2.8 ^{19, 39}	Colombia
	...	...	...	...	...	...	...	...	...	...	...	...	...	Comoros
	...	...	...	...	...	...	...	...	...	...	...	...	...	Congo, Dem. Rep. of the
	25	4.5	29	5.1	67	11.8	3	0.5	15	85 ¹⁵	15.1 ¹⁵	10	2.0	Congo, Rep. of the
	122	6.9	97	5.5	439	25.0	145	8.3	79	312	17.8	33	1.9	Costa Rica
	85	2.0	118	2.8	530	12.4	3	3	3	591 ³	13.9 ³	210 ²¹	4.9 ²¹	Côte d'Ivoire
	130	7.1	104	5.7	301	16.4	98	5.3	106	234	12.7	253	13.8	Croatia
	176	4.4	202	5.0	508	12.6	54	1.3	15	1,376 ¹⁵	34.2 ¹⁵	—	—	Cuba
	35	10.2	17	5.1	88	25.8	39	11.4	24	64	18.7	17 ¹⁹	4.8 ¹⁹	Cyprus ⁴¹
	440	8.6	366	7.1	812	15.8	367	7.1	324	782	15.2	425 ²¹	8.3 ²¹	Czech Republic
	173	6.0	179	6.2	495	17.1	376	13.0	15	974 ¹⁵	33.7 ¹⁵	125 ¹⁹	4.3 ¹⁹	Denmark
	...	...	...	...	...	...	...	...	...	...	...	...	...	Djibouti
	2.2	6.4	1.5	4.5	5.0	15.1	1.4	4.2	1.5	4.4	13.1	8.8 ¹⁹	26.3 ¹⁹	Dominica
	207	5.6	244	6.6	924	25.0	71	1.9	172	777	21.0	233	6.3	Dominican Republic
	...	4.4 ³	...	...	...	...	...	...	...	...	...	...	22.0 ⁴	East Timor
	271	6.8	248	6.2	1,198	30.0	228	5.7	192	736	18.4	192 ³⁷	4.8 ³⁷	Ecuador
	1,329 ³⁴	6.7 ³⁴	1,137 ³⁴	5.7 ³⁴	2,684 ³⁴	13.5 ³⁴	568 ³⁴	2.9 ³⁴	1,947 ³⁴	2,996 ³⁴	15.1 ³⁴	1,917 ³⁴	9.6 ³⁴	Egypt
	195	7.2	121	4.5	747	27.6	116	4.3	107	400	14.8	27	1.0	El Salvador
	1.9	1.9	1.8	1.7	3.1	3.0	0.4	0.4	15	8.4 ¹⁵	8.2 ¹⁵	25.8 ¹⁹	25.2 ¹⁹	Equatorial Guinea
	...	...	...	...	...	...	...	...	...	...	...	...	...	Eritrea
	43	6.5	56	8.5	98	14.9	52	7.9	35	124	18.7	66 ²¹	10.0 ²¹	Estonia

Employment and labour (continued)

country	year	economically active population										distribution by economic sector			
		total (⁰⁰⁰)	participation rate (%)		activity rate (%)			employment status (%)				agriculture, forestry, fishing		manufacturing; mining, quarrying; public utilities	
			female	ages 15–64	total	male	female	employers, self- employed	employees	unpaid family workers	other	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active
Ethiopia	1999	27,272	45.5	68.4	49.7	54.9	44.7	...	...	...	...	21,605 ¹¹	87.8 ¹¹	419 ¹¹	1.7 ¹¹
Faroe Islands	2003	27	...	...	56.0	...	...	...	...	...	...	...	...	...	...
Fiji	1996	298	32.8	60.6	38.4	50.8	25.6	...	...	...	...	133	44.6	34	11.3
Finland	2003	2,600	48.0	74.1	49.8	52.9	46.8	12.3	86.4	0.4	0.9	120	4.6	470	18.1
France	2003	27,125	45.9	69.3	45.3	50.4	40.5	10.2 ⁴⁵	77.4 ⁴⁵	—	12.4 ⁴⁵	1,057 ⁴	4.3 ⁴	4,249 ⁴	17.4 ⁴
French Guiana	1999	62.6	43.8	65.0 ⁷	39.9	44.6	35.3	15.2 ⁴⁶	84.8	46	—	2.9	4.6	3.5	5.6
French Polynesia	2002	99.5	40.0	61.7	40.6	47.5	33.4	...	...	...	...	10.9 ⁴⁷	12.5 ⁴⁷	6.9 ⁴⁷	7.9 ⁴⁷
Gabon	1993	376	44.5	52.5 ³²	37.2	41.9	32.7	...	...	...	...	128	34.1	26	6.9
Gambia, The	1993	345	40.0	48.9 ³²	33.3	39.9	26.6	...	...	...	...	182	52.6	24	6.9
Gaza Strip	2003	254	12.1	37.6 ²³	19.0	33.0	4.7	26.7	61.8	11.5	—	30	11.7	16 ⁴⁸	6.2 ⁴⁸
Georgia	2002 ⁴⁹	2,104	47.3	71.8 ⁵⁰	48.3	54.1	43.1	64.4	35.4	...	0.2	989	46.9	117	5.6
Germany	2003	40,195	44.5	72.2	48.7	55.3	42.4	10.4	88.6	1.1	—	1,064	2.6	9,631	24.0
Ghana	1999	9,680	52.7	79.9	53.5	52.5	54.3	68.8	13.8	17.2	0.2	3,778 ⁵¹	50.5 ⁵¹	860 ⁵¹	11.5 ⁵¹
Greece	2002	4,369	40.4	63.1	42.1	51.9	33.0	32.0	60.2	7.8	—	624	14.3	593	13.6
Greenland	2002	31.5	45.7	83.2 ⁵²	55.7	56.7	54.5	...	...	...	...	2.04, 5	7.34, 5	3.54, 5	12.94, 5
Grenada	1998	41.0	43.5	78.0 ⁵³	46.0 ⁵³	50.0 ⁵³	41.0 ⁵³	22.9	71.3	1.1	4.7	4.8	11.7	3.1	7.7
Guadeloupe	1999	191	49.1	70.6 ⁷	45.3	47.9	42.9	18.2	80.5	1.3	—	8.2 ⁶	4.5 ⁶	7.9 ⁶	4.3 ⁶
Guam	2002 ²⁴	62.1	45.9	62.4 ¹⁰	39.0 ⁵³	41.0 ⁵³	37.0 ⁵³	4.2 ⁵⁴	95.5 ⁴	0.3 ⁵⁴	— ⁵⁴	0.3 ⁵⁵	0.5 ⁵⁵	1.6 ⁵⁵ , 56	2.8 ⁵⁵ , 56
Guatemala	1998–99	3,982	22.6	50.5	35.0	53.7	15.9	32.7 ⁵⁷	47.6 ⁵⁷	16.2 ⁵⁷	3.5 ⁵⁷	1,844 ³⁴	38.7 ³⁴	741 ³⁴	15.5 ³⁴
Guernsey	2001 ⁵⁸	32.6	45.2	79.1	54.6	61.4	48.1	12.8	87.2	—	—	1.5	4.5	2.3	6.9
Guinea	1990	3,067	47.4	...	49.0 ⁵³	52.0 ⁵³	46.0 ⁵³	...	...	...	...	...	...	...	...
Guinea-Bissau	1995	491	39.9	65.5 ¹²	45.8	55.9	36.0	...	...	...	...	373	76.0	20 ¹³	4.1 ¹³
Guyana	1997	263.8	35.2	61.8 ²	38.8 ²	51.9 ²	26.0 ²	...	...	...	...	66.8	25.3	37.7	14.3
Haiti	1990	2,679	40.0	64.8	41.1	50.3	32.3	59.1	16.5	10.4	14.0	1,535	57.3	178	6.6
Honduras	2001 ²⁴ , 59	2,438	35.7	64.5	38.5	50.6	26.8	39.7 ²⁵	46.8 ²⁵	13.0 ²⁵	0.5 ²⁵	775	31.8	391	16.0
Hong Kong	2003 ²⁴	3,501	43.9	70.2	51.7	59.9	44.0	12.0	87.3	0.7	—	8	0.2	312	8.9
Hungary	2003	4,166	45.6	60.6	41.1	47.1	35.8	12.6	86.7	0.5	0.2	226	5.4	1,069	25.7
Iceland	2003	162.4	47.4	82.2 ⁶⁰	56.1	59.1	53.2	16.3 ³⁴	83.4 ³⁴	0.3 ³⁴	— ³⁴	10.8	6.7	23.3	14.3
India	2001	402,512	31.6	...	39.1	51.8	24.3	48.0 ⁶¹ , 62	10.3 ⁶¹ , 63	31.6 ⁶¹ , 64	10.1 ⁶¹	190,940 ⁶¹	52.6 ⁶¹	44,200 ⁶¹	12.2 ⁶¹
Indonesia	2002 ⁴	91,647	36.1	58.3 ⁷	39.6	50.7	28.5	46.3	27.3	17.6	8.8	40,633	44.3	12,920	14.1
Iran	1996	16,027	12.7	44.1	26.7	45.8	6.9	39.3	51.7	5.5	3.5	3,357	20.9	2,822	17.6
Iraq	1997	4,757 ⁶⁵	10.5 ⁶⁵	42.9 ⁷ , 65	24.8 ⁶⁵	44.7 ⁶⁵	5.2 ⁶⁵	...	...	...	...	477 ⁶⁶	11.6 ⁶⁶	439 ⁶⁶	10.6 ⁶⁶
Ireland	2004	1,876	41.7	68.1	47.1	55.3	39.1	16.7	82.3	1.0	—	117	6.2	306	16.3
Isle of Man	2001	39.7	45.4	78.9 ²⁷	52.0	58.0	46.3	14.6	85.4	—	—	0.5	1.4	3.7	9.3
Israel	2003 ²⁴	2,610	46.3	61.7	39.0	42.4	35.7	11.4	86.2	0.4	2.0	42	1.6	398	15.2
Italy	2003	24,229	39.1	61.6	42.2	52.8	32.1	22.2	72.8	4.1	0.9	1,075	4.4	5,210	21.5
Jamaica	2003 ²⁴	1,098	44.3	66.0 ⁶⁷	41.6	47.4	36.1	35.7	62.3	1.3	0.4	188	17.1	78	7.1
Japan	2003	66,660	41.0	72.3	52.2	63.2	41.8	10.4	84.5	4.7	0.4	2,930	4.4	12,150	18.2
Jersey	2001	48.1	46.0	81.7 ⁶⁸	55.2	61.2	49.5	11.9	88.1	—	—	2.1 ³⁵	4.0 ³⁵	2.7 ³⁵	5.0 ³⁵
Jordan	2003	1,293	14.9	37.9 ²³	23.6	39.6	7.1	18.6	80.7	0.5	0.2	39	3.0	169	13.1
Kazakhstan	2003	7,657	49.1	76.9	51.2	...	...	37.4	60.5	1.0	1.1	2,463	32.1	855	11.2
Kenya	1998–99	12,300	46.1 ²⁰	73.6	42.1 ⁵	...	...	...	...	...	...	...	...	...	...
Kiribati	1995	40.6	47.8	84.0 ²³	49.5	52.1	46.8	...	...	...	...	31,054, 69	71.7 ⁵⁴ , 69	0.3 ⁵⁴	0.8 ⁵⁴
Korea, North	1985	9,084	46.0	75.3	44.6	48.6	40.6	...	...	...	...	...	...	...	...
Korea, South	2003	22,846	41.0	65.3	48.3	56.5	39.9	27.1	66.2	6.7	—	1,955	8.6	4,409	19.3
Kosovo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait	2002	1,364	25.7	74.4 ²³	56.4	69.3	36.6	2.2 ¹¹	97.8 ¹¹	— ¹¹	— ¹¹	22	1.6	100	7.3
Kyrgyzstan	2002	2,116	44.0	68.7	42.5 ⁵³	48.4 ⁵³	36.8 ⁵³	42.5	42.7	10.6	4.2	952 ⁴	52.7 ⁴	140 ⁴	7.7 ⁴
Laos	1995	2,166	56.4	83.3	47.3	46.2	52.8	...	...	...	...	...	...	...	...
Latvia	2003	1,126	48.6	69.2	48.3	53.9	43.5	9.3	87.0	3.7	—	139	12.3	198	17.6
Lebanon	1997	1,362	21.6	49.3	34.0	55.2	14.2	...	...	...	...	132 ⁷¹	19.1 ⁷¹	131 ⁷¹	18.9 ⁷¹
Lesotho	1996	573	33.5	49.9	29.2	39.5	19.3	...	...	...	...	105	18.4	126	21.9
Liberia	1984	704	41.0	56.3	33.5	39.1	27.8	59.1	21.6	14.4	5.0	481	68.3	31	4.4
Libya	1996	1,224	9.8	37.1 ¹² , 30	26.1	42.9 ³⁰	4.9 ³⁰	...	...	...	...	219	17.9	195	15.9
Liechtenstein	2004	15.6 ⁷³	41.4 ⁷³	55.6 ²³ , 73	45.6 ⁷³	54.3 ⁷³	37.2 ⁷³	...	...	...	...	0.4 ⁷⁴	1.3 ⁷⁴	10.6 ⁷⁴	36.4 ⁷⁴
Lithuania	2003 ²⁴	1,642	49.3	65.7	47.5	51.6	44.0	16.9	79.6	3.5	—	257	15.6	298	18.1
Luxembourg	2003	195 ⁷⁵	41.5 ⁷⁵	64.1 ⁷⁵	43.2 ⁷⁵	51.2 ⁷⁵	35.4 ⁷⁵	8.6 ⁵ , 75	85.6 ⁵ , 75	1.7 ⁵ , 75	4.1 ⁵ , 75	476	1.3 ⁷⁶	357 ⁶	11.5 ⁷⁶
Macau	2003 ²⁴	215.5	46.6	66.2 ⁶⁷	49.9	55.9	44.4	9.4	89.0	1.6	—	0.6	0.3	38.4	17.8
Macedonia	2003	861	39.7	61.3	42.3	51.1	33.6	15.8	72.7	11.4	—	120	13.9	149	17.3
Madagascar	2003	8,481	49.5	83.2	50.7	51.6	49.8	43.7	15.0	40.6	0.7	6,316	74.5	482	5.7
Malawi	1998	4,509	50.2	76.5	45.4	46.1	44.7	84.6	12.9	2.5	—	3,766	83.6	128	2.8
Malaysia	2000	9,616	34.7	65.5	41.3	52.7	29.4	21.1 ⁷⁷	71.4 ⁷⁷ </						

	construction		transportation, communications		trade, hotels, restaurants		finance, real estate		public administration, defense		services		other		country
	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active	number (⁰⁰⁰)	% of econ. active	
	61 ¹¹	0.2 ¹¹	103 ¹¹	0.4 ¹¹	936 ¹¹	3.8 ¹¹	19 ¹¹	0.1 ¹¹	11, 15	11, 15	1,252 ^{11, 15}	5.1 ^{11, 15}	210 ^{11, 37}	0.9 ^{11, 37}	Ethiopia
	11	3.6	17	5.6	32	10.8	8	2.6	16	5.3	29	9.7	19 ¹⁹	6.5 ¹⁹	Faroe Islands
	151	5.8	173	6.7	363	14.0	313	12.0	118	4.5	649	25.0	243 ¹⁹	9.3 ¹⁹	Fiji
	1,576 ⁴	6.4 ⁴	1,051 ⁴	4.3 ⁴	3,234 ⁴	13.2 ⁴	4,088 ⁴	16.7 ⁴	2,581 ⁴	10.5 ⁴	6,530 ⁴	26.7 ⁴	117 ⁴	0.5 ⁴	Finland
	3.3	5.3	1.6	2.6	4.6	7.3	5.0	8.0	10.3	16.4	12.2	19.5	19.2	30.7	French Guiana
	4.8 ⁴⁷	5.5 ⁴⁷	3.8 ⁴⁷	4.4 ⁴⁷	9.4 ⁴⁷	10.7 ⁴⁷	1.9 ⁴⁷	2.1 ⁴⁷	13.5 ⁴⁷	15.5 ⁴⁷	23.5 ⁴⁷	27.0 ⁴⁷	12.6 ^{19, 47}	14.4 ^{19, 47}	French Polynesia
	10	2.6	16	4.2	40	10.8	5	1.3	48	12.8	33	8.8	70 ¹⁹	18.5 ¹⁹	Gabon
	10	2.8	14	4.1	55	15.8	2	0.7	41 ¹⁵	15	41 ¹⁵	11.9 ¹⁵	17	5.0	Gambia, The
	18	7.0	9	3.5	29	11.4	3	3	3	3	70 ^{3, 48}	27.5 ^{3, 48}	83 ¹⁹	32.7 ¹⁹	Gaza Strip
	34	1.6	78	3.7	231	11.0	28	1.3	109	5.2	253	12.0	265	12.6	Georgia
	3,230	8.0	2,192	5.5	7,029	17.5	4,957	12.3	15	15	11,835 ¹⁵	29.4 ¹⁵	258 ³⁷	0.6 ³⁷	Germany
	97 ⁵¹	1.3 ⁵¹	150 ⁵¹	2.0 ⁵¹	1,257 ⁵¹	16.8 ⁵¹	52 ⁵¹	0.7 ⁵¹	15	15	673 ^{15, 51}	9.0 ^{15, 51}	613 ^{21, 51}	8.2 ^{21, 51}	Ghana
	294	6.7	244	5.6	947	21.7	324	7.4	294	6.7	628	14.4	421	9.6	Greece
	1.9 ^{4, 5}	7.0 ^{4, 5}	2.2 ^{4, 5}	8.1 ^{4, 5}	2.5 ^{4, 5}	9.0 ^{4, 5}	1.3 ^{4, 5}	4.7 ^{4, 5}	12.9 ^{4, 5}	47.0 ^{4, 5}	1.1 ^{4, 5}	3.9 ^{4, 5}	— ^{4, 5}	0.1 ^{4, 5}	Greenland
	5.2	12.6	2.0	5.0	8.3	20.2	1.3	3.2	1.9	4.6	6.9	16.7	7.5 ¹⁹	18.4 ¹⁹	Grenada
	13 ⁰⁶	7.1 ⁶	4.2 ⁶	2.3 ⁶	20.7 ⁶	11.4 ⁶	3.5 ⁶	1.9 ⁶	43.4 ⁶	23.8 ⁶	24.4 ⁶	13.4 ⁶	56.9 ^{6, 19}	31.2 ^{6, 19}	Guadeloupe
	3.4 ⁵⁵	6.1 ⁵⁵	4.6 ^{55, 56}	8.2 ^{55, 56}	12.7 ⁵⁵	22.7 ⁵⁵	2.5 ⁵⁵	4.4 ⁵⁵	16.5 ⁵⁵	29.5 ⁵⁵	14.5 ⁵⁵	25.9 ⁵⁵	—	—	Guam
	213 ³⁴	4.5 ³⁴	104 ³⁴	2.2 ³⁴	1,050 ³⁴	22.0 ³⁴	32 ³⁴	0.7 ³⁴	15	15	602 ^{15, 34}	12.6 ^{15, 34}	184 ³⁴	3.9 ³⁴	Guatemala
	2.9	9.0	1.2	3.8	7.5	22.8	8.6	26.4	1.9	5.8	6.2	19.1	0.5 ¹⁹	1.7 ¹⁹	Guernsey
	13	13	14	14	14	14	14	14	14	14	98 ¹⁴	20.0 ¹⁴	—	—	Guinea
	16.5	6.3	20.2	7.6	44.7	16.9	12.2	4.6	15.2	5.8	22.6	8.6	28.0 ¹⁹	10.6 ¹⁹	Guinea-Bissau
	28	1.0	21	0.8	353	13.2	5	0.2	15	15	155 ¹⁵	5.8 ¹⁵	404 ¹⁹	15.1 ¹⁹	Guyana
	135	5.5	79	3.2	574	23.6	69	2.8	15	15	395 ¹⁵	16.2 ¹⁵	213 ³⁷	0.9 ³⁷	Haiti
	328	9.4	371	10.6	1,082	30.9	496	14.2	15	15	881 ¹⁵	25.2 ¹⁵	233 ³⁷	0.7 ³⁷	Honduras
	318	7.6	311	7.5	729	17.5	350	8.4	314	7.5	789	18.9	60	1.4	Hong Kong
	10.8	6.7	9.7	6.0	26.0	16.0	20.5	12.6	8.2	5.0	47.6	29.3	5.5 ²¹	3.4 ²¹	Hungary
	14.950 ⁶¹	4.1 ⁶¹	13.650 ⁶¹	3.8 ⁶¹	37.540 ⁶¹	10.3 ⁶¹	4.620 ⁶¹	1.3 ⁶¹	15	15	30,840 ^{15, 61}	8.5 ^{15, 61}	26,580 ^{21, 61}	7.3 ^{21, 61}	Iceland
	4,274	4.7	4,673	5.1	17,795	19.4	992	1.1	15	15	10,360 ¹⁵	11.3 ¹⁵	—	—	India
	1,650	10.3	973	6.1	1,927	12.0	302	1.9	1,618	10.1	1,631	10.2	1,747 ¹⁹	10.9 ¹⁹	Indonesia
	461 ⁶⁶	11.2 ⁶⁶	266 ⁶⁶	6.4 ⁶⁶	282 ⁶⁶	6.8 ⁶⁶	42 ⁶⁶	1.0 ⁶⁶	15, 66	15, 66	2,160 ^{15, 66}	52.3 ^{15, 66}	—	—	Iran
	191	10.2	112	6.0	366	19.5	227	12.1	92	4.9	382	20.4	82 ²¹	4.4 ²¹	Iraq
	2.5	6.3	3.3	8.4	7.2	18.2	9.0	22.6	3.1	7.8	9.7	24.4	0.6 ²¹	1.6 ²¹	Ireland
	129	4.9	152	5.8	406	15.6	375	14.4	127	4.8	684	26.2	297 ¹⁹	11.4 ¹⁹	Isle of Man
	1,809	7.5	1,162	4.8	4,483	18.5	2,393	9.9	1,934	8.0	4,050	16.7	2,113 ¹⁹	8.7 ¹⁹	Israel
	90	8.2	64	5.9	210	19.1	66	6.0	15	15	257 ¹⁵	23.4 ¹⁵	145 ¹⁹	13.2 ¹⁹	Italy
	6,040	9.1	4,960	7.4	14,830	22.2	2,320	3.5	2,270	3.4	17,050	25.6	4,110	6.2	Jamaica
	4.7 ³⁵	8.8 ³⁵	1.4 ³⁵	2.7 ³⁵	14.7 ³⁵	27.5 ³⁵	3	3	3	3	27.8 ^{3, 35}	52.0 ^{3, 35}	—	—	Japan
	71	5.5	110	8.5	224	17.3	59	4.5	184	14.2	246	19.1	191 ¹⁹	14.8 ¹⁹	Jersey
	329	4.3	504	6.6	1,085	14.2	261	3.4	318	4.1	1,170	15.3	672 ²¹	8.8 ²¹	Jordan
	0.3 ⁵⁴	0.8 ⁵⁴	0.9 ⁵⁴	2.2 ⁵⁴	1.2 ⁵⁴	2.7 ⁵⁴	0.3 ⁵⁴	0.7 ⁵⁴	5.8 ⁵⁴	13.5 ⁵⁴	2.6 ⁵⁴	6.1 ⁵⁴	0.6 ^{21, 54}	1.5 ^{21, 54}	Kazakhstan
	1,898	8.3	1,358	5.9	6,046	26.5	2,535	11.1	802	3.5	3,724	16.3	119	0.5	Kenya
	108	7.9	43	3.2	220	16.1	59	4.3	15	15	720 ¹⁵	52.8 ¹⁵	92 ⁷⁰	6.7 ⁷⁰	Kiribati
	46 ⁴	2.5 ⁴	68 ⁴	3.7 ⁴	217 ⁴	12.1 ⁴	38 ⁴	2.1 ⁴	66 ⁴	3.7 ⁴	280 ⁴	15.5 ⁴	—	—	Korea, North
	74	6.6	95	8.4	177	15.7	58	5.1	67	6.0	199	17.7	—	—	Korea, South
	43 ⁷¹	6.2 ⁷¹	48 ⁷¹	7.0 ⁷¹	115 ⁷¹	16.5 ⁷¹	24 ⁷¹	3.5 ⁷¹	15	15	200 ^{15, 71}	28.8 ^{15, 71}	119 ²¹	10.6 ²¹	Kosovo
	19	3.4	15	2.6	15	2.6	4	0.7	15	15	131 ¹⁵	22.8 ¹⁵	159 ⁷²	27.7 ⁷²	Kuwait
	4	0.6	14	2.0	47	6.7	3	3	3	3	63 ³	9.0 ³	64 ¹⁹	9.1 ¹⁹	Kyrgyzstan
	171	14.0	104	8.5	73	6.0	22	1.8	15	15	440 ¹⁵	35.9 ¹⁵	—	—	Laos
	2.5 ⁷⁴	8.6 ⁷⁴	1.0 ⁷⁴	3.5 ⁷⁴	3.1 ⁷⁴	10.7 ⁷⁴	4.4 ⁷⁴	15.3 ⁷⁴	1.5 ⁷⁴	5.0 ⁷⁴	3.4 ⁷⁴	11.8 ⁷⁴	2.1 ⁷⁴	7.3 ⁷⁴	Latvia
	107	6.5	92	5.6	244	14.9	70	4.3	75	4.6	295	18.0	204 ²¹	12.4 ²¹	Lebanon
	29 ⁷⁶	9.5 ⁷⁶	24 ⁷⁶	8.1 ⁷⁶	55 ⁷⁶	18.2 ⁷⁶	82 ⁷⁶	27.1 ⁷⁶	15 ⁷⁶	5.1 ⁷⁶	50 ⁷⁶	16.7 ⁷⁶	8 ⁷⁶	2.5 ⁷⁶	Lesotho
	16.3	7.6	14.2	6.6	54.9	25.5	18.1	8.4	17.8	8.3	42.0	19.5	13.2 ¹⁹	6.1 ¹⁹	Liberia
	36	4.2	31	3.6	75	8.7	18	2.1	35	4.0	80	9.3	317 ¹⁹	36.9 ¹⁹	Libya
	61	0.7	117	1.4	468	5.5	6	0.1	206	2.4	443	5.2	383 ²¹	4.5 ²¹	Liechtenstein
	73	1.6	33	0.7	257	5.7	14	0.3	101	2.2	86	1.9	50	1.1	Lithuania
	907 ³⁴	9.2 ³⁴	496 ³⁴	5.0 ³⁴	2,118 ³⁴	21.4 ³⁴	639 ³⁴	6.5 ³⁴	15	15	1,822 ^{15, 34}	18.4 ^{15, 34}	334 ^{21, 34}	3.4 ^{21, 34}	Luxembourg
	3.7	4.2	7.9	8.9	15.6	17.7	1.7	1.9	15	15	18.1 ¹⁵	20.6 ¹⁵	16.6 ²¹	18.8 ²¹	Macau
	13	0.4	6	0.2	159	4.6	0.3	—	75	2.2	84	2.4	107	3.1	Macedonia
	11.2	7.0	11.3	7.1	34.0	21.3	12.6	7.9	13.2	8.3	27.8	17.4	14.7 ¹⁹	9.2 ¹⁹	Madagascar
	0.8	5.8	0.8	5.2	0.8	5.4	0.6	3.8	15	15	3.8 ¹⁵	25.9 ¹⁵	4.8 ²¹	32.6 ²¹	Malawi
	7.1	4.1	4.8	2.7	16.5	9.5	12.3	7.1	19.9	11.5	38.0	21.8	57.9 ¹⁹	33.3 ¹⁹	Malaysia
	16	2.4	18	2.7	109	16.7	2	0.3	15	15	99 ¹⁵	15.1 ¹⁵	56	8.6	Maldives
	44	8.5	31	6.0	82	16.0	21	4.2	30	5.8	65	12.6	49 ¹⁹	9.5 ¹⁹	Mali
	5.6	12.6	2.0	4.5	5.4	12.2	0.1	0.3	15	15	13.5 ¹⁵	30.2 ¹⁵	13.1 ²¹	29.3 ²¹	Malta
	2,397 ⁵	6.0 ⁵	1,777 ⁵	4.5 ⁵	10,821 ⁵	27.3 ⁵	1,505 ⁵	3.8 ⁵	1,682 ⁵	4.2 ⁵	5,910 ⁵	14.9 ⁵	821 ⁵	2.1 ⁵	Marshall Islands
	0.8	2.1	0.8	2.2	2.6	6.8	0.7	1.9	6.1	16.4	1.5	3.9	8.2 ²¹	22.0 ²¹	Martinique
	53	3.6	68	4.6	176	11.9	36	2.5	66	4.5	210	14.2	117 ²¹	7.9 ²¹	Mauritania
	83	83	0.5	3.9	2.6	20.4	2.0 ⁸³	15.7 ⁸³	1.8	14.3	4.3	33.8	0.7	5.5	Mauritius
	35	3.7	40	4.1	153	15.9	22	2.3	45	4.7	135	14.1	33 ²¹	3.5 ²¹	Mayotte
	646	6.2	332	3.2	1,180	11.4	—	—	503	4.8	1,330	12.8	1,206 ¹⁹	11.6 ¹⁹	Mexico
	43	43	14	14	14	14	14	14	14	14	971 ¹⁴	10.4 ¹⁴	—	—	Micronesia
	400	2.2	495	2.7	1,781	9.7	—	—	15	15	1,485 ¹⁵	8.1 ¹⁵	270	1.5	Moldova
	22	3.3	14	2.2	47	7.1	44	6.8	24	3.7	112	17.2	224 ¹⁹	34.3 ¹⁹	Monaco
	344	3.0	135	1.2	522	4.5	51	0.4	1.2 ^{4, 20}	58.0 ^{4, 20}	—	—	0.2 ^{4, 20}	9.3 ^{4, 20}	Mongolia
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Employment and labour (continued)

country	year	economically active population										distribution by economic sector			
		total (000)	participation rate (%)		activity rate (%)			employment status (%)				agriculture, forestry, fishing		manufacturing; mining, quarrying; public utilities	
			female	ages 15–64	total	male	female	employers, self- employed	employees	unpaid family workers	other	number (000)	% of econ. active	number (000)	% of econ. active
New Zealand	2003 ²⁴	2,015	45.7	74.5	50.3	55.5	45.2	18.6	80.7	0.7	—	157	7.8	290	14.4
Nicaragua	2001	1,900	30.8	61.7 ²⁵	36.5	50.8	22.4	...	...	...	...	596 ³⁵	28.1 ³⁵	277 ³⁵	13.1 ³⁵
Niger	1988 ⁹⁰	2,316	20.4	55.2	31.9	51.1	13.0	51.4	5.0	40.3	3.3	1,764	76.2	73	3.1
Nigeria	1986 ²⁴	30,766	33.3	58.8	31.1	41.1	20.9	64.6	18.8	10.7	5.9	13,259	43.1	1,401	4.6
Northern Mariana Islands	2000	44.5	54.2	84.1 ¹⁰	64.2	63.7	64.7	1.0	98.9	0.1	—	0.6	1.4	17.4 ⁵⁵	39.1 ⁵⁵
Norway	2003	2,373	47.0	79.3	52.0	55.6	48.4	7.0	92.5	0.3	0.2	83	3.5	327	13.8
Oman	2003 ³⁴	737	15.4	...	31.5	47.4	11.1	11,454, ⁹¹	87,854, ⁹¹	...	54, ⁹¹	58	7.9	84	11.4
Pakistan	2001–02 ²⁴	42,388	16.1	51.6	29.6	48.0	9.9	39.3	39.9	20.8	—	16,366	38.6	5,719	13.5
Palau	2000	9.6	38.1	67.5 ¹⁰	50.2	56.9	42.2	1.1	98.5	0.4	—	0.7 ²⁸	7.0 ²⁸	0.1 ^{17, 29}	0.717, ²⁹
Panama	2003 ⁹²	1,251	37.1	67.1	40.1 ⁵³	50.0 ⁵³	30.1 ⁵³	31.7	64.9	3.4	—	189	15.1	106	8.5
Papua New Guinea	2000 ⁹³	2,413	47.9	73.2	46.5	46.7	46.3	...	...	...	...	1,696	70.3	37	1.5
Paraguay	2002	1,980	32.1	61.4	38.4	51.7	24.8	44.6	47.6	5.4	1.4	532	26.8	224	11.3
Peru	2002	12,892 ⁵³	42.0 ⁵³	72.6 ⁵³	48.2 ⁵³	56.2 ⁵³	40.2 ⁵³	38,835, ^{94, 95}	51,135, ^{94, 95}	3,835, ^{94, 95}	6,335, ^{94, 95}	2,693 ⁷⁷	32.5 ⁷⁷	1,091 ⁷⁷	13.2 ⁷⁷
Philippines	2004	35,830	37.4 ⁵³	67.1 ²³	41.5 ⁵³	52.0 ⁵³	31.0 ⁵³	36.0	52.8	11.2	—	11,444	31.9	3,280	9.2
Poland	2003	16,945	46.0	64.4	44.4	49.5	39.6	21.7	73.0	5.3	—	2,508	14.8	3,089	18.2
Portugal	2003 ²⁴	5,470	45.9	73.0	52.4	58.5	46.6	24.9	73.1	1.6	0.4	642	11.7	1,069	19.5
Puerto Rico	2002	1,356	42.6	54.3 ²⁷	35.1 ⁵³	42.0 ⁵³	28.8 ⁵³	14.3	85.1	0.6	—	23	1.7	152	11.2
Qatar	1997	280	13.5	73.6	53.7	70.8	21.0	1.2	98.7	—	0.1	7.1 ⁵	2.2 ⁵	59.1 ⁵	18.3 ⁵
Réunion	1999	298	44.8	63.9	42.2	47.3	37.2	...	...	...	...	10	3.2	13 ¹⁷	4.5 ¹⁷
Romania	2003	9,914	44.9	62.4	45.6	51.5	40.0	22.5	62.5	14.8	0.2	3,292	33.2	2,324	23.4
Russia	2003	72,212	48.6	69.6	50.1	55.3	45.5	6.9	92.6	0.1	0.4	6,651	9.2	16,468	22.8
Rwanda	2002	3,418	55.2	52.1 ⁹⁸	42.0	39.4	44.4	75.6	7.4	14.9	2.1	2,951	86.3	51	1.5
St. Kitts and Nevis	1991	16.94	44.44	70.54	41.64	47.14	36.34	14.84	81.94	1.04	2.34	2.44, ⁴⁵	14.74, ⁴⁵	1.74, ⁴⁵	10.54, ⁴⁵
St. Lucia	2000	76.0	47.2	74.0 ⁵³	48.6 ⁵³	52.3 ⁵³	45.1 ⁵³	33.1	64.1	0.9	1.9	13.2	17.4	6.9	9.1
St. Vincent	1991	41.7	35.9	67.5	39.1	50.3	28.0	18.2	59.6	2.1	20.1	8.4	20.1	3.5	8.4
Samoa	2001	52.9	30.6	50.7 ²³	30.0	39.9	19.1	...	...	...	...	26.84, ³⁰	63.04, ³⁰	1.94, ³⁰	4.54, ³⁰
San Marino	2003	20.0 ⁹⁹	41.6	78.3 ²⁵	66.2	79.2	53.8	11.5	88.5	—	—	0.1	0.4	6.3	31.5
São Tomé and Príncipe	2001	42.94	33.8	43.7 ³²	31.2	41.7	20.9	47.5	49.3	2.2	1.0	13.5	31.5	2.9	6.7
Saudi Arabia	2003	7,437	...	54.3	32.8	...	...	...	...	...	...	577	7.8	860	11.6
Senegal	1995	3,508	38.3	62.1 ¹²	42.2	52.0	32	...	...	...	...	2,719	77.5	259 ¹³	7.4 ¹³
Serbia ^{85, 100}	2002	2,2414	41.8	33.8 ¹⁰	27.8	33.2	22.6	...	...	...	...	160	7.1	684	30.5
Seychelles	1997	37.4	47.6	77.8 ⁵²	49.3	52.2	46.5	13.7	79.1	3.1	4.1	1.9	5.0	3.4	9.2
Sierra Leone	1995	1,648	31.7	54.1 ¹²	36.5	50.9	22.7	...	...	...	...	964	58.5	319 ¹³	19.4 ¹³
Singapore	2000	2,192	39.6	73.4	54.6	60.8 ⁶	42.6 ⁶	12.8 ^{35, 101}	86.5 ^{35, 101}	0.7 ^{35, 101}	— ^{35, 101}	535, ¹⁰¹	0.2 ^{35, 101}	376 ^{35, 101}	17.5 ^{35, 101}
Slovakia	2003 ²⁴	2,629	45.8	69.9	48.7	54.2	43.4	9.6	90.0	0.1	0.3	125	4.8	634	24.2
Slovenia	2003	959	45.9	66.9	48.1	53.2	43.1	9.8	86.0	4.2	—	75	7.8	279	29.1
Solomon Islands	1999	57.5 ¹⁰²	27.1 ¹⁰²	23.0 ^{16, 102}	14.1 ¹⁰²	19.8 ¹⁰²	7.9 ¹⁰²	—	33.9 ¹⁰³	66.1 ¹⁰⁴	—	7.477, ¹⁰⁵	21.877, ¹⁰⁵	4.777, ¹⁰⁵	13.977, ¹⁰⁵
Somalia	2001–02	3,906	...	56.4	52.6	...	...	...	...	...	...	2,617 ²⁸	67.0 ²⁸	469 ^{29, 106}	12.0 ^{29, 106}
South Africa	2003	16,192	46.7	54.4	36.4 ⁵³	40.0 ⁵³	33.0 ⁵³	18.2	80.7	1.0	0.1	1,197	7.4	2,223	13.7
Spain	2003	18,815 ²⁴	40.5 ²⁴	68.5 ^{24, 27}	46.4 ²⁴	56.3 ²⁴	36.9 ²⁴	16.3 ²⁴	81.4 ²⁴	1.6 ²⁴	0.7 ²⁴	942	5.0	3,123	16.6
Sri Lanka	2000	6,709 ¹⁰⁷	33.8 ¹⁰⁷	60.6 ^{7, 107}	42.0 ¹⁰⁷	56.7 ¹⁰⁷	27.8 ¹⁰⁷	32.3 ³⁵	58.2 ³⁵	9.5 ³⁵	— ³⁵	2,381 ³⁵	31.2 ³⁵	1,227 ³⁵	16.1 ³⁵
Sudan, The	1996	7,983 ¹⁰⁸	30.6 ¹⁰⁸	51.4 ¹⁰⁸	33.7 ¹⁰⁸	47.2 ¹⁰⁸	20.4 ¹⁰⁸	...	...	...	...	...	...	...	...
Suriname	1999 ¹⁰⁹	85.9	36.9	55.0 ⁷	34.6	43.9	25.3	16.3 ⁶	71.7 ⁶	1.2 ⁶	1.8 ⁶	4.4	5.3	10.0	11.9
Swaziland	2001	392.0	39.3	60.5 ^{12, 47}	42.3 ⁴⁷	55.0 ⁴⁷	30.6 ⁴⁷	...	...	...	...	195.1	49.8 ¹¹⁰	21.9	8.2
Sweden	2003	4,450	48.0	78.1 ²⁷	49.6	52.0	47.2	9.3	90.3	0.3	0.1	89	2.0	723	16.2
Switzerland	2002	4,180	44.5	81.3	56.2	62.9	49.7	15.1 ³⁵	82.5 ³⁵	2.4 ³⁵	— ³⁵	165 ³⁵	4.0 ³⁵	662 ³⁵	16.1 ³⁵
Syria	2002 ²⁴	5,460	21.4	54.9	31.9	48.9	14.0	27.7 ⁵⁴	55.5 ⁵⁴	16.8 ⁵⁴	— ⁵⁴	1,462	26.8	661	12.1
Taiwan	2003 ²⁴	10,076	41.4	63.9	44.8	51.5	37.8	20.7	72.1	7.2	—	696	6.9	2,633	26.1
Tajikistan	2003	1,932	46.5 ⁴⁷	51.7 ¹¹²	29.1	32.5 ⁴⁷	28.2 ⁴⁷	...	...	...	...	1,275	66.0	115	6.0
Tanzania	2001	17,828	51.0	77.7 ³²	53.0 ⁵³	52.7 ⁵³	53.3 ⁵³	8.3	6.9	3.8	81.0	13,890	77.9	289	1.6
Thailand	2003	35,311	45.0	73.0 ²³	55.1	60.9	49.4	34.8	40.5	24.6	0.1	15,5614, ¹¹³	44.94, ¹¹³	5,2314, ¹¹³	15.14, ¹¹³
Togo	1995	1,575	35.4	57.1 ¹²	38.1	49.7	26.7	...	...	...	...	1,059	67.2	183 ¹³	11.6 ¹³
Tonga	1996	33.9	36.0	60.4	35.3	44.6	25.8	33.7 ²²	45.4 ²²	16.8 ²²	4.1 ²²	10.0	29.3	7.3	21.4
Trinidad and Tobago	2002	586	39.1	66.9	45.3 ⁵³	55.8 ⁵³	35.1 ⁵³	20.8	77.3	1.0	0.9	36	6.2	80	13.7
Tunisia	2003	3,460	25.5	48.2 ²³	35.2	52.3	18.0	...	...	...	...	510 ⁵⁷	21.6 ⁵⁷	418 ⁵⁷	17.7 ⁵⁷
Turkey	2003	23,641	27.7	51.1	33.2 ⁵³	47.6 ⁵³	18.6 ⁵³	29.8	50.6	19.6	—	7,165	30.3	3,847	16.3
Turkmenistan	1996	1,680	40.0	71.9 ¹¹⁴	36.1	43.9	28.5	...	...	...	...	8924, ⁶	48.54, ⁶	2274, ⁶	12.34, ⁶
Tuvalu	2002	3.2 ¹¹⁵	42.4	53.0 ²³	33.9	39.4	28.4	...	...	...	...	...	...	...	...
Uganda	1996	9,636	39.9	68.9 ¹²	44.0	53.2	34.8	42.0 ³⁴	15.0 ³⁴	39.0 ³⁴	4.0 ³⁴	7,440	77.2	637 ¹³	6.6 ¹³
Ukraine	2003	22,614	48.9	65.8	47.4 ⁵³	52.5 ⁵³	43.1 ⁵³	10.9	87.6	1.5	—	3,883	17.2	5,101	22.6
United Arab Emirates	2003	2,191	11.7 ¹¹	72.6 ²³	54.2	73.4 ¹¹	19.4								

	construction		transportation, communications		trade, hotels, restaurants		finance, real estate		public administration, defense		services		other		country
	number (000)	% of econ. active	number (000)	% of econ. active	number (000)	% of econ. active	number (000)	% of econ. active	number (000)	% of econ. active	number (000)	% of econ. active	number (000)	% of econ. active	
	139 74 ³⁵ 14 546 2.8	6.9 3.5 ³⁵ 0.6 1.8 6.3	111 75 ³⁵ 15 1,112 1.4 ⁵⁵	5.5 3.5 ³⁵ 0.6 3.6 3.3 ⁵⁵	442 457 ³⁵ 209 7,417 9.6	22.0 21.6 ³⁵ 9.0 24.1 21.5	251 52 ³⁵ 2 120 1.0	12.4 2.5 ³⁵ 0.1 0.4 2.3	111 15 15 15 2.6	5.5 15 15 15 5.8	417 422 ^{15, 35} 123 ¹⁵ 4,902 ¹⁵ 7.3	20.7 19.9 ^{15, 35} 5.3 ¹⁵ 15.9 ¹⁵ 16.5	9719 165 ^{21, 35} 117 2,009 ¹⁹ 1.7 ¹⁹	4.8 ¹⁹ 7.8 ^{21, 35} 5.0 6.5 ¹⁹ 3.9 ¹⁹	New Zealand Nicaragua Niger Nigeria Northern Mariana Islands
	159 118 2,353 1.2 80	6.7 16.0 5.6 12.8 6.4	149 28 2,295 0.5 ¹⁸ 86	6.3 3.8 5.4 5.2 ¹⁸ 6.9	407 109 5,776 2.9 248	17.2 14.8 13.6 29.9 19.8	272 25 346 0.4 66	11.5 3.4 0.8 3.7 5.3	149 163 15 1.2 74	6.3 22.1 15 12.1 5.9	720 137 6,027 ¹⁵ 2.5 231	30.3 18.6 14.2 ¹⁵ 26.3 18.5	107 14 3,506 ²¹ 0.2 ²¹ 171 ¹⁹	4.5 2.0 8.3 ²¹ 2.3 ²¹ 13.7 ¹⁹	Norway Oman Pakistan Palau Panama
	48 142 308 ⁷⁷ 1,654 803	2.0 7.2 3.7 ⁷⁷ 4.6 4.7	25 86 364 ⁷⁷ 2,464 823	1.0 4.3 4.4 ⁷⁷ 6.9 4.9	358 417 1,352 ⁷⁷ 6,706 2,191	14.8 21.1 16.3 ⁷⁷ 18.7 12.9	31 68 197 ⁷⁷ 1,039 975	1.3 3.4 2.4 ⁷⁷ 2.9 5.8	32 87 15 1,414 853	1.3 4.4 15 3.9 5.0	86 370 2,287 ^{15, 77} 3,621 2,373	3.6 18.7 27.6 ^{15, 77} 10.1 14.0	100 ¹⁹ 55 — 4,209 ¹⁹ 3,329 ²¹	4.1 ¹⁹ 2.8 — 11.8 ¹⁹ 19.6 ²¹	Papua New Guinea Paraguay Peru Philippines Poland
	584 85 59.3 ⁵ 11 ¹⁸ 426	10.7 6.3 18.4 ⁵ 3.7 ¹⁸ 4.3	214 42 9.9 ⁵ 5 461	3.9 3.1 3.1 ⁵ 1.8 4.7	1,034 250 ⁹⁶ 42.6 ⁵ 25 981	18.9 18.4 ⁹⁶ 13.2 ⁵ 8.3 9.9	349 44 10.1 ⁵ 16 233	6.4 3.2 3.1 ⁵ 5.4 2.3	339 15 43.8 ⁵ 39 530	6.2 15 13.6 ⁵ 13.1 5.3	895 595 ^{15, 97} 76.1 ⁵ 54 975	16.4 43.9 ^{15, 97} 23.6 ⁵ 18.3 9.8	342 ²¹ 166 ²¹ 14.9 ^{5, 19} 124 ²¹ 692 ²¹	6.3 ²¹ 12.2 ²¹ 4.6 ^{5, 19} 41.7 ²¹ 7.0 ²¹	Portugal Puerto Rico Qatar Réunion Romania
	4,316 42 1.74, 45 6.0 3.5	6.0 1.2 10.5 ^{4, 45} 7.9 8.5	5,957 30 0.54, 45 4.1 2.3	8.3 0.9 3.24, 45 5.4 5.5	11,024 94 3.44, 45 17.9 6.5	15.3 2.8 20.34, 45 23.6 15.7	4,530 11 — 2.3 1.4	6.3 0.3 — 3.0 3.4	4,622 26 2.74, 45 7.5 15	6.4 0.7 16.5 ^{4, 45} 9.9 15	12,915 156 3.74, 45 4.7 7.7 ¹⁵	17.9 4.6 22.44, 45 6.2 18.5 ¹⁵	5,729 ¹⁹ 5719 0.34, 45 13.419 8.3 ²¹	7.9 ¹⁹ 1.7 ¹⁹ 2.14, 45 17.6 ¹⁹ 20.0 ²¹	Russia Rwanda St. Kitts and Nevis St. Lucia St. Vincent
	2.04, 30 1.7 4.4 1,084 13	4.84, 30 8.4 10.2 14.6 13	1.94, 30 0.5 0.8 308 14	4.54, 30 2.4 1.8 4.1 14	1.94, 30 3.2 8.8 1,064 14	4.44, 30 16.1 20.5 14.3 14	1.4 0.7 — 367 14	3.2 3.4 — 4.9 14	15 2.1 3.3 929 14	15 10.6 7.7 12.5 14	6.64, 15, 30 4.8 9.2 2,248 530 ¹⁴	15.64, 15, 30 24.0 21.5 30.2 15.1 ¹⁴	— 0.7 ²¹ — — —	— 3.2 ²¹ — — —	Samoa San Marino São Tomé and Príncipe Saudi Arabia Senegal
	140 2.4 13 115 ^{35, 101} 195	6.3 6.4 13 5.3 ^{35, 101} 7.4	138 3.6 14 216 ^{35, 101} 149	6.2 9.5 14 10.0 ^{35, 101} 5.7	418 6.0 14 425 ^{35, 101} 349	18.7 16.0 14 19.8 ^{35, 101} 13.3	72 1.0 14 348 ^{35, 101} 152	3.2 2.6 14 16.2 ^{35, 101} 5.8	184 15 14 148 ^{35, 101} 160	8.2 15 14 6.9 ^{35, 101} 6.1	426 12.8 ¹⁵ 365 ¹⁴ 400 ^{35, 101} 397	19.0 34.3 ¹⁵ 22.1 ¹⁴ 18.6 ^{35, 101} 15.1	18 6.419 — 11619, 35, 101 46219	0.8 17.0 ¹⁹ — 5.419, 35, 101 17.6 ¹⁹	Serbia ^{85, 100} Seychelles Sierra Leone Singapore Slovakia
	52 1,277, 105 — 626 1,985	5.4 3.7 ^{77, 105} — 3.9 10.5	59 1,977, 105 14 563 1,027	6.2 5.7 ^{77, 105} 14 3.5 5.5	154 4,677, 105 15 2,451 3,681	16.1 13.6 ^{77, 105} 14 15.1 19.6	75 1,277, 105 14 1,079 1,769	7.8 3.5 ^{77, 105} 14 6.7 9.4	50 4,377, 105 14 15 1,097	5.2 12.5 ^{77, 105} 14 15 5.8	146 8,877, 105 820 ¹⁴ 3,469 ¹⁵ 3,069	15.2 25.7 ^{77, 105} 21.0 ¹⁴ 21.4 ¹⁵ 16.3	6919 — — 4,581 ¹⁹ 2,128 ¹⁹	7.2 ¹⁹ — — 28.3 ¹⁹ 11.3 ¹⁹	Slovenia Solomon Islands Somalia South Africa Spain
	397 ³⁵ — 5.0 5.8 239	5.2 ³⁵ — 5.9 1.5 5.4	376 ³⁵ — 5.8 111 111	4.9 ³⁵ — 6.9 111 111	988 ³⁵ — 17.3 12.5 ¹¹¹ 802 ¹¹¹	12.9 ³⁵ — 20.4 3.2 ¹¹¹ 18.0 ¹¹¹	217 ³⁵ — 4.5 7.5 593	2.8 ³⁵ — 5.4 1.9 13.3	560 ³⁵ — 15 15 243	7.3 ³⁵ — 15 15 5.5	544 ³⁵ — 27.3 ¹⁵ 25.3 ¹⁵ 1,541	7.1 ³⁵ — 32.3 ¹⁵ 6.5 ¹⁵ 34.6	95419, 35 — 14.719 123.9 221	12.519, 35 — 17.419 31.6 5.0	Sri Lanka Sudan, The Suriname Swaziland Sweden
	247 ³⁵ 634 702 31 152	6.0 ³⁵ 11.6 7.0 1.6 0.9	241 ³⁵ 265 484 45 112	5.9 ³⁵ 4.9 4.8 2.3 0.6	718 ³⁵ 724 2,283 88 1,263	17.4 ³⁵ 13.3 22.7 4.6 7.1	675 ³⁵ 61 727 — 26	16.4 ³⁵ 1.1 7.2 — 0.1	218 ³⁵ 15 369 28 15	5.3 ³⁵ 15 3.7 1.4 15	1,019 ³⁵ 1,014 ¹⁵ 1,680 296 1,183 ¹⁵	24.7 ³⁵ 18.6 ¹⁵ 16.7 15.3 6.6 ¹⁵	175 ³⁵ 638 ²¹ 503 ²¹ 5419 913 ²¹	4.2 ³⁵ 11.7 ²¹ 5.0 ²¹ 2.819 5.1 ²¹	Switzerland Syria Taiwan Tajikistan Tanzania
	1,614 ^{4, 113} 13 0.5 69 248 ⁵⁷	4.74, 113 13 1.5 11.8 10.5 ⁵⁷	9884, 113 14 1.2 42 9657	2.84, 113 14 3.6 7.1 4.1 ⁵⁷	7,160 ^{4, 113} 14 2.5 95 217 ⁵⁷	20.64, 113 14 7.4 16.1 9.2 ⁵⁷	8464, 113 14 0.7 44 1557	2.44, 113 14 1.9 7.5 0.7 ⁵⁷	9034, 113 14 3.7 15 15	2.64, 113 14 10.9 15 15	2,3514, 113 331 ¹⁴ 3.6 15815 44415, 57	6.84, 113 21.0 ¹⁴ 10.7 27.0 ¹⁵ 18.15, 57	234, 113 — 4.5 6219 41219, 57	0.14, 113 — 13.3 10.619 17.519, 57	Thailand Togo Tonga Trinidad and Tobago Tunisia
	965 1084, 6 — 13 1,047	4.1 5.94, 6 — 13 4.6	1,022 914, 6 — 14 1,494	4.3 4.94, 6 — 14 6.6	4,052 1164, 6 — 14 3,071	17.1 6.34, 6 — 14 13.6	738 134, 6 — 14 855	3.1 0.74, 6 — 14 3.8	1,177 294, 6 — 14 1,188	5.0 1.64, 6 — 14 5.3	2,181 3344, 6 — 1,559 ¹⁴ 3,915	9.2 18.24, 6 — 16.214 17.3	2,496 ¹⁹ 29 — — 2,060	10.6 ¹⁹ 1.6 — — 9.1	Turkey Turkmenistan Tuvalu Uganda Ukraine
	362 2,111 ¹¹⁶ 10,138 70 ²⁴ 676	16.5 7.0 ¹¹⁶ 6.9 5.6 ²⁴ 7.5	134 1,813 ¹¹⁶ 9,445 6124 382	6.1 6.0 ¹¹⁶ 6.4 4.924 4.3	528 7,040 ¹¹⁶ 29,727 225 ²⁴ 754	24.1 23.2 ¹¹⁶ 20.3 18.2 ²⁴ 8.4	89 5,828 ¹¹⁶ 23,627 9124 3	4.1 19.2 ¹¹⁶ 16.1 7.324 3	248 15 6,243 9124 3	11.3 15 4.3 7.424 3	298 9,255 ^{15, 116} 37,662 294 ²⁴ 2,042 ³	13.6 30.515, 116 25.7 23.7 ²⁴ 22.73	— 8,774 ²¹ 20921, 24 901	— 6.0 ²¹ 16.821, 24 10.0	United Arab Emirates United Kingdom United States Uruguay Uzbekistan
	1.5 776 ²⁴ 119 4.9 781 ²¹	2.0 6.724 119 9.6 9.81 ²¹	1.6 704 ²⁴ 119 4,255 341 ²¹	2.1 6.124 119 8.3 ⁵⁵ 4.31 ²¹	4.1 2,585 ²⁴ 119 120 1191 ²¹	5.3 22.424 119 120 14.91 ²¹	0.7 482 ²⁴ 119 2.3 131 ²¹	1.0 4.224 119 4.6 1.71 ²¹	2.5 15 119 4.9 711 ²¹	3.3 15 119 9.7 9.01 ²¹	5.1 2,93315, 24 13,200 ¹¹⁹ 27.11 ²⁰ 1011 ²¹	6.7 25.515, 24 31.519 53.01 ²⁰ 12.81 ²¹	1.3 ²¹ 1,84419, 24 700 ²¹ 4.519 21019, 121	1.6 ²¹ 16.019, 24 1.721 8.819 26.419, 121	Vanuatu Venezuela Vietnam Virgin Islands (U.S.) West Bank
	— 238 43 106	— 5.8 43 2.1	— 123 14 102	— 3.0 14 2.1	— 437 14 333	— 10.7 14 6.7	— 30 14 121	— 0.7 14 2.4	— 358 14 15	— 8.7 14 15	— 310 757 ¹⁴ 579 ¹⁵	— 7.6 21.614 11.715	— 470 ¹⁹ — 48519	— 11.519 — 9.819	Western Sahara Yemen Zambia Zimbabwe

agriculture). ⁷⁰Unspecified. ⁷¹1986. ⁷²Includes not adequately defined, military personnel, and unemployed not previously employed. ⁷³Employed within Liechtenstein only, excluding inward commuters. ⁷⁴Employed within Liechtenstein only, including inward commuters. ⁷⁵Includes resident foreigners; excludes workers from neighbouring countries. ⁷⁶Includes resident foreigners and workers from neighbouring countries. ⁷⁷1993. ⁷⁸Self-employed and unpaid family workers. ⁷⁹Includes employers. ⁸⁰Excludes 123,000 unemployed, not previously employed. ⁸¹Includes resident foreign workers; excludes c. 25,000 nonresident foreign workers (mostly French). ⁸²Ages 17–64. ⁸³Finance, real estate includes construction. ⁸⁴Ages 16–59. ⁸⁵Serbia includes Montenegro. ⁸⁶Nauruan population only. ⁸⁷Includes 1,987,000 workers age 5–14. ⁸⁸Ages 15–64 only. ⁸⁹Ages 20–69. ⁹⁰Excludes nomadic population. ⁹¹Oman only. ⁹²August labour force survey. ⁹³De facto population. ⁹⁴Metropolitan Lima only. ⁹⁵Third quarter. ⁹⁶Excludes hotels. ⁹⁷Includes hotels. ⁹⁸Over age 5. ⁹⁹All data include cross border workers. ¹⁰⁰Excludes Kosovo. ¹⁰¹De jure population. ¹⁰²Paid workers only. ¹⁰³Paid workers as percent of all workers. ¹⁰⁴Unpaid workers as percent of all workers. ¹⁰⁵Employees of monetary sector only. ¹⁰⁶Includes construction. ¹⁰⁷Excludes Northern and Eastern provinces. ¹⁰⁸Official estimate. ¹⁰⁹Paramaribo only. ¹¹⁰Represents informally employed (mostly in agriculture). ¹¹¹Trade, hotels, restaurants includes transportation, communications. ¹¹²Ages 15–62 (male) and 15–57 (female). ¹¹³Over age 12. ¹¹⁴Ages 16–59 (male) and 16–54 (female). ¹¹⁵Total of wage earners, unpaid workers, and subsistence workers. ¹¹⁶March 2004; number of workforce jobs in sector. ¹¹⁷Urban areas only. ¹¹⁸Includes not stated (mostly subsistence workers). ¹¹⁹Services includes construction; transportation, communications; trade, hotels, restaurants; finance, real estate; and public administration, defense. ¹²⁰Services includes trade, hotels, restaurants. ¹²¹Includes the Gaza Strip.

Crops and livestock

This table provides comparative data for selected categories of agricultural production for the countries of the world. The data are taken mainly from the United Nations Food and Agriculture Organization's (FAO's) annual *Production Yearbook* and the online FAOSTAT statistics database (<http://apps.fao.org/default.htm>).

The FAO depends largely on questionnaires supplied to each country for its statistics, but, where no official or semiofficial responses are returned, the FAO makes estimates, using incomplete, unofficial, or other similarly limited data. And, although the FAO provides standardized guidelines upon which many nations have organized their data collection systems and methods, persistent, often traditional, variations in standards of coverage, methodology, and reporting periods reduce the comparability of statistics that *can* be supplied on such forms. FAO data are based on calendar-year periods; that is, data for any particular crop refer to the calendar year in which the harvest (or the bulk of the harvest) occurred.

In spite of the often tragic food shortages in a number of countries in recent years, worldwide agricultural production is probably more often underreported than overreported. Many countries do not report complete

domestic production. Some countries, for example, report only crops that are sold commercially and ignore subsistence crops produced for family or communal consumption, or barter; others may limit reporting to production for export only, to holdings above a certain size, or represent a sampling only.

Methodological problems attach to much smaller elements of the agricultural whole, however. The FAO's cereals statistics relate, ideally, to weight or volume of crops harvested for dry grain (excluding cereal crops used for grazing, harvested for hay, or harvested green for food, feed, or silage). Some countries, however, collect the basic data they report to the FAO on sown or cultivated areas instead and calculate production statistics from estimates of yield. Millet and sorghum, which in many European and North American countries are used primarily as livestock or poultry feed, may be reportable by such countries as animal fodder only, while elsewhere many nations use the same grains for human consumption and report them as cereals. Statistics for tropical fruits are frequently not compiled by producing countries, and coverage is not uniform, with some countries reporting only commercial fruits and others including those consumed for

Crops and livestock

country	crops															
	cereals								roots and tubers ^a				pulses ^b			
	production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007
Afghanistan	2,379	4,840	1,009	1,721	233	...	16,667	15,000	50	42	1,351	1,071	...	514	...	663
Albania	522	494	3,001	3,731	162	155	14,402	18,890	27	23	925	1,062	145	207	627	723
Algeria	1,872	4,133	1,020	1,391	1,057	1,900	15,556	21,111	33	50	513	731	1,490	2,030	2,781	3,761
American Samoa	...	...	...	...	2	10	3,361	3,575	...	...	...	...	1	1	0.5	2
Andorra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Angola	555	731	606	490	4,596	1,012	7,503	9,868	77	110	381	289	440	418	259	271
Antigua and Barbuda	...	0.1	1,602	1,625	...	0.4	4,650	4,588	...	...	...	...	10	2	3	3
Argentina	36,570	41,961	3,336	4,270	3,001	2,465	22,681	22,511	354	376	1,113	1,341	7,413	8,096	3,160	3,177
Armenia	298	267	1,588	1,490	356	540	11,086	16,364	4	4	1,331	1,839	222	386	492	808
Aruba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Australia	36,455	22,145	2,107	1,179	1,265	1,155	30,006	35,743	2,581	1,216	1,187	867	3,157	3,341	1,940	1,865
Austria	4,708	4,595	5,746	5,664	700	614	30,002	27,057	81	74	2,439	2,055	1,052	1,150	522	547
Azerbaijan	1,514	1,978	2,353	2,719	490	1,178	10,098	17,557	15	23	2,318	2,209	556	607	1,042	1,632
Bahamas, The	—	0.4	2,017	2,222	1	1	4,117	3,849	...	0.1	677	675	28	26	20	26
Bahrain	...	...	...	...	...	0.04	10,444	20,000	...	0.01	1,091	1,010	22	17	10	9
Bangladesh	37,985	44,669	3,263	3,828	3,343	4,627	11,681	13,373	379	302	772	807	1,369	1,413	1,794	2,491
Barbados	...	0.3	2,604	2,590	5	4	12,650	13,771	1	1	1,183	1,788	3	1	12	16
Belarus	4,283	7,016	1,819	2,890	7,992	8,744	12,245	21,198	268	202	1,309	1,249	268	542	1,370	2,160
Belgium	816 ¹	2,519	2,709 ¹	7,887	1,002 ¹	2,878	15,045 ¹	42,253	5 ¹	5	1,551 ¹	3,419	420	604	1,124	1,801
Belize	56	56	2,776	2,568	3	4	9,723	11,351	8	7	1,277	954	357	445	9	10
Benin	970	1,221	1,111	1,258	4,153	4,821	10,779	12,629	97	91	710	848	206	120	332	373
Bermuda	...	...	...	...	1	1	20,088	22,222	...	...	...	...	0.3	0.3	3	3
Bhutan	150	196	1,483	2,338	56	79	10,750	8,876	2	8	800	2,012	56	79	7	26
Bolivia	1,221	1,332	1,579	1,754	1,417	1,233	7,041	6,101	33	56	1,008	1,225	1,238	818	538	328
Bosnia and Herzegovina	1,146	1,001	3,169	3,223	374	387	8,107	9,378	17	21	1,162	1,516	83	275	700	759
Botswana	22	48	146	555	13	93	7,193	7,750	16	18	502	522	10	600	17	16
Brazil	50,148	68,832	2,843	3,518	25,743	31,475	13,674	14,558	2,788	3,347	696	848	35,602	36,818	7,265	9,313
Brunei	—	1	1,613	1,200	2	2	4,279	4,411	...	...	...	...	6	2	8	10
Bulgaria	5,526	3,180	2,883	2,072	521	291	10,249	12,956	28	16	664	1,690	687	489	1,488	610
Burkina Faso	2,698	3,736	913	1,148	88	95	7,338	7,293	328	521	3,550	655	73	11	231	241
Burundi	261	279	1,288	1,289	1,518	1,643	6,943	7,030	255	255	904	880	1,609	1,600	240	250
Cambodia	4,201	6,375	2,053	2,404	227	2,078	9,344	19,099	16	60	629	784	321	249	471	487
Cameroon	1,313	1,567	1,863	1,338	3,524	3,840	9,062	5,942	254	295	1,034	1,068	2,000	2,215	1,259	1,349
Canada	49,476	48,773	2,782	2,988	4,352	4,971	27,086	31,278	3,747	4,175	1,771	1,804	819	564	2,340	2,386
Cape Verde	27	12	865	800	10	12	8,477	9,111	4	5	108	128	15	13	15	19
Cayman Islands	...	...	...	...	...	2,950	...	6	...	...	...	...	...	0.4	...	0.1
Central African Republic	184	201	1,086	1,092	1,038	1,008	3,711	3,570	31	27	968	900	258	244	65	64
Chad	1,161	3,083	609	1,211	654	697	6,983	7,283	92	122	624	589	113	51	95	99
Chile	2,624	3,694	4,453	6,409	1,072	1,455	17,190	22,305	85	108	1,428	2,046	4,007	5,309	2,607	2,873
China	420,306	460,353	4,835	5,433	187,063	180,312	17,472	17,813	4,841	6,198	1,401	1,752	66,086	94,418	321,830	448,983
Colombia	3,631	3,851	3,248	3,797	4,995	4,450	13,046	13,355	155	146	1,060	1,179	6,553	7,439	1,776	1,593
Comoros	21	21	1,324	1,313	72	77	5,142	5,390	13	14	992	992	63	65	6	4
Congo, Dem. Rep. of the	1,624	1,522	782	773	16,681	15,538	7,948	7,931	192	178	581	503	2,426	2,384	440	467
Congo, Rep. of the	8	10	782	798	884	974	8,846	8,992	8	9	773	769	219	198	40	98
Costa Rica	288	167	3,857	2,982	217	409	13,703	13,703	16	11	557	750	3,921	4,027	368	469
Côte d'Ivoire	2,019	1,396	1,460	1,710	5,041	7,415	5,549	6,719	8	9	668	692	2,026	2,252	585	643
Croatia	3,017	2,607	4,436	4,648	651	215	9,892	16,814	17	8	1,457	2,344	533	376	472	300
Cuba	841	895	2,720	2,881	1,224	1,356	7,001	7,330	94	71	932	922	2,304	1,932	2,217	2,793
Cyprus	101	70	1,788	1,102	136	138	21,254	24,510	1	0.9	1,377	1,065	277	220	147	138
Czech Republic	6,914	7,066	4,256	4,526	1,338	785	20,597	24,589	99	64	2,341	2,378	486	446	476	298
Denmark	9,211	8,220	6,058	5,676	1,563	1,626	40,807	39,456	148	25	3,378	3,192	42	69	258	257
Djibouti	1,625	0.01	...	1,667	...	...	...	...	...	2	...	273	3	2	24	26
Dominica	—	0.2	1,308	1,448	26	27	9,197	9,291	...	0.1	417	421	66	64	6	7
Dominican Republic	662	750	4,146	4,310	266	236	7,709	7,488	53	54	840	910	1,129	1,450	443	542
East Timor	137	105	1,941	1,103	117	111	4,457	4,054	4	5	826	750	6	7	17	18
Ecuador	1,800	2,226	2,086	2,698	504	482	6,690	5,872	37	49	518	461	7,763	7,198	303	373
Egypt	19,605	22,059	7,277	7,663	2,148	3,041	23,923	25,277	440	412	2,727	3,058	7,037	7,701	14,367	16,041
El Salvador	798	1,050	2,105	2,926	88	31	16,896	6,641	70	99	879	1,049	262	376	146	323
Equatorial Guinea	...	...	...	...	105	105	2,848	2,853	...	...	...	...	51	51	...	...
Eritrea	216	177	594	454	127	101	3,211	2,623	51	36	587	455	4	2	28	23

subsistence as well. Figures on wild fruits and berries are seldom included in national reports at all. FAO vegetable statistics include vegetables and melons grown for human consumption only. Some countries do not make this distinction in their reports, and some exclude the production of kitchen gardens and small family plots, although in certain countries, such small-scale production may account for 20 to 40 percent of total output.

Livestock statistics may be distorted by the timing of country reports. Ireland, for example, takes a livestock enumeration in December that is reported the following year and that appears low against data for other-wise comparable countries because of the slaughter and export of animals at the close of the grazing season. It balances this, however, with a June enumeration, when numbers tend to be high. Milk production as defined by the FAO includes whole fresh milk, excluding milk sucked by young animals but including amounts fed by farmers or ranchers to livestock, but national practices vary. Certain countries do not distinguish between milk cows and other cattle, so that yield per dairy cow must be estimated. Some countries do not report egg production statistics (here given of metric tons), and external estimates must be based on the numbers of chickens

and reported or assumed egg-laying rates. Other countries report egg production by number, and this must be converted to weight, using conversion factors specific to the makeup by species of national poultry flocks.

Metric system units used in the table may be converted to English system units as follows:

metric tons \times 1.1023 = short tons

kilograms \times 2.2046 = pounds

kilograms per hectare \times 0.8922 = pounds per acre.

The notes that follow, keyed by references in the table headings, provide further definitional information.

a. Includes such crops as potatoes and cassava.

b. Includes beans and peas harvested for dry grain only. Does not include green beans and green peas.

c. Excludes melons.

d. Includes melons, green beans, and green peas.

e. From cows only.

f. From chickens only.

	livestock													country	
	cattle		sheep		hogs		chickens		milk ^e				eggs ^f		
	stock ('000 head)		stock ('000 head)		stock ('000 head)		stock ('000 head)		production ('000 metric tons)		yield (kg/animal)		production (metric tons)		
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	
	2,959	4,500	15,563	10,000	—	...	7,000	8,400	1,633	2,035	1,103	904	18,000	18,300	Afghanistan
	719	663	1,929	1,826	97	150	4,000	4,600	803	917	1,823	2,120	22,000	26,700	Albania
	1,596	1,588	17,634	19,500	6	6	108,000	124,000	1,173	1,243	1,300	1,300	101,000	170,000	Algeria
	...	0.1	—	...	10	11	...	40	...	22	800	733	...	0.03	American Samoa
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Andorra
	4,014	4,160	345	340	800	782	7,000	6,900	194	195	485	481	4,000	4,300	Angola
	13	15	18	19	5	3	...	110	5	5	964	973	...	0.3	Antigua and Barbuda
	48,861	50,750	13,588	12,450	4,200	2,270	109,000	96,000	10,212	11,000	4,139	4,773	316,000	480,000	Argentina
	478	620	501	587	75	153	4,000	3,870	446	613	1,730	1,996	21,000	29,960	Armenia
	...	...	...	—	...	—	...	—	...	...	...	...	...	...	Aruba
	27,296	28,400	114,969	100,000	2,628	2,430	89,000	75,000	10,850	10,350	5,006	5,133	144,000	166,000	Australia
	2,166	1,998	357	312	3,556	3,213	13,000	15,000	3,330	3,145	5,029	5,955	88,000	90,000	Austria
	1,965	2,217	5,321	7,481	21	20	14,000	18,000	1,033	1,301	1,073	1,069	30,000	51,574	Azerbaijan
	1	0.8	6	7	5	5	3,000	3,000	1	0.7	1,000	1,000	1,000	0.9	Bahamas, The
	12	9	17	41	—	...	...	470	14	11	1,970	1,615	3,000	2,450	Bahrain
	23,884	25,300	1,132	1,560	—	...	140,000	142,000	777	818	206	205	133,000	134,500	Bangladesh
	20	11	13	11	19	20	3,000	3,500	8	7	1,766	1,792	1,000	2,050	Barbados
	4,411	3,989	96	52	3,565	3,642	30,000	27,900	4,688	5,882	2,479	3,907	182,000	179,000	Belarus
	1,132 ¹	2,640	53 ¹	156	2,544 ¹	6,270	16,000 ¹	30,370	1,216 ¹	3,000	1,791 ¹	5,981	75,000 ¹	223,620	Belgium
	56	59	4	6	25	22	1,000	1,600	1	4	627	1,014	2,000	2,850	Belize
	1,482	1,900	660	811	315	344	10,000	15,050	23	30	130	130	7,000	10,845	Benin
	1	0.6	—	...	1	600	...	45	1	1	3,787	3,857	...	280	Bermuda
	355	385	28	18	49	35	...	230	41	41	257	249	...	240	Bhutan
	6,579	7,515	8,743	8,990	2,786	2,490	78,000	80,600	211	320	1,579	1,616	40,000	59,300	Bolivia
	448	515	645	1,000	345	712	2,000	13,300	536	587,000	1,828	2,003	15,000	16,100	Bosnia and Herzegovina
	1,570	3,100	370	300	6	8	4,000	4,000	100	102	350	352	3,000	3,150	Botswana
	170,295	207,170	14,608	15,600	31,669	34,080	843,000	999,100	20,396	25,327	1,144	1,224	1,505,000	1,690,000	Brazil
	2	1	2	3	1	2	10,000	15,500	...	0.4	...	412	5,000	7,350	Brunei
	664	628	2,536	1,635	1,459	1,013	15,000	18,000	1,341	1,148	3,170	3,280	84,000	99,000	Bulgaria
	4,767	8,764	6,722	7,321	621	2,763	22,000	27,150	169	193	176	110	18,000	47,530	Burkina Faso
	321	400	215	250	67	70	4,000	4,350	20	17	350	303	3,000	3,000	Burundi
	2,896	3,500	—	...	2,079	2,790	15,000	15,200	20	24	170	170	12,000	13,300	Cambodia
	5,761	6,000	3,734	3,800	1,232	1,350	28,000	31,000	125	130	500	500	13,000	13,400	Cameroon
	13,340	14,155	819	879	12,970	13,810	157,000	165,000	8,120	8,000	7,273	7,962	372,000	392,199	Canada
	22	24	9	11	195	217	...	505	5	6	647	631	2,000	1,950	Cape Verde
	...	1	...	...	...	0.4	...	0.6	...	...	...	...	...	5	Cayman Islands
	3,130	3,378	222	260	678	805	4,000	4,750	63	65	265	262	1,000	1,480	Central African Republic
	5,852	6,820	2,374	2,982	22	27	5,000	5,240	158	184	270	270	4,000	4,725	Chad
	4,061	4,350	4,117	3,420	2,479	3,480	76,000	98,000	2,077	2,450	1,380	1,369	110,000	124,500	Chile
	104,154	116,861	130,536	171,961	440,384	501,583	3,605,000	4,511,613	8,916	32,820	1,807	3,109	19,391,000	25,846,300	China
	24,412	26,000	2,247	3,400	2,147	1,800	104,000	150,000	5,791	6,800	1,016	1,007	339,000	500,000	Colombia
	51	45	20	21	—	...	...	500	5	5	500	500	1,000	776	Comoros
	823	758	925	900	1,050	957	21,000	19,800	5	5	825	833	7,000	6,000	Congo, Dem. Rep. of the
	87	110	102	99	46	46	2,000	2,400	1	1	500	500	1,000	1,200	Congo, Rep. of the
	1,358	1,000	3	3	463	550	17,000	19,500	737	790	1,404	1,386	42,000	49,000	Costa Rica
	1,409	1,500	1,451	1,523	336	345	30,000	33,000	25	25	143	127	32,000	35,000	Côte d'Ivoire
	435	483	519	680	1,276	1,489	11,000	7,050	628	860	2,426	3,209	48,000	48,200	Croatia
	4,185	3,750	2,786	2,765	1,549	1,765	28,000	30,000	618	420	1,174	1,200	73,000	105,000	Cuba
	55	58	240	270	419	460	3,000	3,100	140	153	5,854	5,885	11,000	9,500	Cyprus
	1,604	1,390	87	150	3,761	2,741	19,000	14,500	2,797	2,700	5,447	6,470	194,000	87,000	Czech Republic
	1,887	1,579	147	210	12,052	13,599	20,000	16,500	4,643	4,600	7,333	8,288	78,000	78,000	Denmark
	297	297	466	466	—	...	...	...	8	8	350	349	...	...	Djibouti
	13	14	8	8	5	5	...	190	6	6	910	904	...	225	Dominica
	2,026	2,210	106	123	548	580	45,000	47,500	410	755	1,355	1,423	64,000	80,219	Dominican Republic
	174	171	26	25	331	346	1,000	2,200	...	...	...	...	1,000	1,600	East Timor
	4,750	5,050	2,214	1,050	2,801	1,300	125,000	110,000	2,124	2,600	1,916	2,600	67,000	77,500	Ecuador
	3,583	4,550	4,510	5,180	29	30	89,000	96,000	1,702	2,250	1,195	1,275	177,000	240,000	Egypt
	1,136	1,380	5	5	195	451	8,000	14,748	377	495	1,327	1,271	58,000	70,000	El Salvador
	5	5	37	38	6	6	...	320	...	...	...	...	...	190	Equatorial Guinea
	2,150	1,960	2,100	2,120	—	...	1,000	1,380	50	39	195	196	2,000	2,000	Eritrea

Crops and livestock

(continued)

country	crops																			
	cereals								roots and tubers ^a				pulses ^b				fruits ^c		vegetables ^d	
	production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		production ('000 metric tons)					
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007				
Estonia	552	860	1,801	3,029	406	176	14,590	23,840	5	9	1,510	1,898	23	6	58	62				
Ethiopia	8,654	13,666	1,146	1,720	4,436	5,600	7,509	7,977	978	1,315	827	1,027	656	647	773	1,010				
Faroe Islands	...	...	...	...	2	1	13,636	14,000	...	...	...	...	...	...	...	...
Fiji	16	16	2,541	2,673	75	87	10,875	10,655	1	1	1,200	1,200	14	13	20	22				
Finland	3,548	4,181	3,061	3,695	770	702	24,435	25,700	10	11	1,960	2,432	18	15	234	245				
France	63,423	58,707	7,082	6,422	6,386	6,521	38,665	42,649	2,220	931	4,548	3,711	11,275	9,577	8,749	5,819				
French Guiana	21	23	2,619	2,864	14	14	5,906	5,854	...	...	...	...	15	13	25	25
French Polynesia	...	...	...	...	12	10	12,256	12,011	...	...	...	...	9	6	7	7
Gabon	29	34	1,651	1,663	442	457	5,712	5,811	...	0.2	667	733	292	290	35	35				
Gambia, The	176	281	1,337	1,300	7	8	3,000	3,000	3	3	247	244	4	700	9	10				
Gaza Strip ²	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Georgia	631	226	1,743	1,381	389	175	11,150	5,797	7	9	770	1,073	494	240	480	199				
Germany	46,473	42,295	6,734	6,419	12,547	11,605	42,057	42,000	606	331	3,398	2,829	5,346	2,484	3,798	2,605				
Ghana	1,674	1,852	1,264	1,328	13,456	14,953	10,713	10,490	15	15	116	83	2,454	3,592	656	647				
Greece	4,692	3,808	3,681	3,601	898	838	19,244	23,343	42	41	1,708	1,630	4,219	3,474	4,302	3,595				
Greenland	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grenada	—	0.3	1,000	1,000	4	4	5,274	5,307	1	0.6	983	969	17	15	3	3				
Guadeloupe	...	...	...	...	20	12	11,681	10,311	...	0.1	2,600	2,667	143	96	32	41
Guam	...	0.03	2,000	2,333	2	3	14,904	14,611	...	...	...	...	2	620	5	6
Guatemala	1,165	1,195	1,778	1,660	235	317	13,922	19,543	126	137	839	833	1,783	2,124	937	1,015				
Guernsey	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guinea	1,015	2,601	1,369	1,437	1,204	1,410	5,735	6,472	58	62	853	873	1,008	1,087	479	507				
Guinea-Bissau	161	203	1,052	1,472	98	116	7,731	7,607	2	2	622	640	74	63	25	28				
Guyana	505	479	3,843	4,435	48	41	10,243	8,182	1	1	1,137	715	57	66	47	42				
Haiti	423	380	909	874	756	750	3,924	3,849	74	66	665	641	992	940	214	200				
Honduras	589	615	1,325	1,513	37	48	7,345	6,655	66	75	653	708	1,004	1,699	293	652				
Hong Kong	...	...	...	...	...	...	33,333	...	...	...	...	...	...	...	...	...
Hungary	12,158	14,047	4,408	4,781	990	531	21,589	20,917	81	53	1,943	2,530	1,614	1,375	1,792	1,754				
Iceland	...	...	...	...	10	13	13,846	18,571	...	...	...	...	—	—	3	4
India	238,070	252,121	2,374	2,523	31,438	34,860	18,719	17,868	13,161	14,500	608	622	43,371	51,142	73,993	72,545				
Indonesia	60,484	69,430	3,989	4,446	19,536	22,803	11,989	15,141	286	321	896	1,029	8,638	11,615	6,765	8,678				
Iran	14,002	23,097	1,937	2,580	3,526	5,240	20,854	24,952	530	1,066	515	604	12,341	12,102	11,893	15,993				
Iraq	1,382	2,710	530	723	633	740	15,652	16,444	77	103	621	558	...	934	...	2,691				
Ireland	2,117	1,969	7,547	7,076	497	455	33,024	36,976	12	12	4,891	4,920	25	18	220	225				
Isle of Man	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Israel	184	273	2,237	3,222	403	603	35,354	35,119	12	31	1,943	3,030	1,293	1,310	1,643	1,560				
Italy	20,588	20,500	4,963	5,256	2,058	1,858	24,632	25,322	121	172	1,545	1,898	18,087	17,891	15,788	13,587				
Jamaica	2	2	1,186	1,177	237	210	16,600	16,117	4	2	1,058	1,084	446	415	191	208				
Japan	12,444	12,029	6,121	6,033	4,488	4,113	26,227	26,882	101	86	1,733	1,933	4,034	3,290	12,647	11,938				
Jersey	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jordan	44	81	2,042	1,298	98	170	26,417	34,000	4	4	1,273	1,000	232	293	828	1,301				
Kazakhstan	13,887	20,495	1,155	1,332	1,857	2,415	11,601	15,579	25	56	1,166	1,037	201	224	1,985	2,865				
Kenya	2,893	3,755	1,469	1,857	2,063	2,481	8,430	9,061	462	737	435	509	2,238	2,255	1,611	1,664				
Kiribati	...	...	...	...	9	10	8,117	7,704	...	...	...	...	6	6	6	6
Korea, North	3,554	4,244	2,754	3,355	2,237	2,190	10,396	10,092	290	265	853	757	1,360	880	3,756	3,756				
Korea, South	7,606	6,269	6,455	6,106	1,011	885	23,211	22,692	30	13	1,091	1,245	2,608	2,578	11,938	11,222				
Kosovo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait	3	4	2,260	2,690	25	24	31,873	27,647	...	...	...	...	...	15	170	205
Kyrgyzstan	1,653	1,419	2,674	2,500	1,057	1,374	15,309	15,701	20	72	1,749	1,576	165	185	832	909				
Laos	2,321	3,320	3,000	3,551	204	331	7,869	9,324	15	18	979	1,034	191	168	539	782				
Latvia	888	1,535	2,036	2,940	719	642	13,870	15,891	4	2	1,574	1,600	49	37	132	157				
Lebanon	123	168	2,355	2,635	272	491	20,655	25,784	13	12	1,368	1,361	892	753	924	753				
Lesotho	198	73	930	463	88	96	16,560	17,143	15	8	706	497	13	13	18	20				
Liberia	175	155	1,224	1,290	488	613	6,797	5,713	3	4	591	617	161	178	76	89				
Libya	217	209	643	637	174	196	21,497	19,600	20	20	1,401	1,397	321	366	862	906				
Liechtenstein	...	...	...	...	...	...	...	...	...	...	...	...	0.2	0.2	...	...		
Lithuania	2,350	3,017	2,433	3,007	1,518	576	13,604	10,911	63	56	1,540	1,386	132	55	326	250				
Luxembourg	... ¹	151	... ¹	5,162	... ¹	20	... ¹	33,667	... ¹	1	... ¹	2,233	19	23	11	0.8				
Macao	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Macedonia	559	364	2,596	2,365	167	193	12,677	14,051	28	24	1,977	2,344	361	360	535	530				
Madagascar	2,756	4,109	1,958	2,511	3,472	3,695	6,662	7,203	96	118	952	1,056	883	769	348	344				
Malawi	2,336	3,637	1,506	1,953	4,566	4,050	12,243	13,967	226	260	520	496	518	720	259	310				
Malaysia	2,153	2,314	3,028	3,373	467	502	9,333	9,526	...	...	...	...	1,193	1,013	479	511
Maldives	—	0.4	933	3,917	8	8	4,475	4,442	...	0.1	778	750	14	13	30	29				
Mali	2,596	3,510	1,056	1,114	103	427	11,174	19,234	126	88	423	373	31	370	303	531				
Malta	11	11	4,015	4,500	32	25	18,056	35,714	1	2	2,556	2,612	7	9	61	59				
Marshall Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Martinique	...	...	...	...	22	29	11,101	11,098	...	0.9	...	354	336	338	31	31
Mauritania	166	155	788	844	6	7	2,													

	livestock												country		
	cattle		sheep		hogs		chickens		milk ^a		eggs ^f				
	stock ('000 head)		stock ('000 head)		stock ('000 head)		stock ('000 head)		production ('000 metric tons)		production (kg/animal)			production (metric tons)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	
	276	245	29	63	304	346	2,000	1,609	646	605	4,682	5,589	17,000	10,810	Estonia
	34,518	43,000	11,541	23,700	25	28	32,000	36,000	1,235	1,580	201	201	32,000	38,000	Ethiopia
	2	2	68	68	—	...	...	...	...	...	...	...	...	...	Faroe Islands
	335	315	7	6	139	145	4,000	4,300	56	58	1,990	1,966	3,000	3,600	Fiji
	1,060	929	101	110	1,303	1,435	6,000	5,400	2,436	2,300	6,702	7,706	58,000	57,000	Finland
	20,346	19,359	9,754	8,499	14,998	14,736	231,000	161,500	24,931	23,705	5,849	6,240	1,036,000	765,000	France
	9	9	3	3	10	11	...	190	—	270	583	587	...	460	French Guiana
	10	12	—	0.4	34	27	...	200	1	1	1,998	2,077	2,000	1,960	French Polynesia
	36	36	197	196	213	213	3,000	3,100	2	2	250	250	2,000	2,000	Gabon
	350	334	115	150	12	22	1,000	710	8	8	175	175	1,000	830	Gambia, The
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gaza Strip ²
	1,117	1,319	541	816	407	510	8,000	5,920	647	734	1,046	991	21,000	15,600	Georgia
	14,723	12,601	2,746	2,444	26,021	26,530	108,000	108,000	28,285	27,900	6,081	6,923	887,000	800,000	Germany
	1,302	1,427	2,724	3,420	323	239	20,000	31,000	34	37	130	130	21,000	26,370	Ghana
	588	625	9,050	8,803	969	950	29,000	31,200	780	780	3,247	3,647	114,000	100,000	Greece
	...	0.02	21	20	—	...	...	...	...	...	...	...	...	...	Greenland
	4	4	13	13	6	3	...	270	1	0.5	800	800	1,000	920	Grenada
	85	73	3	3	19	30	...	475	—	0.07	500	500	2,000	1,650	Guadeloupe
	...	0.1	—	...	5	5	...	210	...	...	...	...	1,000	750	Guam
	2,500	2,800	270	265	732	212	24,000	27,000	263	292	712	749	81,000	85,000	Guatemala
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Guernsey
	2,836	4,181	835	1,331	56	82	12,000	17,830	71	93	185	185	12,000	20,895	Guinea
	509	550	283	321	347	391	1,000	1,700	13	15	170	170	1,000	1,300	Guinea-Bissau
	117	110	130	130	15	14	11,000	21,500	30	30	1,000	1,000	1,000	465	Guyana
	1,390	1,450	147	153	934	1,000	5,000	5,500	40	45	250	250	4,000	4,450	Haiti
	1,790	2,510	14	15	494	490	17,000	19,000	576	1,800	1,001	3,482	42,000	41,000	Honduras
	2	...	—	...	100	...	1,000	...	—	...	2,273	...	...	...	Hong Kong
	845	702	991	1,298	5,216	3,987	29,000	30,303	2,131	1,800	5,740	6,691	178,000	164,000	Hungary
	72	65	477	450	44	42	...	210	106	115	3,893	4,600	2,000	2,800	Iceland
	217,773	177,840	57,900	64,269	17,000	14,000	553,000	505,000	33,733	42,140	943	1,109	1,767,000	2,670,000	India
	11,140	11,366	7,351	9,860	6,089	6,756	814,000	1,345,213	471	637	1,370	1,686	620,000	1,095,320	Indonesia
	8,273	9,776	53,900	52,220	—	—	250,000	420,000	4,676	6,450	1,248	1,500	577,000	880,000	Iran
	1,350	1,500	6,067	6,200	—	...	23,000	33,000	297	400	727	666	12,000	50,000	Iraq
	6,853	6,710	5,311	5,471	1,768	1,588	12,000	13,000	5,221	5,200	4,402	4,751	32,000	33,000	Ireland
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Isle of Man
	393	440	373	455	139	205	28,000	37,500	1,203	1,180	9,761	9,833	88,000	94,650	Israel
	7,010	6,110	10,074	8,227	8,538	9,281	102,000	100,000	11,827	11,000	5,534	6,064	713,000	670,000	Italy
	400	430	1	1	180	85	12,000	12,500	28	22	998	957	7,000	7,300	Jamaica
	4,592	4,398	11	10	9,824	9,759	295,000	288,511	8,419	8,140	6,737	7,454	2,530,000	2,525,000	Japan
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Jersey
	66	70	1,666	2,100	—	...	23,000	25,000	155	205	3,461	5,857	49,000	45,100	Jordan
	4,021	5,660	8,785	13,047	984	1,305	18,000	28,100	3,686	5,007	1,958	1,949	94,000	147,700	Kazakhstan
	12,080	12,500	8,023	9,300	320	325	25,000	30,000	2,485	3,500	565	565	60,000	53,000	Kenya
	...	...	...	...	10	13	...	480	...	...	...	...	...	270	Kiribati
	575	577	186	173	3,076	3,300	15,000	22,000	89	90	2,311	2,195	108,490	142,000	Korea, North
	2,191	2,580	1	1	8,266	9,850	100,000	121,000	2,279	2,140	8,410	9,345	490,000	545,000	Korea, South
	21	28	574	900	—	...	30,000	32,500	35	40	5,414	5,333	21,000	22,000	Kosovo
	930	1,117	3,257	3,198	104	79	3,000	4,300	1,077	1,192	2,135	2,038	12,000	20,830	Kuwait
	1,106	1,337	—	...	1,390	2,260	13,000	21,900	6	7	200	200	10,000	12,800	Kyrgyzstan
	393	377	28	41	407	417	3,000	3,830	822	839	3,943	4,598	25,000	39,000	Laos
	77	77	354	340	26	15	31,000	35,000	158	180	4,063	4,091	44,000	47,000	Latvia
	557	695	879	1,025	64	66	2,000	1,850	24	25	250	245	1,000	1,600	Lebanon
	36	38	210	230	127	173	4,000	5,920	1	0.7	130	130	4,000	4,750	Lesotho
	133	130	4,466	4,500	—	...	25,000	25,000	136	130	1,208	1,204	56,000	60,000	Liberia
	6	6	3	3	3	3	...	...	12	12	4,444	4,259	...	...	Liechtenstein
	856	839	14	36	988	1,127	6,000	9,243	1,723	1,997	3,541	5,005	41,000	52,900	Lithuania
	... ¹	192	... ¹	9	... ¹	97	... ¹	79,150	... ¹	313	... ¹	6,914	... ¹	1,230	Luxembourg
	...	...	...	...	...	...	1,000	...	...	...	...	...	1,000	...	Macau
	267	254	1,285	818	209	255	3,000	2,264	210	385	2,218	2,968	23,000	17,980	Macedonia
	10,406	9,600	602	715	1,517	1,610	22,000	25,000	533	520	281	306	15,000	14,900	Madagascar
	741	752	110	116	450	458	15,000	15,300	35	36	458	461	19,000	19,500	Malawi
	727	829	146	103	1,912	2,290	129,000	190,000	31	39	367	430	397,000	465,000	Malaysia
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Maldives
	6,580	7,917	6,563	8,595	66	71	24,000	33,000	162	194	245	245	12,000	10,500	Mali
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Malta
	19	19	14	12	77	74	1,000	1,000	48	41	5,374	5,334	6,000	7,000	Marshall Islands
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Martinique
	25	25	34	15	35	20	...	590	2	2	764	777	2,000	1,500	Mauritania
	1,520	1,692	8,040	8,850	—	...	4,000	4,200	115	121	350	345	5,000	5,270	Mauritius
	27	29	12	12	11	13	8,000	10,000	5	4	1,201	1,000	5,000	5,250	Mauritius
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Mayotte
	30,446	29,000	6,053	7,500	16,473	15,500	475,000	290,000	9,220	9,599	1,362	5,962	1,772,000	2,300,000	Mexico
	14	14	—	...	32	33	...	190	...	...	...	...	...	175	Micronesia
	423	299,105	929	835	646	532	13,000	22,390	561	573	2,221	2,774	32,000	39,300	Moldova
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Monaco
	3,549	2,168	14,587	14,815	17	7	...	31	378	335	390	386	—	520	Mongolia
	...	10	...	5	...	13	...	449	...	180	...	1,958	...	2,300	Montenegro
	2,629	2,700	17,016	17,250	8	8	137,000	140,000	1,160	1,500	913	1,095	238,000	168,000	Morocco
	1,317	1,330	125	126	179	182	28,000	28,500	60	61	170	168	14,000	14,000	Mozambique
	10,988	12,500	390	570	3,983	6,300	46,000	94,500	499	900	392	600	78,000	212,000	Myanmar (Burma)
	2,436	2,500	2,330	2,700	21	25	2,000	3,500	88	110	401	458	2,000	1,900	Namibia
	...	...	—	...	3	3	...	5	...	...	...	...	...	16	Nauru
	7,012	7,044	852	814	872	989	19,000	23,925	336	386	400	427	23,000	26,600	Nepal
	4,108	3,730	1,335	1,388	13,253	11,600	103,000	91,000	11,207	10,750	7,252	7,450	659,000	610,000	Netherlands, The
	1	0.7	8	9	2	3	...	140	—	0.5	1,271	1,286	1,000	530	Netherlands Antilles

Crops and livestock

(continued)

country	crops															
	cereals															
					roots and tubers ^a				pulses ^b				fruits ^c		vegetables ^d	
	production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		yield (kg/hectare)		production ('000 metric tons)		production ('000 metric tons)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007
New Caledonia	4	7	3,732	4,121	21	22	5,739	6,729	...	0.023	644	719	3	1	4	7
New Zealand	888	945	6,309	6,841	517	524	40,468	38,778	52	38	3,036	2,880	1,016	1,002	985	1,176
Nicaragua	693	963	1,646	1,959	83	155	10,200	9,602	162	189	733	821	226	212	28	36
Niger	2,714	3,840	357	424	165	169	18,765	18,969	370	1,023	117	212	49	8	644	710
Nigeria	21,296	30,850	1,123	1,453	65,512	92,718	9,298	10,365	2,193	3,203	421	692	8,962	8,524	7,855	9,869
Northern Mariana Islands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Norway	1,234	1,250	3,751	3,919	351	380	23,218	27,143	...	—	...	—	27	29	145	169
Oman	6	14	2,300	3,131	16	6	29,573	27,500	...	...	...	...	343	300	185	207
Pakistan	28,421	35,553	2,286	2,756	2,227	3,122	16,625	19,190	931	1,189	588	728	5,120	6,137	4,693	5,509
Palau	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Panama	303	364	2,262	1,976	69	95	9,652	10,096	8	9	395	365	837	642	111	274
Papua New Guinea	11	12	4,052	3,727	1,360	1,502	7,485	7,694	3	3	500	500	1,669	890	474	501
Paraguay	1,205	1,845	2,034	2,215	3,422	5,267	13,969	15,438	56	95	784	826	501	445	306	342
Peru	3,568	4,252	3,154	3,643	4,463	4,960	10,568	11,575	170	218	1,032	1,110	3,260	3,814	1,933	2,326
Philippines	16,917	22,730	2,571	3,261	2,576	2,713	6,625	7,179	57	58	737	786	10,694	10,340	4,895	5,879
Poland	25,017	27,365	2,850	3,256	21,179	11,221	17,107	19,700	264	239	1,975	1,972	2,682	1,682	5,695	5,567
Portugal	1,528	1,103	2,747	3,496	1,297	668	15,277	14,881	22	23	589	673	1,902	1,893	2,337	2,342
Puerto Rico	1	0.6	1,737	1,897	10	11	4,156	8,523	1	0.3	1,395	806	185	197	36	46
Qatar	6	7	3,722	3,562	...	0.05	8,667	9,000	...	...	...	...	17	22	50	25
Réunion	17	14	6,724	6,902	7	7	21,486	22,586	1	1	759	759	53	31	57	54
Romania	15,462	7,461	2,717	1,604	3,808	3,498	13,767	12,370	58	27	1,452	718	2,375	1,510	3,465	3,813
Russia	67,190	80,495	1,651	1,839	33,429	36,784	10,369	12,850	1,203	1,301	1,416	1,151	2,944	4,091	13,342	16,516
Rwanda	234	341	861	1,049	2,477	3,104	5,709	6,967	213	247	635	662	2,369	2,580	225	267
St. Kitts and Nevis	...	...	...	...	1	1	2,864	2,809	...	0.2	1,000	1,000	1	1	0.7	0.8
St. Lucia	...	—	...	—	11	7	3,987	3,939	...	0.05	2,000	2,000	127	38	1	1
St. Vincent and the Grenadines	1	0.1	3,000	3,190	12	14	5,584	5,777	...	0.4	1,000	1,000	52	61	4	4
Samoa	...	...	...	...	21	24	4,782	5,090	...	...	...	...	42	38	0.9	1
San Marino	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
São Tomé and Príncipe	2	3	2,285	2,308	33	37	8,902	9,080	...	...	...	...	28	27	6	7
Saudi Arabia	2,343	3,089	3,635	4,526	376	570	25,980	23,750	8	8	1,835	1,822	1,184	1,277	1,604	2,103
Senegal	1,040	885	839	823	133	228	5,203	7,808	49	60	358	355	130	158	332	508
Serbia	...	6,125	...	3,218	...	743	...	9,133	...	99	...	2,897	...	1,603	...	1,124
Seychelles	...	...	...	...	...	0.2	5,000	5,000	...	...	...	...	2	2	2	2
Sierra Leone	254	739	1,137	1,014	287	398	4,803	4,909	53	63	673	734	166	125	197	235
Singapore	...	...	...	...	...	0.01	10,000	10,000	...	...	...	...	—	—	5	21
Slovakia	2,814	2,950	3,555	3,736	376	382	14,047	20,986	53	23	2,280	1,484	238	79	449	329
Slovenia	490	532	4,919	5,358	176	131	19,859	22,847	1	5	2,237	2,005	241	271	67	66
Solomon Islands	5	6	3,999	3,931	138	159	16,760	16,772	4	4	1,301	1,250	17	0.33	7	8
Somalia	384	196	697	417	79	89	10,000	9,519	15	18	260	277	...	74	...	84
South Africa	11,737	9,547	2,512	2,796	1,700	1,947	23,964	26,490	121	91	1,186	1,061	4,912	5,765	2,229	2,033
Spain	20,198	24,135	3,043	3,896	3,173	2,537	25,454	27,882	318	356	677	935	15,571	15,293	12,277	12,676
Sri Lanka	2,839	3,193	3,318	3,822	340	346	8,438	10,066	23	19	907	965	833	668	567	714
Sudan, The	3,973	6,572	532	708	168	476	2,589	5,687	234	257	1,448	1,614	1,117	754	1,834	2,139
Suriname	179	195	3,807	3,749	5	5	13,816	12,929	...	0.2	727	720	76	75	21	22
Swaziland	97	69	1,347	1,146	8	54	1,921	4,936	4	3	591	455	102	108	11	11
Sweden	5,331	5,059	4,493	5,150	965	790	29,559	27,701	76	39	2,525	2,797	35	35	269	323
Switzerland	1,123	1,049	6,210	6,648	534	490	38,414	41,525	10	19	3,582	3,527	565	497	298	293
Syria	4,576	5,453	1,496	1,724	478	640	20,887	21,333	188	307	699	1,026	1,809	1,824	1,806	2,853
Taiwan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tajikistan	499	896	1,265	2,198	287	660	12,283	22,144	6	32	568	3,278	222	261	471	1,083
Tanzania	4,211	5,895	1,371	1,193	8,102	7,809	7,106	6,408	436	479	569	605	1,313	1,102	1,169	1,243
Thailand	30,130	31,702	2,661	2,752	18,199	26,676	16,560	22,758	292	193	840	865	7,785	7,426	3,090	3,339
Togo	737	820	1,043	1,187	1,302	1,417	6,796	6,698	49	55	327	297	49	33	132	142
Tonga	...	...	...	...	27	27	11,713	11,037	...	...	...	...	9	8	23	28
Trinidad and Tobago	7	5	2,785	2,659	6	10	9,504	9,813	2	2	2,252	1,652	61	31	23	19
Tunisia	1,425	2,020	1,329	1,434	313	350	15,378	14,257	67	116	738	1,121	983	1,003	2,008	2,504
Turkey	30,235	30,212	2,171	2,307	5,457	4,281	26,148	27,006	1,377	1,493	882	1,180	10,743	12,390	24,492	24,454
Turkmenistan	1,536	2,886	2,018	2,974	29	159	5,151	5,933	8	11	1,797	1,806	215	274	548	755
Tuvalu	...	...	...	...	...	0.2	...	...	...	...	...	...	0.7	0.3	0.4	0.5
Uganda	2,200	2,631	1,605	1,525	7,936	7,708	7,839	7,397	606	618	689	583	10,028	9,848	543	556
Ukraine	28,878	28,035	2,226	2,127	16,635	19,102	10,391	13,152	702	519	1,661	1,263	1,449	1,539	5,684	7,605
United Arab Emirates	—	0.04	4,730	2,000	11	8	20,033	25,484	...	...	...	...	723	779	1,597	483
United Kingdom	21,691	19,369	6,833	6,771	6,805	5,635	40,141	40,540	832	740	3,597	3,410	329	364	2,911	2,801
United States	334,614	414,066	5,826	6,683	22,235	18,493	39,435	37,312	1,540	2,124	1,897	1,908	30,331	24,962	37,802	38,075
Uruguay	1,949	2,565	3,528	4,275	191	180	12,666	15,385	7	7	978	968	525	524	153	187
Uzbekistan	4,084	6,372	2,603	4,046	708	890	14,016	17,626	17	12	1,704	1,156	1,208	1,539	3,180	4,068
Vanuatu	1	0.8	538	552	39	43	7,959	8,431	...	...	...	...	20	15	10	11,500
Venezuela	2,782	3,402	3,307	3,327	1,135	1,176	13,554	13,262	27	25	796	887	3,018	2,081	1,264	1,413
Vietnam	33,984	39,881	4,084	4,716	4,422	10,720	8,197	13,832	248	255	730	754	4,278	2,848	6,645	7,991
Virgin Islands (U.S.)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
West Bank ²	61	62	1,855	1,930	63	48	29,880	29,166	6	6	906	977	246	176	541	599
Western Sahara	2	...	778	...	...	...	...	...	...	...	...	...	...	...	...	...
Yemen	689	774	1,087	977	210	232	12,355	12,664	64	83	1,233	1,770	597	826	588	712
Zambia	934	1,537	1,421	1,542	975	1,022	5,687	5,109	16	24	516	480	100	4	265	267
Zimbabwe	2,143	1,251	1,229	649	207	231	4,872	4,831	52	34	765	541	219	222	154	162

	livestock												country		
	cattle		sheep		hogs		chickens		milk ^a		eggs ^f				
	stock ('000 head)		stock ('000 head)		stock ('000 head)		stock ('000 head)		production ('000 metric tons)		yield (kg/animal)			production (metric tons)	
	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007	1999–2001 average	2007		1999–2001 average	2007
	110	115	3	2	26	29	1,000	600	4	0.8	600	593	2,000	2,000	New Caledonia
	9,025	9,650	42,153	40,000	364	360	13,000	18,000	12,079	15,842	3,532	3,817	43,000	51,500	New Zealand
	3,254	3,600	4	5	404	123	13,000	18,000	234	646	749	702	19,000	21,456	Nicaragua
	2,217	2,360	4,386	4,750	39	40	24,000	25,000	180	195	400	402	10,000	10,500	Niger
	15,118	16,259	21,000	23,994	5,259	6,730	121,000	166,500	409	468	241	240	425,000	552,800	Nigeria
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Northern Mariana Islands
	1,001	930	2,367	2,400	425	830	3,000	3,350	1,657	1,550	5,461	5,962	49,000	50,500	Norway
	299	310	342	360	—	...	3,000	4,200	24	47	420	553	7,000	9,000	Oman
	22,007	29,600	24,067	26,500	—	...	151,000	182,000	8,040	11,000	1,157	1,200	340,000	452,000	Pakistan
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Palau
	1,412	1,650	—	...	289	300	13,000	15,000	170	187	1,210	1,191	15,000	21,000	Panama
	87	94	6	7	1,600	1,800	4,000	4,000	—	0.2	100	99	4,000	4,800	Papua New Guinea
	9,758	10,000	402	500	2,917	1,600	15,000	17,000	369	375	2,401	2,344	61,000	100,000	Paraguay
	4,931	5,300	14,412	15,000	2,796	3,000	86,000	100,000	1,065	1,500	2,037	2,069	149,000	205,000	Peru
	2,467	2,650	30	30	10,724	13,250	115,000	136,000	10	13	2,305	1,923	443,000	530,000	Philippines
	6,124	5,696	366	332	17,588	18,129	49,000	125,000	12,019	11,800	4,190	4,327	429,000	537,500	Poland
	1,415	1,407	5,671	3,549	2,346	2,295	35,000	37,000	1,966	1,924	5,620	6,264	117,000	119,119	Portugal
	390	380	16	6	118	50	12,000	13,000	377	350	3,660	3,888	15,000	11,500	Puerto Rico
	15	8	192	120	—	...	4,000	4,500	10	5	1,448	1,378	4,000	4,200	Qatar
	28	33	2	1	77	82	12,000	13,500	21	24	951	970	6,000	6,000	Réunion
	3,021	2,934	8,062	7,678	5,946	6,815	70,000	84,991	4,373	5,441	2,608	3,260	276,000	320,932	Romania
	27,936	21,466	12,859	17,508	17,076	15,980	341,000	358,249	32,200	31,950	2,528	3,399	1,900,000	2,093,100	Russia
	766	950	264	470	172	180	1,000	1,800	133	120	725	504	2,000	2,300	Rwanda
	4	5	14	13	4	4	...	70	...	...	...	...	...	220	St. Kitts and Nevis
	12	12	12	13	15	15	...	280	1	1	1,336	1,400	1,000	1,100	St. Lucia
	6	5	13	12	9	9	...	130	1	1	1,371	1,383	1,000	650	St. Vincent and the Grenadines
	28	29	—	...	179	201	...	450	1	2	1,000	1,000	...	260	Samoa
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	San Marino
	4	5	3	3	2	3	...	350	—	0.1	170	171	...	385	São Tomé and Príncipe
	291	372	7,848	7,000	—	...	117,000	145,000	684	993	8,189	8,898	130,000	174,000	Saudi Arabia
	2,991	3,181	4,572	5,131	263	327	45,000	31,700	102	101	342	3,530	33,000	31,500	Senegal
	...	1,106	...	1,556	...	3,999	...	16,595	...	1,700	...	2,521	...	72,800	Serbia
	2	1	—	...	18	19	1,000	575	—	0.3	564	564	2,000	2,200	Seychelles
	413	300	367	470	53	52	6,000	7,500	21	17	250	270	8,000	8,300	Sierra Leone
	—	0.2	—	—	283	260	2,000	2,700	...	...	...	...	16,000	21,300	Singapore
	671	508	341	333	1,548	1,105	6,000	13,038	1,126	1,000	4,522	5,407	63,000	70,000	Slovakia
	473	451	80	132	585	575	5,000	2,930	633	654	4,066	5,813	23,000	17,100	Slovenia
	13	14	—	...	63	54	...	235	1	1	650	636	...	510	Solomon Islands
	5,176	5,350	13,810	13,100	4	4	3,000	3,400	536	435	399	373	2,000	2,540	Somalia
	13,633	13,500	28,677	25,000	1,559	1,650	119,000	126,000	2,636	3,000	2,943	3,093	328,000	385,000	South Africa
	6,198	6,456	24,185	21,847	22,079	26,034	128,000	137,000	6,184	6,717	5,057	6,850	658,000	883,600	Spain
	1,442	1,223	12	16	71	94	10,000	13,779	222	143	661	601	52,000	51,910	Sri Lanka
	37,081	39,500	45,980	49,000	—	...	37,000	35,000	3,120	5,300	480	384	45,000	47,000	Sudan, The
	128	137	8	8	22	25	3,000	3,800	10	9	1,966	1,700	3,000	2,500	Suriname
	577	585	25	28	30	30	3,000	3,200	36	39	292	289	1,000	1,050	Swaziland
	1,683	1,561	440	505	1,975	1,695	8,000	6,500	3,295	3,000	7,642	8,162	102,000	102,000	Sweden
	1,603	1,565	421	450	1,499	1,650	7,000	8,000	3,898	4,000	5,417	5,692	37,000	39,000	Switzerland
	933	1,150	13,288	21,000	—	—	21,000	24,500	1,111	1,300	2,488	2,600	128,000	170,000	Syria
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Taiwan
	1,045	1,480	1,481	1,922	1	0.6	1,000	2,500	286	529	564	710	1,000	6,180	Tajikistan
	17,000	18,000	3,499	3,550	450	455	28,000	30,000	737	850	174	173	34,000	35,100	Tanzania
	4,666	6,481	40	52	6,539	8,381	223,000	209,105	516	684	2,531	2,973	505,000	531,537	Thailand
	277	282	1,528	1,950	289	340	8,000	11,000	9	10	225	225	6,000	8,050	Togo
	11	11	—	...	81	81	...	330	—	0.4	1,484	1,480	...	30	Tonga
	32	30	4	4	48	45	20,000	28,500	10	11	715	629	3,000	3,850	Trinidad and Tobago
	760	710	6,788	7,618	6	6	62,000	64,000	869	982	1,600	1,637	83,000	82,000	Tunisia
	10,949	10,871	29,394	25,400	4	1	245,000	344,820	8,729	11,000	1,647	2,529	636,000	744,000	Turkey
	863	1,948	5,750	15,500	46	30	4,000	7,000	842	1,333	2,075	3,507	15,000	33,900	Turkmenistan
	...	...	—	...	13	14	...	45	...	...	...	...	...	22	Tuvalu
	5,976	7,182	1,102	1,697	1,579	2,000	26,000	23,750	510	795	350	331	20,000	21,000	Uganda
	10,591	6,175	1,074	925	9,270	8,055	118,000	145,600	12,915	12,300	2,475	3,675	511,000	779,600	Ukraine
	96	125	496	615	—	...	12,000	15,500	10	12	192	207	15,000	17,200	United Arab Emirates
	11,052	9,988	41,211	33,582	6,537	4,882	159,000	157,265	14,736	14,450	6,296	7,187	606,000	590,000	United Kingdom
	98,197	97,003	7,071	6,165	60,229	61,860	1,848,000	2,050,000	74,936	84,189	8,108	9,219	4,998,000	5,308,000	United States
	10,446	12,000	13,257	11,000	312	255	13,000	14,000	1,465	1,650	1,739	1,787	35,000	43,000	Uruguay
	5,279	7,043	7,980	10,450	83	92	14,000	24,220	3,614	5,121	1,558	1,737	70,000	37,500	Uzbekistan
	144	156	—	...	62	63	...	360	3	3	206	219	...	370	Vanuatu
	14,445	16,700	779	536	2,823	3,305	128,000	120,000	1,375	1,390	1,315	1,103	150,000	160,000	Venezuela
	4,030	6,840	—	...	20,293	26,500	138,000	150,000	53	243	821	1,666	186,000	225,000	Vietnam
	8	8	3	3	3	3	...	40	2	2	2,703	...	...	160	Virgin Islands (U.S.)
	27	32	647	812	—	...	7,000	12,700	79	95	3,450	3,340	34,000	41,480	West Bank ²
	—	...	33	...	—	...	...	...	...	...	...	...	...	...	Western Sahara
	1,284	1,480	4,833	8,420	—	...	31,000	51,000	182	232	601	600	31,000	51,600	Yemen
	2,709	2,610	137	152	324	340	29,000	30,000	63	65	300	302	46,000	46,900	Zambia
	5,840	5,400	623	610	444	630	18,000	23,000	307	250	308	313	21,000	22,000	Zimbabwe

¹Belgium includes Luxembourg. ²West Bank includes Gaza Strip.

Energy

This table provides data about the commercial energy supplies (reserves, production, consumption, and trade) of the various countries of the world, together with data about petroleum and gas pipeline networks and traffic. Most of the data and concepts used in this table are adapted from the United Nations' *Energy Statistics Yearbook*.

Electricity. Total installed electrical power capacity comprises the sum of the rated power capacities of all main and auxiliary generators in a country. "Total installed capacity" (kW) is multiplied by 8,760 hours per year to yield "Total production capacity" (kW-hr).

Production of electricity comprises the total gross production of electricity by publicly or privately owned enterprises and also that generated by industrial establishments for their own use, but it usually excludes consumption by the utility itself. Measured in millions of kilowatt-hours (kW-hr), annual production of electricity ranges generally between 50% and 60% of total production capacity. The data are further analyzed by type of generation: fossil fuels, hydroelectric power, and nuclear fuel.

The great majority of the world's electrical and other energy needs are met by the burning of fossil hydrocarbon solids, liquids, and gases, either for thermal generation of electricity or in internal combustion engines. Many renewable and nontraditional sources of energy are being developed

worldwide (wood, biogenic gases and liquids, tidal, wave, and wind power, geothermal and photothermal [solar] energy, and so on), but collectively these sources are still negligible in the world's total energy consumption. For this reason only hydroelectric and nuclear generation are considered here separately with fossil fuels.

Trade in electrical energy refers to the transfer of generated electrical output via an international grid. Total electricity consumption (residential and nonresidential) is equal to total electricity requirements less transformation and distribution losses.

Coal. In this table, coal comprises all grades of anthracite, bituminous, subbituminous, and lignite that have acquired or may in the future, by reason of new technology or changed market prices, acquire an economic value. These types of coal may be differentiated according to heat content (density) and content of impurities. Most coal reserve data are based on proven recoverable reserves only, of all grades of coal. Exceptions are footnoted, with proven in-place reserves reported only when recoverable reserves are unknown. Production figures include deposits removed from both surface and underground workings as well as quantities used by the producers themselves or issued to the miners. Wastes recovered from mines or nearby preparation plants are excluded from production figures.

Energy															
country	electricity											coal			
	installed capacity, 2004 ('000 kW)	production		power source, 2004			trade, 2004		consumption				reserves, 2005 ('000,000 metric tons)	pro-duction, 2004 ('000 metric tons)	con-sump-tion, 2004 ('000 metric tons)
		capacity, 2002 ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	fossil fuel (%)	hydro-power (%)	nuclear fuel (%)	exports ('000,000 kW-hr)	imports ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	per capita, 2004 (kW-hr)	resi-dential, latest (%)	non-resi-dential, latest (%)			
Afghanistan	323	5,790	779	27.6	72.4	—	—	100	879	38	...	...	66	34	34
Albania	1,684	16,574	5,559	1.7	98.3	—	274	477	5,762	1,847	...	...	794	109	118
Algeria	6,468	59,830	31,250	99.2	0.8	—	197	211	31,264	889	28.4	71.6	40	—	615
American Samoa	58	508	138	100.0	—	—	—	—	138	2,226	...	...	...	...	...
Andorra	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Angola	665	4,030	2,339	25.1	74.9	—	—	—	2,339	205	...	...	...	...	...
Antigua and Barbuda	27	237	109	100.0	—	—	—	—	109	1,595	...	...	...	...	...
Argentina	30,599	244,089	100,260	64.6	32.0	3.4 ¹	4,143	7,612	103,729	2,714	47.3	52.7	423	51	937
Armenia	3,341	29,162	6,030	30.4	33.1	36.5	1,012	260	5,278	1,744	...	...	...	...	...
Aruba	150	1,314	816	100.0	—	—	—	—	816	11,458	...	...	...	...	...
Australia	48,630	387,507	239,497	92.8	7.2	—	—	—	239,497	11,849	...	...	78,456	354,461	133,516
Austria	16,712	160,632	64,125	37.8	62.2	— ¹	13,548	16,629	67,208	8,256	...	...	16	235	5,480
Azerbaijan	5,476	47,216	21,643	87.2	12.8	—	1,008	2,373	23,008	2,770	...	...	...	...	...
Bahamas, The	401	3,513	2,087	100.0	—	—	—	—	2,087	6,964	...	...	...	...	...
Bahrain	1,709	11,966	8,448	100.0	—	—	—	—	8,448	11,932	...	...	...	...	...
Bangladesh	4,680	30,572	21,466	94.3	5.7	—	—	—	21,466	154	37.7	62.3	...	...	700
Barbados	210	1,454	895	100.0	—	—	—	—	895	3,304	78.4	21.6	...	...	...
Belarus	7,847	68,748	31,211	99.9	0.1	—	4,723	7,975	34,463	3,508	...	...	...	...	234
Belgium	14,305	137,716	85,643	42.7	1.9	55.4	6,790	14,567	93,420	8,988	...	...	...	147	8,391
Belize	52	377	169	51.9	48.1	—	—	25	194	707	71	29	...	...	...
Benin	122	491	81	98.8	1.2	—	—	578	659	81	64.1	35.9	...	...	...
Bermuda	160	1,279	661	100.0	—	—	—	—	661	10,179	...	...	...	...	...
Bhutan	457	3,171	1,952	—	100.0	—	1,470	18	500	229	...	...	...	51	65
Bolivia	1,353	11,160	4,542	64.5	35.5	—	—	5	4,547	493	49.0	51.0	0.9	...	...
Bosnia and Herzegovina	4,368	23,924	12,599	53.0	47.0	—	3,079	997	10,517	2,690	...	...	...	8,578	8,953
Botswana	132	²	²	²	²	²	²	²	²	²	26.3	73.7	40	²	²
Brazil	86,504	722,332	387,451	13.5	78.4	8.1	7	37,392	424,836	2,340	26.7	73.3	10,113	5,406	19,830
Brunei	860	4,459	3,236	100.0	—	—	—	—	3,236	8,842	53.7	46.3	...	...	...
Bulgaria	11,206	111,217	41,621	51.5	8.1	40.4	6,620	741	35,742	4,582	53.1	46.9	2,181	26,485	26,526
Burkina Faso	177	683	400	75.0	25.0	—	—	—	400	31	...	...	...	...	...
Burundi	58	385	136	1.5	98.5	—	—	34	169	22	73.8	26.2	...	...	...
Cambodia	37	307	130	73.1	26.9	—	—	—	130	10	...	...	...	...	...
Cameroon	902	7,927	4,110	4.6	95.4	—	—	—	4,110	256	...	...	...	¹	¹
Canada	118,094	990,896	598,514	29.5	59.4	11.1 ³	33,249	22,785	588,050	18,408	...	...	6,578	65,999	58,861
Cape Verde	7	61	220	100.0	—	—	—	—	220	529	...	...	...	...	...
Cayman Islands	...	...	400	...	...	...	—	—	372	...	...	...	...	...	...
Central African Republic	40	377	110	23.6	76.4	—	—	—	110	26	69.3	30.7	2.7	...	...
Chad	29	254	99	100.0	—	—	—	—	99	11	...	...	...	...	...
Chile	10,737	97,639	51,984	60.1	39.9	—	—	—	53,887	3,347	30	70	1,181	188	4,435
China	391,420	2,095,129	2,193,736	81.7	16.0	2.3	9,476	3,400	2,187,660	1,684	25.3	74.7	114,500	1,992,234	1,922,654
Colombia	13,653	120,783	50,291	23.7	76.3	—	1,682	48	48,657	1,074	70.9	29.1	6,611	53,693	3,144
Comoros	6	53	20	90.0	10.0	—	—	—	20	31	...	...	...	...	...
Congo, Dem. Rep. of the	2,502	28,120	6,852	0.3	99.7	—	1,456	6	5,402	92	...	...	88	108	153
Congo, Rep. of the	121	1,060	399	0.5	98.5	—	—	404	803	229	...	...	...	...	...
Costa Rica	1,939	16,177	8,210	21.0	79.0	—	440	202	7,972	1,876	71.1	28.9	...	...	...
Côte d'Ivoire	909	10,538	5,411	67.7	32.3	—	1,409	—	4,002	224	26.1	73.9	...	...	...
Croatia	3,792	34,436	13,295	47.0	53.0	—	1,633	5,298	16,960	3,818	68	32	39	—	1,189
Cuba	3,959	34,681	15,652	99.4	0.6	—	—	—	15,652	1,380	52.8	47.2	...	...	13
Cyprus	988	8,804	4,176	100.0	—	—	—	—	4,176	5,718	82.4	17.6	...	...	58
Czech Republic	16,193	134,308	84,333	65.7	3.0	31.3	25,493	9,776	68,616	6,720	...	...	5,552	64,076	57,290
Denmark	13,315	116,464	40,477	83.7	0.1	16.2 ⁵	11,545	8,873	37,605	6,967	...	...	...	—	7,327
Djibouti	90	771	200	100.0	—	—	—	—	200	260	...	...	...	...	...
Dominica	22	123	79	57.0	43.0	—	—	—	79	1,129	...	...	...	...	...
Dominican Republic	5,530	44,781	13,759	85.6	14.4	—	—	—	13,759	1,536	72.3	27.7	...	...	777
East Timor	...	...	300	100.0	...	...	—	—	300	254	...	...	...	...	...
Ecuador	3,463	28,321	11,702	20.8	79.2	—	—	1,542	13,344	1,024	56.8	43.2	24	...	...
Egypt	17,058	148,578	101,299	87.0	13.0	—	873	174	100,800	1,465	74.4	25.6	21	33	1,850
El Salvador	1,219	9,207	4,564	48.9	30.3	20.8 ⁶	84	488	4,946	732	67.4	32.6	...	...	...
Equatorial Guinea	18	158	27	88.9	11.1	—	—	—	27	52	...	...	...	...	...
Eritrea	88	1,507	283	100.0	—	—	—	—	283	67	...	...	...	...	...

Natural gas. This term refers to any combustible gas (usually chiefly methane) of natural origin from underground sources. The data for production cover, to the extent possible, gas obtained from gas fields, petroleum fields, or coal mines that is actually collected and marketed. (Much natural gas in Middle Eastern and North African oil fields is flared [burned] because it is often not economical to capture and market it.) Manufactured gas is generally a by-product of industrial operations such as refineries, gasworks, coke ovens, and blast furnaces. It is usually burned at the point of production and rarely enters the marketplace.

Crude petroleum. Crude petroleum is the liquid product obtained from oil wells; the term also includes shale oil, tar sand extract, and field or lease condensate. Production and consumption and consumption per capita data in the table refer, so far as possible, to the same year so that the relationship between national production and consumption patterns can be clearly seen; data are given in barrels.

Proven reserves are that oil remaining underground in known fields whose existence has been "proved" by the evaluation of nearby producing wells or by seismic tests in sedimentary strata known to contain crude petroleum, and that is judged recoverable within the limits of present technology and economic conditions (prices). The published proven reserve

figures do not necessarily reflect the true reserves of a country, because government authorities or corporations often have political or economic motives for withholding or altering such data.

The estimated exhaustion rate of petroleum reserves is an extrapolated ratio of published proven reserves to the current rate of withdrawal/production. Present world published proven reserves will last about 40 to 45 years at the present rate of withdrawal, but there are large country-to-country variations above or below the average.

Data on petroleum and gas pipelines are provided because of the great importance to both domestic and international energy markets of this means of bringing these energy sources from their production or transportation points to refineries, intermediate consumption and distribution points, and final consumers. The pipeline length for petroleum includes the combined total length for both crude and refined petroleum pipelines, whereas the pipeline length for gas includes the combined total length for natural gas, condensate, and liquefied petroleum gas pipelines. The source for these data was the latest edition of the *CIA World Factbook*.

A secondary source reviewed in the overall compilation of this table was the Energy Information Administration website of the U.S. government.

	natural gas					crude petroleum							country	
published proven reserves, 2007 ('000,000,-000 cu m)	production		consumption		reserves		production, 2004 ('000,000 barrels)	consumption, 2004 ('000,000 barrels)	consumption per capita (barrels)	refining capacity, 2007 ('000 barrels per day)	pipelines (2006) length (km)			
	natural gas, 2004 ('000,000 cu m)	manufactured gas, 2004 ('000,000 cu m)	natural gas, 2004 ('000,000 cu m)	natural gas per capita (cu m)	published proven, 2007 ('000,000 barrels)	years to exhaust proven reserves, 2004					petroleum	gas		
50	3	...	3	0.1	...	...	—	—	—	—	387	466	Afghanistan
2.0	16	9.8	16	5.2	165	190	2.8	2.8	0.9	25	207	339	Albania	
4,580	81,291	11,266	21,173	602	12,270	15	471	146	4.1	450	6,496	8,953	Algeria	
...	...	...	...	...	...	...	...	...	...	...	—	—	American Samoa
...	...	...	...	...	...	...	...	...	...	...	—	—	Andorra
57	730	80	730	64	8,000	24	366	11.5	1.0	39	867	357	Angola	
...	...	...	...	...	...	...	...	...	...	...	—	—	Antigua and Barbuda
456	52,390	7,561	43,459	1,137	2,468	10	254	194	5.1	625	10,373	29,845	Argentina	
176	...	...	1,289	426	...	...	—	...	...	...	—	2,002	Armenia
...	...	...	...	...	...	...	—	3.3	46.8	271	—	—	Aruba
2,520	39,954	4,767	28,399	1,405	4,015	9	203	252	12.5	702	4,408	32,109	Australia	
16	2,142	1,627	9,792	1,203	50	11	6.9	60	7.3	209	812	2,722	Austria	
850	4,995	314	9,702	1,168	7,000	62	113	46	5.6	399	2,436	3,190	Azerbaijan	
...	...	...	...	...	...	...	—	...	...	...	—	—	Bahamas, The
92	7,030	510	7,030	9,930	125	2	68	93	131	255	52	20	Bahrain	
436	13,339	67	13,339	95.8	28	89	—	10	0.1	33	—	2,604	Bangladesh	
0.2	25	1.1	25	92.0	3.0	12	0.6	—	...	...	—	—	Barbados
2.8	255	944	19,817	2,017	198	15	13	135	13.8	493	4,007	5,223	Belarus	
—	—	2,357	14,522	1,397	7	...	—	252	24.3	858	693	1,561	Belgium	
...	...	...	...	...	...	...	—	—	—	—	—	—	Belize
1.1	...	...	...	...	8.0	50	0.1	—	—	—	—	—	Benin
...	...	...	...	...	...	...	—	—	—	—	—	—	Bermuda
...	...	...	...	...	...	...	—	—	—	—	—	—	Bhutan
680	9,544	479	1,734	188	440	27	15	11	1.2	47	4,064	4,907	Bolivia	
...	...	...	366	94.0	...	...	—	—	—	—	174	—	Bosnia and Herzegovina
1.1	...	2	...	...	—	—	...	2	...	...	—	—	Botswana
306	9,603	12,952	16,762	92.3	11,773	17	548	623	3.4	1,908	9,967	12,254	Brazil	
391	10,556	59	1,458	3,982	1,100	17	71	0.6	1.8	9	463	672	Brunei	
5.7	353	729	3,301	423	15	67	0.2	39	5.0	115	495	2,505	Bulgaria	
...	...	...	...	...	...	...	—	...	...	...	—	—	Burkina Faso
...	...	...	...	...	...	...	—	—	—	—	—	—	Burundi
...	...	...	...	...	...	...	—	—	—	—	—	—	Cambodia
110	...	32	...	...	400	8	48	14	0.9	42	1,107	79	Cameroon
1,641	180,093	32,757	93,277	2,920	179,210 ⁴	...	764	610	19.1	2,017	23,564 ⁵	74,980 ⁵	Canada	
...	...	...	...	...	...	...	—	...	...	...	—	—	Cape Verde
—	—	—	—	—	—	—	—	—	—	—	—	—	Cayman Islands	
...	...	...	...	...	...	...	—	—	—	—	—	—	Central African Republic
98	1,967	1,444	8,436	524	1,500	...	1.3	75	4.7	227	205	—	Chad	
2,265	39,589	45,746	37,259	28.7	150	48	1,287	2,124	1.6	6,246	1,760	3,148	Chile	
...	...	...	...	...	16,000	19	...	...	...	...	21,362	22,664	China
113	7,843	1,489	7,843	173	1,453	9	189	112	2.5	286	9,298	4,360	Colombia	
...	...	...	...	...	...	...	...	...	...	...	...	...	Comoros
1.0	...	5.0	...	...	180	25	7.5	—	—	—	78	54	Congo, Dem. Rep. of the
91	141	5.8	141	40.1	1,600	18	84	5.5	1.7	21	744	93	Congo, Rep. of the	
...	...	16	...	—	...	...	—	3.0	0.9	24	242	—	Costa Rica
28	1,016	124	1,016	56.9	100	29	9.5	26	1.5	65	112	349	Côte d'Ivoire	
30	2,414	735	3,305	744	74	8	6.5	37	8.4	250	583	1,340	Croatia	
71	704	191	704	62.1	558	36	21	31	2.8	301	230	49	Cuba	
—	—	20	...	—	...	...	—	2.0	2.8	—	—	—	Cyprus
4.0	229	2,540	10,969	1,074	15	39	2.1	45	4.5	198	641	7,010	Czech Republic	
72	10,124	632	5,524	1,023	1,277	9	148	62	11	176	626	3,943	Denmark	
...	...	...	...	...	...	...	—	—	—	—	—	—	Djibouti
...	...	...	...	...	...	...	—	—	...	...	—	—	Dominica
—	...	39	0.7	0.6	...	...	...	16	1.8	48	104	—	Dominican Republic
...	...	2,568	...	...	...	...	1.0	—	—	—	—	—	East Timor
90	352	133	352	27.0	4,517	24	195	66	5.0	176	3,122	71	Ecuador	
1,657	32,967	2,830	29,378	428	3,700	13	253	240	3.5	726	6,017	7,476	Egypt	
—	...	34	...	—	...	...	...	7.1	1.0	22	—	—	El Salvador
37	480	...	480	927	1,100	20	55	2.6	5.0	—	31	98	Equatorial Guinea	
...	...	...	...	...	...	...	...	—	—	15	—	—	Eritrea

Energy (continued)

country	electricity										coal				
	installed capacity, 2004 ('000 kW)	production		power source, 2004			trade, 2004		consumption				reserves, 2005 ('000,000 metric tons)	pro-duction, 2004 ('000 metric tons)	con-sump-tion, 2004 ('000 metric tons)
		capacity, 2002 ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	fossil fuel (%)	hydro-power (%)	nuclear fuel (%)	exports ('000,000 kW-hr)	imports ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	per capita, 2004 (kW-hr)	resi-dential, latest (%)	non-resi-dential, latest (%)			
Estonia	2,554	22,294	10,128	99.7	0.3	—	2,141	347	8,334	6,168	55.4	44.6	...	13,993	15,561
Ethiopia	726	4,765	2,547	1.0	99.0	—	—	—	2,547	36	35.65	64.45	...	...	...
Faroe Islands	87	815	290	69.0	31.0	—	—	—	290	6,215	...	...	...	...	...
Fiji	199	1,752	540	19.4	80.6	—	—	—	540	613	22	78	...	...	13
Finland	16,569	145,144	85,817	55.8	17.6	26.9 ¹	6,797	11,677	90,687	17,374	...	...	...	...	8,082
France	112,151	1,018,919 ⁷	572,241 ⁷	10.1 ⁷	11.3 ⁷	78.6 ⁷	68,588 ⁷	6,548 ⁷	510,201 ⁷	8,231 ⁷	...	...	15	872 ⁷	20,820 ⁷
French Guiana	140	1,226	430	100.0	—	—	—	—	430	2,248	55.42	44.62	...	...	...
French Polynesia	133	964	485	81.0	19.0	—	—	—	485	1,821	...	...	...	...	...
Gabon	414	3,635	1,537	41.9	58.1	—	—	—	1,537	1,128	41.9	58.1	...	...	...
Gambia, The	29	254	151	100.0	—	—	—	—	151	96	...	...	...	...	...
Gaza Strip	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Georgia	4,388	39,035	6,924	12.6	87.4	—	—	1,281	8,205	1,577	...	...	...	8	12
Germany	118,850	1,100,825	616,785	64.2	4.5	27.1 ⁸	50,808	48,187	614,164	7,442	...	...	6,739	211,077	249,280
Ghana	1,432	10,985	6,044	12.6	87.4	—	878	665	6,257	289	7.2	92.8	...	...	4
Greece	11,320	99,163	59,344	89.2	8.8	2.0 ⁶	2,034	4,854	62,164	5,630	...	...	3,900	70,041	71,631
Greenland	106	929	270	100.0	—	—	—	—	270	4,789	...	...	183	...	...
Grenada	32	237	157	100.0	—	—	—	—	157	1,963	72.9	27.1	...	...	...
Guadeloupe	423	3,679	1,165	100.0	—	—	—	—	1,165	2,621	...	...	...	...	...
Guam	552	3,504	1,589	100.0	—	—	—	—	1,589	9,587	...	...	...	...	...
Guatemala	2,009	13,254	7,009	65.3	34.7	—	464	41	6,586	532	67.3	32.7	...	...	481
Guernsey	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Guinea	284	1,726	801	45.2	54.8	—	—	—	801	87	...	...	...	...	...
Guinea-Bissau	21	184	61	100.0	—	—	—	—	61	44	...	...	...	...	...
Guyana	313	2,707	835	100.0	—	—	—	—	835	1,080	...	...	...	...	...
Haiti	244	2,278	547	51.9	48.1	—	—	—	547	81	44.1	55.9	...	...	...
Honduras	1,044	7,989	4,877	51.9	48.1	—	—	357	5,234	730	69.5	30.5	...	...	174
Hong Kong	11,683	103,368	37,129	100.0	—	—	3,087	9,837	43,879	6,401	...	...	...	...	10,012
Hungary	8,272	74,670	33,708	64.0	0.6	35.4	3,056	10,524	41,176	4,070	65.5	34.5	3,357	11,242	13,472
Iceland	1,507	13,219	8,623	0.1	82.7	17.2 ⁶	—	—	8,623	29,430	...	...	...	...	104
India	131,434	1,105,862	665,873	84.0	12.7	2.6 ⁹	40	1,735	667,568	618	53.5	46.5	92,445	412,952	434,719
Indonesia	25,034	221,488	103,536	85.3	14.5	0.2 ¹⁰	—	—	103,536	476	46.9	...	4,968	119,700	14,167
Iran	34,310	310,104	164,481	93.5	6.5	—	—	—	164,481	2,460	...	...	419	1,246	1,707
Iraq	2,760	83,220	33,410	98.5	1.5	—	—	1,318	34,728	1,280	...	...	...	...	...
Ireland	5,163	47,646	25,627	93.4	4.0	2.6 ⁶	10	1,574	27,191	6,751	...	...	14	—	2,671
Isle of Man	...	...	...	...	...	...	...	...	337	4,610	...	...	...	...	...
Israel	9,981	87,924	49,025	100.0	—	—	1,459	—	47,566	6,924	61.6	38.4	...	439	13,314
Italy	71,355	751,398 ¹¹	303,347 ¹¹	81.1 ¹¹	16.4 ¹¹	2.5 ⁶ , 11	791 ¹¹	46,426 ¹¹	348,982 ¹¹	6,029 ¹¹	...	...	34 ¹¹	98 ¹¹	24,289 ¹¹
Jamaica	1,469	11,808	7,217	98.3	1.7	—	—	—	7,217	2,697	36.2	63.8	...	...	66
Japan	243,512	2,285,353	1,080,124	63.9	9.5	26.6 ¹²	—	—	1,080,124	8,459	...	...	359	—	180,807
Jersey	...	...	...	...	...	...	...	...	557	6,265	...	...	...	...	...
Jordan	1,789	15,663	8,967	99.4	0.6	—	1	826	9,792	1,638	66.1	33.9	...	...	...
Kazakhstan	17,157	165,476	68,942	88.0	12.0	—	7,403	5,234	64,773	4,320	...	...	31,279	89,945	63,950
Kenya	1,143	10,056	5,894	35.8	59.2	5.0 ⁶	—	84	5,978	179	38.8	61.2	...	...	108
Kiribati	3	26	10	100.0	—	—	—	—	10	99	...	...	...	...	...
Korea, North	9,500	83,220	21,974	43.1	56.9	—	—	—	21,974	968	...	...	600	30,140	30,006
Korea, South	58,779	522,219	371,011	63.1	1.6	35.3	—	—	371,011	7,716	41.8	58.2	80	3,191	84,926
Kosovo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait	9,392	82,274	41,256	100.0	—	—	—	—	41,256	15,423	93.3	6.7	...	...	...
Kyrgyzstan	3,720	32,386	15,145	6.9	93.1	—	3,382	54	11,817	2,320	25.4	...	812	461	1,436
Laos	691	2,488	1,295	3.5	96.5	—	750	217	762	126	...	...	...	290	290
Latvia	2,164	18,545	4,683	33.6	66.4	—	636	2,733	6,780	2,923	59.5	40.5	...	...	98
Lebanon	2,537	20,122	10,192	91.0	9.0	—	—	216	10,408	2,691	...	...	...	...	200
Lesotho	76	²	²	²	²	²	²	²	²	²	...	...	...	²	²
Liberia	253	2,926	330	100	—	—	—	—	330	118	...	...	...	...	...
Libya	4,710	41,260	20,202	100.0	—	—	—	—	20,202	3,147	...	...	...	...	4
Liechtenstein	¹³	¹³	¹³	¹³	¹³	¹³	¹³	¹³	¹³	¹³	...	...	...	...	¹³
Lithuania	5,772	57,536	19,274	16.7	4.9	78.4	11,488	4,293	12,079	3,505	...	...	...	...	264
Luxembourg	528	10,897	4,136	78.2	20.6	1.2 ⁶	3,132	6,506	7,510	16,348	...	...	...	...	129
Macau	489	3,478	1,973	100.0	—	—	—	151	2,124	4,564	87.2	12.8	...	...	...
Macedonia	1,526	13,087	6,665	77.8	22.2	—	—	1,176	7,841	3,863	...	...	...	7,245	7,551
Madagascar	227	1,997	990	35.4	64.6	—	—	—	990	56	31.7	68.3	...	...	10
Malawi	238	1,717	1,270	—	100.0	—	8	—	1,262	100	67.4	32.6	1.8	70	57
Malaysia	20,082	137,278	82,282	92.9	7.1	—	616	93	81,759	3,475	48.4	51.6	3.6	382	13,275
Maldives	49	385	160	100.0	—	—	—	—	160	539	...	...	...	...	...
Mali	280	999	455	47.3	52.7	—	—	—	455	41	99	1	...	...	...
Malta	570	4,511	2,216	100.0	—	—	—	—	2,216	5,542	...	...	...	...	326
Marshall Islands	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Martinique	396	3,469	1,190	100.0	—	—	—	—	1,190	2,771	...	...	...	...	...
Mauritania	115	1,007	240	85.0	15.0	—	—	—	240	80	...	...	...	...	7
Mauritius	663	5,782	2,165	94.4	5.6	—	—	—	2,165	1,775	64.7	35.3	...	...	289
Mayotte	...	...	...	...	...	...	—	—	139	666	...	...	...	...	...
Mexico	49,553	414,339	224,077	75.8	19.5	2.8 ¹⁴	1,006	47	223,118	2,190	...	...	1,211	9,882	13,446
Micronesia	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Moldova	2,954	8,953	3,617	98.4	1.6	—	424	3,361	6,554	1,554	...	...	...	...	186
Monaco	⁷	⁷	⁷	⁷	⁷	⁷	⁷	⁷	⁷	⁷	...	...	...	⁷	⁷
Mongolia	901	7,893	3,303	100.0	—	—	8	171	3,466	1,260	...	...	...	6,865	6,865
Montenegro ¹⁵	...	...	...									

	natural gas				crude petroleum							country		
	published proven reserves, 2007 ('000,000,-000 cu m)	production		consumption		reserves		production, 2004 ('000,000 barrels)	consumption, 2004 ('000,000 barrels)	consumption per capita (barrels)	refining capacity, 2007 ('000 barrels per day)			
		natural gas, 2004 ('000,000 cu m)	manufactured gas, 2004 ('000,000 cu m)	natural gas, 2004 ('000,000 cu m)	natural gas per capita (cu m)	published proven, 2007 ('000,000 barrels)	years to exhaust proven reserves, 2004					pipelines (2006) length (km)		
												petroleum	gas	
	...	...	117	923	658	—	—	—	—	—	—	—	859	Estonia
	25	...	3.5	4.7	...	0.4	...	—	5.6	0.1	—	—	—	Ethiopia
	...	...	...	...	...	...	...	—	—	—	—	—	—	Faroe Islands
	—	—	1,533	4,769	940	...	...	—	78	15.2	252	—	—	Fiji
	9.7	1,374 ⁷	8,847 ⁷	49,845 ⁷	804 ⁷	122	15	8.3	632 ⁷	10.2 ⁷	1,979	7,913 ⁷	14,588 ⁷	France
	...	...	...	...	...	...	...	—	—	—	—	—	—	French Guiana
	28	126	32	126	92.4	2,000	32	78	5.3	3.9	17	1,354	272	French Polynesia
	...	...	...	...	...	...	...	—	—	...	—	—	—	Gabon
	...	...	...	...	...	...	...	...	...	...	...	—	—	Gambia, The
	8.5	12	...	1,077	207	35	51	0.7	0.3	0.1	...	1,010	1,349	Gaza Strip
	255	22,564	19,596	120,583	1,461	367	17	25	811	9.8	2,428	7,373	25,072	Georgia
	23	...	122	...	...	15	...	...	13	0.6	45	13	316	Germany
	1.0	34	1,300	2,658	241	5.0	8	0.8	134	12.1	413	94	1,166	Ghana
	...	...	...	...	...	...	...	—	—	—	—	—	—	Greece
	...	...	...	...	...	...	...	—	—	—	—	—	—	Greenland
	...	...	...	...	...	...	...	—	—	—	—	—	—	Grenada
	...	...	...	...	...	...	...	—	—	—	—	—	—	Guadeloupe
	...	...	...	...	...	...	...	—	—	—	—	—	—	Guam
	3.1	—	—	—	—	83	79	7.3	2.2	0.2	...	480	—	Guatemala
	...	...	...	...	...	...	...	...	...	...	...	—	—	Guernsey
	...	...	...	...	...	...	...	...	...	...	...	—	—	Guinea
	...	...	...	...	...	...	...	...	...	...	...	—	—	Guinea-Bissau
	...	...	...	...	...	...	...	...	...	...	...	—	—	Guyana
	...	...	...	...	...	...	...	...	...	...	...	—	—	Haiti
	—	...	...	...	...	...	...	—	—	—	—	—	—	Honduras
	8.1	3,035	992	15,021	1,485	127	12	7.2	43	4.2	161	1,325	4,397	Hong Kong
	—	...	...	...	...	...	...	...	...	...	...	—	—	Hungary
	1,075	26,764	9,482	26,764	24.8	5,625	20	259	983	0.9	2,255	12,652	7,185	Iceland
	2,769	72,710	3,938	33,142	152	4,300	9	412	382	1.8	993	9,051	10,254	India
	27,581	81,259	5,049	83,865	1,252	136,270	61	1,430	539	8.0	1,451	16,329	18,138	Indonesia
	3,172	2,600	1,636	2,600	95.8	115,000	157	729	173	6.4	598	7,143	3,146	Iran
	9.9	805	184	4,263	1,058	—	—	—	21	5.3	71	—	1,728	Iraq
	...	...	...	...	...	...	...	—	—	—	—	—	—	Ireland
	36	1,125	621	1,125	164	2.0	—	—	79	11.5	220	703	193	Isle of Man
	164	12,966	7,964	80,638 ¹¹	1,393 ¹¹	600	16	37	629 ¹¹	10.8 ¹¹	2,324	1,136	17,589	Israel
	...	...	11	...	...	...	...	...	5.4	2.0	36	...	...	Italy
	40	5,228	34,398	81,950	642	59	14	2.1	1,466	11.5	4,672	170	8,015	Jamaica
	...	...	...	...	...	...	...	...	...	...	...	—	—	Japan
	6.0	267	180	267	47.3	1.0	...	—	30	5.3	90	49	426	Jersey
	2,832	22,104	2,683	16,472	1,099	30,000	21	374	90	6.0	345	11,433	11,677	Jordan
	...	...	76	...	...	...	...	...	15	0.4	86	894	—	Kazakhstan
	...	...	...	...	...	...	...	...	...	...	...	—	—	Kenya
	...	...	51	...	...	...	...	...	4.2	0.2	71	154	—	Kiribati
	...	...	...	...	...	...	...	...	...	...	...	—	—	Korea, North
	—	—	29,269	29,611	616	...	...	—	828	17.2	2,577	827	1,482	Korea, South
	1,557	9,700	5,787	9,700	3,626	101,500	106	855	321	120	889	597	269	Kosovo
	5.7	29	...	798	157	40	68	0.5	0.7	0.1	10	16	254	Kuwait
	...	...	...	...	...	...	...	...	...	...	...	540	—	Kyrgyzstan
	...	...	7	1,588	685	40	...	—	—	—	—	497	1,097	Laos
	...	...	...	...	...	...	...	...	—	—	—	—	43	Latvia
	...	...	2	...	...	...	...	...	2	—	—	—	—	Lebanon
	...	...	...	...	...	...	...	...	...	...	15	—	—	Lesotho
	1,491	6,817	954	5,746	895	41,464	61	566	126	20	380	6,916	4,363	Liberia
	...	...	...	...	...	...	...	...	...	...	...	...	...	Libya
	—	...	13	...	...	...	...	...	13	13	—	—	20	Liechtenstein
	...	...	935	2,828	821	12	212	2.2	64	18.5	190	349	1,696	Lithuania
	...	...	5	1,399	3,099	...	...	—	—	—	—	—	155	Luxembourg
	...	...	...	...	...	...	...	—	—	—	—	—	—	Macau
	...	...	23	2,731	647	...	...	—	6.0	0.3	50	120	268	Macedonia
	...	...	7	...	...	...	...	—	3.5	0.2	15	—	—	Madagascar
	2,124	55,889	1,714	30,045	1,277	3,000	11	280	201	8.5	545	1,829	5,654	Malawi
	...	...	...	...	...	...	...	...	...	...	...	—	—	Malaysia
	...	...	...	...	...	...	...	...	...	...	...	—	—	Maldives
	...	...	...	...	...	...	...	...	...	...	...	—	—	Mali
	...	...	...	...	...	...	...	...	...	...	...	—	—	Malta
	...	...	...	...	...	...	...	...	...	...	...	—	—	Marshall Islands
	28	...	32	...	...	...	...	...	4.4	10.2	17	—	—	Martinique
	...	...	48	...	...	100	...	...	...	...	...	—	—	Mauritania
	...	...	...	...	...	...	...	...	...	...	...	—	—	Mauritius
	...	...	...	...	...	...	...	...	...	...	...	...	...	Mayotte
	412	37,311	3,720	45,948	439	12,352	12	1,242	506	4.8	1,684	15,208	24,580	Mexico
	...	...	...	...	...	...	...	...	...	...	...	—	—	Micronesia
	...	...	...	2,408	571	...	...	...	...	...	...	—	606	Moldova
	...	...	7	...	...	...	...	...	7	7	—	—	—	Monaco
	...	...	...	...	...	...	...	...	...	...	...	...	...	Mongolia
	1.6	45	23	45	1.5	1.0	20	0.8	47	1.5	155	285	715	Montenegro ¹⁵
	127	1,182	...	2.8	0.1	...	...	...	...	...	...	294	918	Morocco
	283	7,184	57	1,455	29.1	50	7	7.1	7.5	0.1	57	558	2,224	Mozambique
	...	...	...	...	...	...	...	...	...	...	...	...	...	Myanmar (Burma)
	62	...	2	...	...	...	...	...	2	2	—	—	—	Namibia
	...	...	...	...	...	...	...	...	...	...	...	—	—	Nauru
	1,416	90,520	15,231	54,009	3,332	100	5	14	348	21.4	1,222	1,294	7,310	Nepal
	...	...	138	...	...	...	...	...	80	366	320	—	—	Netherlands, The
	...	...	...	...	...	...	...	...	...	...	...	...	...	Netherlands Antilles

Energy (continued)

country	electricity											coal			
	installed capacity, 2004 ('000 kW)	production		power source, 2004			trade, 2004		consumption				reserves, 2005 ('000,000 metric tons)	pro-duction, 2004 ('000 metric tons)	con-sump-tion, 2004 ('000 metric tons)
		capacity, 2002 ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	fossil fuel (%)	hydro-power (%)	nuclear fuel (%)	exports ('000,000 kW-hr)	imports ('000,000 kW-hr)	amount, 2004 ('000,000 kW-hr)	per capita, 2004 (kW-hr)	resi-dential, latest (%)	non-resi-dential, latest (%)			
New Caledonia	348	2,900	1,678	79.9	20.1	—	—	—	1,678	7,271	...	...	1.8	...	281
New Zealand	8,642	73,873	41,813	28.0	64.6	7.4 ⁶	—	—	41,813	10,238	...	...	571	5,156	3,774
Nicaragua	693	5,615	2,822	79.6	19.4	1.0 ⁶	22	23	2,823	525	70.7	29.3	...	...	...
Niger	105	920	247	100.0	—	—	—	220	467	40	56	44	70	178	178
Nigeria	5,898	51,518	20,224	65.8	34.2	—	—	—	20,224	157	...	...	244	3	3
Northern Mariana Islands	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Norway	26,637	245,674	110,598	1.0	98.8	0.2 ⁶	15,254	3,828	122,024	26,657	...	...	5.4	2,904	904
Oman	3,336	24,966	11,499	100.0	—	—	—	—	11,499	5,079	...	...	...	...	...
Pakistan	20,360	152,923	85,699	66.8	30.0	3.2	—	—	85,699	564	72.3	27.7	3,055	4,587	7,894
Palau	62	543	171	85.4	14.6	—	—	—	171	8,543	...	...	...	...	...
Panama	1,555	11,817	5,860	35.5	64.5	—	207	78	5,731	1,807	79.5	20.5	...	—	—
Papua New Guinea	544	4,135	1,399	33.7	66.3	—	—	—	1,399	258	27.9	72.1	...	...	...
Paraguay	7,416	64,964	51,921	0.1	99.9	—	44,997	—	6,925	1,141	79	21	...	...	...
Peru	5,970	51,798	25,547	23.2	76.8	—	—	—	25,547	927	67.74	32.34	1,060	16	963
Philippines	15,125	110,849	55,957	66.2	15.4	18.4 ⁶	—	—	55,957	686	65.34	34.74	236	2,485	9,461
Poland	30,041	268,038	154,159	97.5	2.5	—	14,605	5,312	144,866	3,793	41.84	58.24	14,000	162,428	145,091
Portugal	11,024	98,480	45,105	75.5	22.5	2.0 ⁶	2,131	8,612	51,586	4,925	...	...	36	—	5,514
Puerto Rico	5,358	42,933	24,130	99.4	0.6	—	—	—	24,130	6,195	...	...	...	...	176
Qatar	2,670	19,771	13,233	100.0	—	—	—	—	13,233	19,840	74.9	25.1	...	...	...
Réunion	440	3,846	1,620	64.2	35.8	—	—	—	1,620	2,114	...	...	...	...	...
Romania	20,073	191,879	56,503	61.0	29.2	9.8	3,766	2,584	56,321	2,548	27.1	72.9	495	31,792	35,099
Russia	215,277	1,863,848	931,865	65.3	19.2	15.5	19,800	12,179	924,244	6,425	36.1	63.9	157,010	262,344	220,438
Rwanda	35	377	173	2.9	97.1	—	10	120	283	31	...	...	...	...	...
St. Kitts and Nevis	20	175	130	100.0	—	—	—	—	130	3,333	...	...	...	...	...
St. Lucia	57	613	309	100.0	—	—	—	—	309	1,879	...	...	...	...	...
St. Vincent and the Grenadines	24	201	110	72.7	27.3	—	—	—	110	939	...	...	...	...	...
Samoa	29	210	110	63.6	36.4	—	—	—	110	619	...	...	...	...	...
San Marino	11	11	11	11	11	11	11	11	11	11	...	...	...	11	...
São Tomé and Príncipe	10	53	18	44.4	55.6	—	—	—	18	99	...	...	...	...	...
Saudi Arabia	29,119	211,116	156,506	100.0	—	—	—	—	156,506	6,902	...	...	...	...	...
Senegal	239	2,094	2,351	87.5	12.5	—	—	—	2,351	206	16.7	83.3	...	...	...
Serbia ¹⁵	9,315	103,184	38,489	69.0	31.0	—	1,318	1,032	38,203	3,530	...	...	16,591	41,157	41,441
Seychelles	95	815	220	100.0	—	—	—	—	220	2,716	24.3	75.7	...	...	...
Sierra Leone	132	1,139	85	100.0	—	—	—	—	85	15	...	...	...	...	...
Singapore	7,368	77,508	36,810	100.0	—	—	—	—	36,810	8,682	...	...	...	...	1
Slovakia	7,273	76,151	30,567	30.5	13.8	55.7	10,593	8,731	28,705	5,335	...	...	172	2,952	8,740
Slovenia	2,985	22,277	15,279	37.4	26.8	35.8	7,094	6,314	14,499	7,262	...	...	275	4,809	5,374
Solomon Islands	12	105	33	100.0	—	—	—	—	33	63	...	...	...	...	...
Somalia	80	701	286	100.0	—	—	—	—	286	29	...	...	...	...	...
South Africa	40,481	346,992 ²	247,777 ²	92.0 ²	2.8 ²	5.2 ²	13,329 ²	13,232 ²	247,680 ²	4,818 ²	28.5	71.5	48,750	244,062	180,287
Spain	60,978	529,157	280,007	59.4	12.3	28.3 ¹⁶	11,139	8,111	276,979	6,412	...	...	530	20,487	45,804
Sri Lanka	2,958	24,248	8,158	63.7	36.3	—	—	—	8,158	420	62.7	37.3	...	...	95
Sudan, The	755	6,631	3,883	72.8	27.2	—	—	—	3,883	116	...	...	...	...	...
Suriname	389	3,408	1,509	9.1	90.9	—	—	—	1,509	3,437	...	...	...	...	...
Swaziland	128	2	2	2	2	2	2	2	2	2	...	...	208	2	2
Sweden	33,317	294,765	151,727	8.7	40.0	50.7 ¹⁷	17,750	15,646	149,623	16,670	...	...	0.9	—	3,329
Switzerland	17,468 ¹³	157,408 ¹³	65,299 ¹³	4.3 ¹³	54.3 ¹³	41.4 ¹³	27,759 ¹³	27,056 ¹³	64,596 ¹³	8,669 ¹³	...	...	...	...	177 ¹³
Syria	6,470	56,502	32,077	86.8	13.2	—	—	—	32,077	1,784	...	...	...	...	...
Taiwan	33,290	34,598	181,245	75.5	3.6	20.9	—	—	167,478	7,406	32.4	67.6	0.9	...	...
Tajikistan	4,443	38,921	17,277	2.3	97.7	—	4,714	4,400	16,963	2,638	...	...	...	51	154
Tanzania	881	4,757	2,478	4.9	95.1	—	...	—	2,591	69	...	...	200	85	85
Thailand	24,805	258,481	125,727	95.2	4.8	—	372	3,388	128,743	2,020	58.3	41.7	1,354	20,060	28,085
Togo	28	333	262	38.9	61.1	—	—	348	810	102	...	...	...	...	...
Tonga	8	70	36	100.0	—	—	—	—	36	327	...	...	...	...	...
Trinidad and Tobago	1,416	12,413	6,430	100.0	—	—	—	—	6,430	4,921	35.3	64.7	...	...	...
Tunisia	2,932	21,331	13,067	98.8	1.2	—	28	—	13,039	1,313	54.1	45.9	...	...	1
Turkey	35,587	279,032	150,698	69.3	30.7	— ¹	1,144	463	150,017	2,122	...	...	4,186	46,379	64,450
Turkmenistan	3,106	34,427	11,470	100.0	—	—	1,654	—	9,816	2,060	...	...	...	...	...
Tuvalu	...	...	...	...	...	...	—	—	...	...	...	...	...	...	...
Uganda	303	2,356	1,896	—	100	—	170	—	1,726	63	...	...	...	...	...
Ukraine	52,408	462,659	182,167	45.7	6.5	47.8	7,529	2,203	186,831	3,727	...	...	34,153	59,670	65,179
United Arab Emirates	5,880	51,509	52,417	100.0	—	—	—	—	52,417	12,000	...	...	...	...	...
United Kingdom	76,187	674,730	395,853	77.4	1.9	20.7 ¹²	2,294	9,784	403,343	6,756	...	...	220	25,097	33,353
United States	942,178	8,040,594	4,174,481	79.1	8.2	12.7 ³	22,898	34,210	4,185,793	14,240	21.4	78.6	242,721	1,008,880	1,000,482
Uruguay	2,171	19,027	5,936	19.5	80.5	—	19	2,348	8,265	2,408	76	34	...	...	1
Uzbekistan	11,751	102,571	51,030	87.2	12.8	—	11,929	11,843	50,944	1,944	...	...	4,000	2,699	2,699
Vanuatu	12	105	44	100.0	—	—	—	—	44	206	...	...	...	...	...
Venezuela	20,577	180,255	98,482	29.0	71.0	—	—	—	98,482	3,770	23.8	76.2	479	6,748	—
Vietnam	9,029	44,054	46,029	38.3	59.9	1.8 ⁶	—	—	46,029	560	...	...	150	25,500	14,900
Virgin Islands (U.S.)	323	2,829	1,050	100.0	—	—	—	—	1,050	9,633	...	...	...	...	290
West Bank	...	...	...	...	...	...	...	1,929	1,929	513	...	...	...	...	1
Western Sahara	58	508	90	100.0	—	—	—	—	90	336	...	...	...	...	...
Yemen	997	7,096	4,337	100.0	—	—	—	—	4,337	208	...	...	...	...	...
Zambia	1,778	19,798	8,512	0.6	99.4	—	231	—	8,251	721	33	67	10	233	153
Zimbabwe	2,099	17,616	9,908	44.3	55.7	—	—	2,040	11,948	924	42.6	57.4	502	3,398	3,435

¹In addition, geothermal equals 0.1%. ²South Africa includes Botswana, Lesotho, Namibia, and Swaziland. ³In addition, geothermal equals 2.1%. ⁴Includes 173,936,000,000 of Canadian oil sands. ⁵2005. ⁶Geothermal. ⁷France includes Monaco. ⁸In addition, geothermal equals 4.2%. ⁹In addition, geothermal equals 0.7%. ¹⁰In addition, geothermal equals 0.2%. ¹¹Italy includes San Marino.

	natural gas						crude petroleum							country
	published proven reserves, 2007 ('000,000,-000 cu m)	production		consumption		reserves		production, 2004 ('000,000 barrels)	consumption, 2004 ('000,000 barrels)	consumption per capita (barrels)	refining capacity, 2007 ('000 barrels per day)	pipelines (2006) length (km)		
		natural gas, 2004 ('000,000 cu m)	manufactured gas, 2004 ('000,000 cu m)	natural gas, 2004 ('000,000 cu m)	natural gas per capita (cu m)	published proven, 2007 ('000,000 barrels)	years to exhaust proven reserves, 2004					petroleum	gas	
	...	...	...	...	...	...	...	...	...	...	...	...	...	New Caledonia
	25	3,776	438	3,776	925	53	7	7.4	38	9.3	104	568	1,962	New Zealand
	—	...	37	...	—	...	...	—	6.4	1.2	20	54	—	Nicaragua
	...	...	...	...	...	...	...	...	...	...	...	...	...	Niger
	5,151	22,388	167	9,668	75	36,220	33	899	38	0.3	439	7,795	3,063	Nigeria
	...	...	...	...	...	...	...	...	...	...	...	...	...	Northern Mariana Islands
	2,328	81,278	7,760	5,106	1,115	7,849	8	1,130	108	23.7	310	2,557	6,418	Norway
	850	18,096	139	8,019	3,542	5,506	20	285	27	12.0	85	3,405	4,072	Oman
	793	32,153	967	32,162	212	289	11	24	85	0.6	269	2,001	10,257	Pakistan
	—	...	...	...	...	—	—	—	—	—	...	—	—	Palau
	...	...	—	—	—	...	...	—	—	—	—	—	—	Panama
	345	85	...	85	15.7	240	12	18	0.5	0.1	33	264	—	Papua New Guinea
	...	...	...	...	...	...	...	...	0.5	0.1	8	—	—	Paraguay
	247	1,409	1,328	1,409	51.2	930	8	34	60	2.2	193	1,767	1,667	Peru
	99	2,479	559	2,479	30.4	139	22	0.1	75	0.9	333	240	565	Philippines
	165	5,821	6,045	17,616	461	96	18	6.6	134	3.5	467	2,161	13,552	Poland
	—	...	431	3,938	376	...	...	—	93	8.9	304	182	1,099	Portugal
	—	...	101	679	175	...	...	0.3	85	21.7	110	—	—	Puerto Rico
	25,783	41,155	2,865	16,872	25,296	15,207	47	269	34	50	200	844	1,639	Qatar
	...	...	...	...	...	...	...	—	—	—	—	—	—	Réunion
	63	12,114	2,474	16,269	749	600	18	41	94	4.3	517	2,427	3,508	Romania
	47,573	514,548	28,480	350,223	2,435	60,000	18	3,199	1,372	9.5	5,341	85,941	156,407	Russia
	57	0.2	—	0.2	...	...	...	—	—	—	—	—	—	Rwanda
	...	...	...	...	...	...	...	—	—	—	—	—	—	St. Kitts and Nevis
	...	...	...	...	...	...	...	—	—	—	—	—	—	St. Lucia
	...	...	...	...	...	...	...	—	—	—	—	—	—	St. Vincent and the Grenadines
	...	...	...	...	...	...	...	...	11	11	—	—	—	Samoa
	...	...	...	11	...	...	...	...	—	—	—	—	—	San Marino
	6,796	65,679	37,145	65,679	2,897	262,300	74	3,264	610	27	2,095	5,681	3,275	São Tomé and Príncipe
	—	13	20	13	1.1	...	...	—	8.6	0.8	27	—	—	Saudi Arabia
	48	306	111	2,342	216	78	34	4.8	29	2.7	215	393	3,177	Senegal
	...	...	...	...	...	...	...	—	—	—	—	—	—	Serbia ¹⁵
	...	...	...	...	...	...	...	—	—	—	—	—	—	Seychelles
	—	—	1,721	6,303	1,487	...	...	—	1.9	0.3	10	—	—	Sierra Leone
	...	...	...	...	...	...	...	—	324	76	1,337	8	139	Singapore
	14	169	1,625	6,555	1,218	9.0	24	0.3	42	7.8	115	416	6,769	Slovakia
	5.7	5.2	7.0	1,071	537	7.0	...	—	—	—	14	11	2,526	Slovenia
	...	...	...	...	—	...	...	—	—	—	—	—	—	Solomon Islands
	5.7	...	...	...	...	...	...	—	—	...	—	—	—	Somalia
	2.8	1,978	4,000	1,978	38.5	15	1	34	207	4.0	505	2,320	1,162	South Africa
	2.5	356	4,359	28,942	670	150	8	1.9	449	10.4	1,272	4,069	7,962	Spain
	—	...	74	...	—	...	...	—	16	0.8	50	—	—	Sri Lanka
	85	...	353	...	...	5,000	5	110	28	0.8	122	5,543	156	Sudan, The
	—	...	...	...	...	111	42	3.8	3.2	7.4	7	51	—	Suriname
	...	...	...	...	...	...	...	...	2	—	—	—	—	Swaziland
	—	...	1,836	1,054	117	...	...	—	150	16.8	434	—	798	Sweden
	...	...	571 ¹³	3,310 ¹³	444 ¹³	...	...	—	37 ¹³	5.0 ¹³	132	101	1,831	Switzerland
	241	6,860	334	6,860	382	2,500	18	159	85	4.7	240	2,000	2,764	Syria
	84	850	...	850	37.6	4.0	4	2.8	352	15.3	1,220	—	686	Taiwan
	5.7	32	...	563	87.6	12	111	0.1	0.1	...	—	38	549	Tajikistan
	6.5	127	—	127	3.4	...	...	—	—	—	15	872	254	Tanzania
	418	18,819	7,027	27,295	428	290	8	29	315	5.0	703	379	3,760	Thailand
	—	...	...	...	...	...	...	—	—	—	—	—	—	Togo
	...	...	...	...	...	...	...	—	—	...	—	—	—	Tonga
	733	26,303	1,032	12,527	9,588	728	13	45	48	36.6	175	571	1,531	Trinidad and Tobago
	65	2,070	76	3,278	330	400	12	25	12	1.2	34	1,578	2,945	Tunisia
	8.5	708	3,174	23,373	331	300	17	16	186	2.8	714	3,543	4,621	Turkey
	2,832	57,288	443	13,691	2,873	600	7	69	47	10	237	1,361	6,441	Turkmenistan
	...	...	...	...	...	...	...	...	...	—	—	—	—	Tuvalu
	...	...	...	...	...	...	...	—	—	—	—	—	—	Uganda
	1,104	20,479	5,476	78,531	1,655	395	48	22	178	3.7	880	8,725	19,951	Ukraine
	6,071	45,800	9,142	38,753	8,872	97,800	96	878	68	16	781	3,106	3,400	United Arab Emirates
	481	113,935	14,275	115,230	1,930	3,875	6	653	616	10.3	1,877	9,538	22,205	United Kingdom
	5,788	529,874	121,163	622,433	2,117	21,757	11	1,965	5,869	20	17,339	244,620 ¹⁸	548,665 ¹⁸	United States
	—	—	161	111	32.3	...	...	—	15.4	4.5	50	160	257	Uruguay
	1,841	57,288	285	54,369	2,074	594	11	32	32	1.2	222	868	9,594	Uzbekistan
	...	...	...	...	...	...	...	—	—	—	—	—	—	Vanuatu
	4,315	24,964	5,849	24,964	956	80,012	70	1,022	373	14	1,282	10,280	5,369	Venezuela
	193	5,501	391	5,501	67.0	600	16	144	—	—	—	256	595	Vietnam
	—	...	...	...	...	...	...	6	42	380	495	—	—	Virgin Islands (U.S.)
	...	...	...	...	...	...	...	—	—	—	—	—	—	West Bank
	...	...	...	...	...	...	...	—	—	—	—	—	—	Western Sahara
	479	...	104	...	...	3,000	26	148	29	1.4	130	1,284	93	Yemen
	—	...	19	...	—	...	...	—	3.0	0.3	24	771	—	Zambia
	...	...	105	...	—	...	...	—	—	—	—	261	—	Zimbabwe

¹²In addition, geothermal equals 0.5%.¹⁷In addition, geothermal equals 0.6%.¹³Switzerland includes Liechtenstein.¹⁸2003.¹⁴In addition, geothermal equals 1.9%.¹⁵Serbia includes Montenegro.¹⁶In addition, geothermal equals 5.6%.

Communications

Virtually all the states of the world have a variety of communications media and services available to their citizens: book, periodical, and newspaper publishing (although only daily papers are included in this table); postal services; and telecommunications systems, that is, television broadcasting, telephones (fixed and mobile), personal computers (PCs), and access to the Internet (including broadband). Unfortunately, the availability of information about these services often runs behind the capabilities of the services themselves. Certain countries publish no official information; others publish data analyzed according to a variety of fiscal, calendar, religious, or other years; still others, while they possess such data almost simultaneously with the end of the business or calendar year, may not see them published except in company or parastatal reports of limited distribution. Even when such data are published in national statistical summaries, it may be only after a delay of up to several years.

The data also differ in their completeness and reliability. Book production data generally include all works published in separate bindings except advertising works, timetables, telephone directories, price lists, catalogs of

businesses or exhibitions, musical scores, maps, atlases, and the like. The figures include government publications, school texts, theses, offprints, series works, and illustrated works, even those consisting principally of illustrations. Figures refer to works actually published during the year of survey, usually by a registered publisher, and deposited for copyright. A book is defined as a work of 49 or more pages; a work published simultaneously in more than one country is counted as having been published in each. A periodical is a publication issued at regular or stated intervals and, in Unesco's usage, directed to the general public. Newspaper statistics are especially difficult to collect and compare. Newspapers continually are founded, cease publication, merge, or change frequency of publication. Data on circulation are often incomplete, slow to be aggregated at the national level, or regarded as proprietary. In some countries no daily newspaper exists.

Post office statistics are compiled mainly from the Universal Postal Union's annual summary *Statistique des services postaux*. Postal services, unlike the other media discussed earlier, tend most often to be operated by a single national service, to cover a country completely, and to record traf-

Communications													
country	publishing (latest)							postal services				telecommunications	
	books		periodicals		daily newspapers			post offices, 2004				television, 2000	
	number of titles	number of copies ('000)	number of titles	number of copies ('000)	number	average circulation ('000)	circulation per 1,000 adult persons	number	persons per office	pieces of mail handled ('000,000)	pieces handled per person	receivers (all types; '000)	receivers per 1,000 persons
Afghanistan	2,795	3,741	...	...	12	27	1.5	410	69,693	2.4	0.03	362	14
Albania	381	5,710	143	3,477	21	75	28	563	5,527	7.6	1.8	383	123
Algeria	670	...	48	803	24	1,000	41	3,287	9,844	234	11	3,330	110
American Samoa	...	...	...	...	2	9	231	...	...	...	...	13	211
Andorra	57	...	...	...	2	32	525	...	...	...	...	30	458
Angola	22	419	...	...	5	41	5.9	55	281,637	0.7	0.05	193	19
Antigua and Barbuda	...	...	...	...	2	9	180	13	6,194	6.0	32	33	501
Argentina	9,850	39,663	...	...	182	1,501	97	5,689	6,745	393	9	10,500	293
Armenia	396 ⁵	20,212 ⁵	44	541	12	31	12	907	3,298	3.6	0.6	759	244
Aruba	...	...	...	...	13	54	675	4	17,100	12	94	207	2047
Australia	10,835	...	...	...	49	3,151	186	3,844	5,188	5,727	261	14,200	738
Austria	25,358	...	2,792	...	16	2,988	428	1,999	4,088	2,054	252	4,310	536
Azerbaijan	542	2,643	49	801	24	130	22	1,311	6,373	7	1.2	2,080	259
Bahamas, The	...	...	...	...	4	40	179	62	5,141	26	46	75	247
Bahrain	40 ⁵	...	26	73	6	155	299	13	55,063	48	54	256	402
Bangladesh	...	...	...	...	37	1,400	14	9,995	13,928	290	2.1	909	7.0
Barbados	...	...	...	...	2	48	212	18	14,938	45	156	78 ⁸	290 ⁸
Belarus	3,809	59,073	155	3,765	10	940	113	3,784	2,593	876	51	3,420	342
Belgium	13,913	...	13,706	...	29	1,665	190	1,369	7,597	3,713 ⁹	346 ⁹	5,550	541
Belize	70	—	...	...	10	23.5	0.5	1347	1,7207	4.07	127	42 ⁸	179 ⁸
Benin	84 ⁵	42 ⁵	...	...	8	50	11	178	45,939	12	1.0	289	45
Bermuda	...	...	...	...	1	19	352	...	...	...	...	66 ⁹	1,031 ⁹
Bhutan	...	...	...	...	1	...	...	110	19,235	1.4	1.9	13 ⁸	20 ⁸
Bolivia	...	...	...	...	19	140	23	78	84,300	9.9 ⁹	0.7 ⁹	970	119
Bosnia and Herzegovina	...	...	...	...	7	75	19	245	15,957	29	13	411	111
Botswana	158 ⁵	...	14	177	2	76	65	181	9,773	39	22	41	25
Brazil	21,57410	104,39710	...	...	532	8,523	62	12,367	14,871	8,318	44	58,900	343
Brunei	45 ⁵	56 ⁵	15	132	2	45	167	32	11,428	10	26	216	668
Bulgaria	4,840	20,317	772	1,740	62	653	98	3,008	2,587	131	17	3,600	449
Burkina Faso	12 ⁵	14 ⁵	37	24	5	32	4.2	73	175,640	3.5	0.5	147	12
Burundi	...	...	...	...	1	20	4.4	32	227,557	162	1.32	171	30
Cambodia	...	...	...	...	6	55	6.0	79	174,660	3.7	0.2	100	8.0
Cameroon	...	...	...	...	3	73	6.9	3777	37,0007	6.17, 11	0.47, 11	503	34
Canada	19,900	...	1,400	37,108	100	6,249	232	...	...	...	...	21,700	716
Cape Verde	...	...	...	...	4	...	...	54 ⁹	7,780 ⁹	1.6 ⁹	2.1 ⁹	2.0	4.6
Cayman Islands	...	...	...	...	...	18	487	...	...	...	...	237	6397
Central African Republic	...	...	...	...	6	5.0	2.0	24	166,082	...	...	21	6.0
Chad	...	...	...	...	1	2.0	0.2	42	224,951	10	0.6	8.4	1.0
Chile	2,469	4,095	417	3,450	59	851	70	710 ⁹	20,870 ⁹	343 ⁹	23 ⁹	3,580	242
China	130,613	7,24012	7,999	250,400	1,035	103,62013	10813	66,393	19,700	25,163	19	370,000	293
Colombia	1,481	11,314	...	...	24	1,580	67	1,996	22,500	97	2.0	11,200	282
Comoros	...	...	...	...	1	...	...	37 ⁹	17,800 ⁹	0.4 ⁹	0.3 ⁹	...	...
Congo, Dem. Rep. of the	64 ⁵	535 ⁵	...	...	8	50	1.5	497 ⁹	98,870 ⁹	...	...	15014	3,014
Congo, Rep. of the	...	...	3	34	6	8	3.9	...	...	...	...	45	13
Costa Rica	963	...	...	...	7	229	70	149	28,544	26	6.2	907	231
Côte d'Ivoire	...	...	...	...	20	200	19	197	90,720	40	2.1	950	60
Croatia	1,718	...	352	6,357	12	795	216	1,158	3,920	367	65	1,300	293
Cuba	932	4,610	14	285	16	1,800	195	1,855 ⁹	5,990 ⁹	12 ⁹	1.1 ⁹	2,800	250
Cyprus	930	1,776	39	338	8	102	162	1,111	743	71	69	120	180
Czech Republic	10,244	...	1,168	81,387	81	2,364	268	3,419	2,992	3,364	303	5,200	508
Denmark	12,352	...	157	6,930	34	2,871	647	996	5,436	1,389	257	4,310	807
Djibouti	...	...	7	6.0	—	—	—	11	70,828	0.9	0.4	31	71
Dominica	...	...	...	...	—	—	—	...	...	...	...	16	220
Dominican Republic	...	...	...	...	11	619	97	278	31,539	6.6	0.6	810	97
East Timor	...	...	...	...	2	3	4.3	5	177,367	0.1	0.1	...	...
Ecuador	12 ⁵	19 ⁵	199	...	36	64015	6915	315 ⁹	38,600 ⁹	13 ⁹	0.4 ⁹	2,710	218
Egypt	2,215	92,353	258	2,373	17	2,700	50	5,615	12,937	312	3.2	12,200	189
El Salvador	...	...	45	774	5	250	56	317	21,333	9	0.8	1,250	201
Equatorial Guinea	...	...	...	...	—	...	...	20	24,612	...	...	4.07	9.07
Eritrea	106	420	...	...	—	—	—	66	64,114	2.8	0.4	97	26

fic data according to broadly similar schemes (although the details of *classes* of mail handled may differ). Some countries do not enumerate domestic traffic or may record only international traffic requiring handling charges. Data on mail traffic includes the number of copies of newspapers and excludes advertising material and ordinary money orders.

Data for some kinds of telecommunications apparatus are relatively easy to collect; telephones, for example, must be installed, and service recorded so that it may be charged. But in most countries the other types of apparatus mentioned above may be purchased by anyone and used whenever desired. As a result, data on distribution and use of these types of apparatus may be collected in a variety of ways—on the basis of numbers of subscribers, licenses issued, periodic sample surveys, trade data, census or housing surveys, or private consumer surveys. Data on telephones refer to “main lines,” or the lines connecting a subscriber’s apparatus (fixed or mobile) to the public, switched net. The information provided for the number of PCs is estimated only. “Users” refers to the number of people with access to computers connected to the Internet.

The *Statistical Yearbook* of Unesco contains extensive data on book, periodical, and newspaper publishing, and on television broadcasting that have been collected from standardized questionnaires. The quality and recency of its data, however, depend on the completion and timely return of each questionnaire by national authorities. The commercially published annual *World Radio TV Handbook* (Andrew G. Sennitt, editor) is a valuable source of information on broadcast media and has complete and timely coverage. It depends on data received from broadcasters, but, because some do not respond, local correspondents and monitors are used in many countries, and some unconfirmed or unofficial data are included as estimates. The statistics on telecommunications apparatus and computers are derived mainly from the UN-affiliated International Telecommunication Union’s *World Telecommunication Development Report* (annual).

... Not available.

— None, nil, or not applicable.

										country	
	telephones, 2008		cellular phones, 2008		personal computers, 2005		Internet users, 2008		broadband, 2008		
	main lines		cellular sub- scrip- tions (⁰ 00)	subscrip- tions per 1,000 persons	units (⁰ 00)	units per 1,000 persons	number (⁰ 00)	users per 1,000 persons	subscriptions (⁰ 00)	subscriptions per 1,000 persons	
	(⁰ 00)	per 1,000 persons									
	101	3.7	7,899	290	...	...	500	18	0.5 ¹	— ¹	Afghanistan
	316	101	3,141	999	36 ²	12 ²	471 ¹	150 ¹	10	3.1	Albania
	3,314	96	31,871	927	350	11	4,100	119	287 ³	8.5 ³	Algeria
	10	157	2,2 ²	38 ²	...	...	...	...	...	...	American Samoa
	37	443	64	761	...	...	59	700	21	245	Andorra
	114	6.3	6,773	376	27 ²	1.9 ²	550	31	...	...	Angola
	38	439	137	1,577	...	...	65	750	13	145	Antigua and Barbuda
	9,631	241	46,509	1,166	3,000 ²	82 ²	11,212	281	3,185	80	Argentina
	650	211	2,336	759	200 ⁴	66 ⁴	196	64	2,0 ⁶	0.7 ⁶	Armenia
	39	365	127	1,205	...	...	24	228	18	174	Aruba
	9,370	445	22,120	1,050	13,720 ⁴	689 ⁴	15,170	720	5,140	244	Australia
	3,285	394	10,816	1,297	4,996	611	5,387	646	1,729	207	Austria
	1,311	150	6,548	750	195	23	1,500	172	60	6.9	Azerbaijan
	133	394	358	1,060	...	...	142	421	34	101	Bahamas, The
	220	284	1,400	1,805	121 ⁴	164 ⁴	403	520	125	161	Bahrain
	1,345	8.4	44,640	279	1,650 ⁴	114	556	3.5	443	0.3 ³	Bangladesh
	150	588	406	1,591	40	149	188	737	55 ¹	205 ¹	Barbados
	3,718	384	8,693	898	109 ⁴	114	2,850	295	478	49	Belarus
	4,457	421	11,822	1,116	3,627 ⁴	351 ⁴	7,297	689	2,963	280	Belgium
	31	104	160	532	35 ⁴	127 ⁴	34	113	7.7	27	Belize
	159	18	3,435	397	32	4.3	160	19	2,0 ³	0.2 ³	Benin
	58	890	79	1,221	34 ⁴	535 ⁴	51	788	241	367 ¹	Bermuda
	28	40	251	366	13	17	40	58	2.1	3.0	Bhutan
	690	71	4,830	498	190 ⁴	23 ⁴	1,000	103	34 ³	3.6 ³	Bolivia
	1,031	273	3,179	843	...	...	1,308	347	189	50	Bosnia and Herzegovina
	142	74	1,486	773	80 ⁴	45 ⁴	80	42	3,5 ³	1.9 ³	Botswana
	41,141	214	150,641	785	19,350 ⁴	107 ⁴	64,948	338	10,098	53	Brazil
	77	195	376	959	31 ⁴	85 ⁴	217	553	113	299	Brunei
	2,258	297	10,633	1,401	461 ⁴	59 ⁴	2,657	350	853	112	Bulgaria
	144	9.5	2,553	168	31	2.4	140	9.2	1.7 ¹	0.1 ¹	Burkina Faso
	30	3.8	481	60	34 ⁴	4.8 ⁴	65	8.1	0.2	—	Burundi
	45	3.1	4,237	291	38 ⁴	2.6 ⁴	74	5.1	8.4 ³	0.6 ³	Cambodia
	198	10	6,161	323	160 ⁴	9.8 ⁴	725	38	0.4 ³	— ³	Cameroon
	18,250	549	21,455	645	22,390 ⁴	705 ⁴	25,086	754	9,633	290	Canada
	72	144	278	557	48 ⁴	10 ⁴	103	206	7.4	15	Cape Verde
	38	683	34 ³	766 ³	...	...	23	413	...	...	Cayman Islands
	12	28	154	36	11 ⁴	2.8 ⁴	19	4.4	...	...	Central African Republic
	13	1.2	1,809	166	15 ⁴	1.7 ⁴	130	12	...	...	Chad
	3,526	210	14,797	881	2,300	148	5,457	325	1,426	85	Chile
	365,637 ³	275 ³	634,000	474	52,990 ⁴	40 ⁴	298,000	223	83,366	62	China
	6,820	152	41,365	919	1,892	42	17,117	380	1,903	42	Colombia
	23	35	42	64	5.0 ⁴	6.3 ⁴	23	35	...	...	Comoros
	37	6.0	9,263	144	...	...	290	4.5	...	...	Congo, Dem. Rep. of the
	22	6.1	1,807	500	17 ⁴	4.5 ⁴	155	43	...	...	Congo, Rep. of the
	1,438	318	1,887	418	1,014 ⁴	239 ⁴	1,460	323	176	39	Costa Rica
	357	17	10,449	507	262 ⁴	16 ⁴	660	32	10 ¹	0.5 ¹	Côte d'Ivoire
	1,851	419	5,924	1,340	842 ⁴	191 ⁴	2,244	508	525	119	Croatia
	1,104	99	332	30	377	34	1,450	129	1.9 ³	0.2 ³	Cuba
	413	479	1,017	1,179	249 ⁴	309 ⁴	335	388	104	121	Cyprus
	2,278	221	13,780	1,335	2,450 ⁴	240 ⁴	6,026	584	1,760	171	Czech Republic
	2,487	456	6,551	1,200	3,543 ⁴	659 ⁴	4,630	848	2,006	368	Denmark
	11	13	44 ⁶	55 ⁶	21 ⁴	31 ⁴	13	15	...	...	Djibouti
	18	262	100	1,497	9.0 ⁴	127 ⁴	28	412	6.5 ³	97 ³	Dominica
	986	99	7,211	725	...	...	2,563	256	226	23	Dominican Republic
	2.4	2.2	101	92	...	...	1.8	1.6	...	...	East Timor
	1,910	142	11,595	860	514	39	1,310	97	35	2.6	Ecuador
	12,011	147	41,273	506	2,800	38	12,569	154	769	9.4	Egypt
	1,077	176	6,951	1,133	350	51	826	135	124	20	El Salvador
	10	15	346	525	7.0 ⁴	14 ⁴	12.0	18	0.2 ¹	0.4 ¹	Equatorial Guinea
	40	8.2	109	22	35	8.0	150	30	—	—	Eritrea

Communications (continued)

country	publishing (latest)							postal services				telecommunications	
	books		periodicals		daily newspapers			post offices, 2004				television, 2000	
	number of titles	number of copies ('000)	number of titles	number of copies ('000)	number	average circulation ('000)	circulation per 1,000 adult persons	number	persons per office	pieces of mail handled ('000,000)	pieces handled per person	receivers (all types; '000)	receivers per 1,000 persons
Estonia	2,628	6,662	517	2,323	11	368	323	545	2,450	110	54	809	591
Ethiopia	240	674	...	...	5	92	2.1	650	116,307	29	0.3	376	6.0
Faroe Islands	...	...	...	...	1	17	447	33	1,416	11	271	47	1,022
Fiji	401	2,256	...	...	3	40	63	169	4,975	30	31	92	113
Finland	13,104	...	5,711	...	53	2,402	549	1,311	3,993	1,859	506	3,580	692
France	34,766	1,041	2,672	120,018	85	10,213	205	16,947	3,556	19,658	326	37,000	628
French Guiana	...	...	...	...	1	15	106	...	...	...	...	307	1727
French Polynesia	...	...	...	...	2	22	106	979	2,3709	289	1029	45	189
Gabon	...	...	...	...	1	20	24	60	22,706	6.6	3.7	410	326
Gambia, The	1416	1016	10	885	2	4	4.2	19	77,772	7.8	2.0	3.9	3.0
Gaza Strip ¹⁷	...	...	...	...	...	...	...	...	...	...	...	...	...
Georgia	5815	8345	...	...	9	24	6.2	998	4,527	3,241	716	2,380	474
Germany	71,515	...	9,010	395,036	371	20,707	292	13,019	6,348	23,869	289	48,200	586
Ghana	28	648	121	774	7	215	15	721	30,048	12518	2.518	2,300	118
Greece	4,225	...	...	...	32	1,515	259	2,200	5,045	734	54	5,330	488
Greenland	103	...	...	...	—	—	—	75	757	7.9	85	227	3937
Grenada	...	...	4	89	—	—	—	53	1,929	8.9	51	338	3558
Guadeloupe	...	...	...	...	1	2	5.8	...	...	...	...	1188	2628
Guam	...	...	...	...	1	20	161	...	...	...	...	1068	6468
Guatemala	...	...	...	...	6	520	69	436	28,199	34	2.1	697	61
Guernsey	...	...	...	...	...	...	...	12	5,000	56	642	...	...
Guinea	...	...	3	5.0	2	25	4.5	40	94,800	7.99	0.49	357	44
Guinea-Bissau	...	...	...	...	—	—	—	20	76,986	...	...	...	...
Guyana	425	5085	...	...	3	32	56	71	10,567	15	13	608	708
Haiti	...	...	...	...	3	23	4.6	55	152,853	1.7	0.3	36	5.0
Honduras	22	80	...	...	6	200	44	...	...	...	...	610	96
Hong Kong	...	...	598	...	30	3,41919	57019	131	53,152	1,2549	1759	3,290	493
Hungary	9,193	53,194	1,203	14,927	32	1,670	170	2,824	3,585	2,202	135	4,460	437
Iceland	1,527	...	938	384	3	218	883	94	3,106	68	355	1,43	509
India	11,903	...	...	...	410	98,841	135	153,0219	6,2409	16,3949	169	79,300	78
Indonesia	4,01816	8,10316	115	4,173	218	5,100	31	19,632	11,210	1,076	4.5	31,500	149
Iran	15,073	87,861	318	6,166	32	1,660	33	6,511	10,567	267	4.0	10,400	163
Iraq	...	...	...	...	11	...	...	278	100,924	699	2.19	1,880	83
Ireland	...	...	...	...	7	954	283	1,604	2,543	749	184	1,530	399
Isle of Man	...	...	...	...	...	...	...	31	2,475	49	651	...	...
Israel	2,31020	9,36820	...	...	34	1,050	208	661	9,986	764	116	2,040	335
Italy	35,236	278,821	9,951	80,469	94	9,453	193	13,855	4,189	6,661	115	28,100	494
Jamaica	...	...	...	...	3	115	61	603	4,377	71	26	502	194
Japan	56,2215	400,0135	2,926	...	107	68,521	625	24,678	5,184	28,016	219	92,000	725
Jersey	...	...	...	...	...	...	...	21	4,190	627	4687	...	...
Jordan	511	2,6735	31	43	4	383	77	392	12,941	24	4.8	417	84
Kazakhstan	1,226	21,014	...	...	4	500	30	3,733	3,975	153	10.1	3,580	241
Kenya	3005	452	...	...	5	320	15	865	38,691	136	4.1	758	25
Kiribati	...	...	...	...	—	—	—	257	3,2007	1.97	1.27	3	36
Korea, North	...	...	...	...	3	4,500	252	...	...	...	...	1,170	54
Korea, South	30,4875	142,8045	...	...	136	16,217	409	3,692	12,905	4,952	103	17,100	364
Kosovo	...	...	...	...	7	...	...	...	...	...	...	...	...
Kuwait	19622	6,10722	...	...	7	550	300	59	44,177	32	12	1,090	486
Kyrgyzstan	351	1,980	...	...	3	65	18	922	5,644	28	5.6	239	49
Laos	885	9955	...	...	4	25	6.5	234	24,751	1.1	0.2	53	10
Latvia	1,965	7,734	213	1,660	22	436	222	968	2,395	116	50	1,870	789
Lebanon	...	...	...	...	15	240	83	200	17,701	13	3.4	1,200	335
Lesotho	...	...	...	...	6	14	8.0	153	11,751	2.6	1.1	29	16
Liberia	...	...	...	...	3	55	31	3414	8,26014	...	...	79	25
Libya	26	2,645	...	...	5	100	25	360	15,945	50	8.8	717	137
Liechtenstein	...	...	...	...	2	20	714	12	2,850	34	977	127	3757
Lithuania	3,645	14,915	269	...	19	654	238	955	3,606	175	51	1,480	422
Luxembourg	681	...	508	...	6	134	358	105	4,211	220	485	170	391
Macau	67	99	16	...	10	190	491	18	25,401	27	58	123	286
Macedonia	892	2,496	74	347	13	225	144	320	6,345	28	14	571	282
Madagascar	119	296	55	108	9	110	10	617	29,356	269	1.59	372	24
Malawi	1175, 23	9,1745, 23	...	...	2	22	3.0	325	38,795	449	3.49	33	3.0
Malaysia	5,843	29,040	25	996	35	4,967	282	1,202	20,711	1,238	49	3,900	168
Maldives	...	...	...	...	3	21	100	216	1,487	1.4	4.8	11	40
Mali	145	285	...	...	4	40	6.4	1249	86,2009	3.49	0.29	1309	129
Malta	404	...	359	...	4	102	305	51	7,839	57	143	217	556
Marshall Islands	...	...	...	...	—	—	—	...	...	...	...	...	...
Martinique	...	...	...	...	1	68	200	...	...	...	...	667	1687
Mauritania	...	...	...	...	3	9	5.0	26	114,629	0.3	0.1	239	96
Mauritius	80	163	62	...	2	110	115	125	9,865	74	60	318	268
Mayotte	...	...	...	...	...	...	...	...	...	...	...	3.514	3014
Mexico	...	...	158	13,097	299	4,470	59	8,002	13,209	698	6.6	27,700	283
Micronesia	...	...	...	...	—	—	—	...	...	...	...	2.2	20
Moldova	921	2,779	76	196	6	303	103	1,146	3,681	99	24	1,270	297
Monaco	41	722	3	38	—	—	—	...	...	...	...	257	7587
Mongolia	2855	9595	45	6,361	6	54	29	385	6,790	20	8.1	155	65
Montenegro	...	...	...	...	...	60	9.6	...	...	...	...	...	...
Morocco	918	1,836	...	...	20	395	17	1,653	18,766	284	9.5	4,720	166
Mozambique	...	3,490	...	...	6	17	1.5	299	64,963	8.9	0.5	88	5.0
Myanmar (Burma)	3,660	4,038	...	...	8	370	11	1,331	37,569	...	...	292	7.0
Namibia	106	...	...	...	5	55	43	118	17,028	79	39	69	38
Nauru	...	...	...	...	—	—	—	1	10,100	...	...	0.57	0.17
Nepal	...	...	...	...	29	680	38	4,1569	5,2609	74	2.8	159	7.0
Netherlands	34,067	...	367	19,283	36	5,517	397	3,188	5,090	5,30324	32624	8,570	538
Netherlands Antilles	...	...	...	...	3	30	175	15	12,058	24	132	697	3217

										country	
	telephones, 2008		cellular phones, 2008		personal computers, 2005		Internet users, 2008		broadband, 2008		
	main lines		cellular subscriptions ('000)	subscriptions per 1,000 persons	units ('000)	units per 1,000 persons	number ('000)	users per 1,000 persons	subscriptions ('000)	subscriptions per 1,000 persons	
	('000)	per 1,000 persons									
	498	371	2,525	1,882	650	489	888	662	318	237	Estonia
	909	11	3,168	39	225 ⁴	3.1 ⁴	360	4.5	0.3 ³	— ³	Ethiopia
	22	440	55	1,106	...	...	38	756	15	300	Faroe Islands
	129	153	600	711	44 ⁴	52 ⁴	103	122	12 ³	14 ³	Fiji
	1,650	311	6,830	1,288	2,515 ⁴	482 ⁴	4,381	826	1,617	306	Finland
	35,000	564	57,972	935	35,000	579	42,309	682	17,691	285	France
	51	232	138 ²	781 ²	...	...	54	245	...	...	French Guiana
	55	205	187	704	78 ⁴	315 ⁴	90	339	28	104	French Polynesia
	27	18	1,300	898	45	33	90	62	2.0 ³	1.5 ³	Gabon
	49	29	1,166	702	23 ⁴	16 ⁴	114	69	0.3 ³	0.2 ³	Gambia, The
	...	...	...	...	...	...	...	...	...	...	Gaza Strip ¹⁷
	618	144	2,755	640	192 ⁴	38 ⁴	1,024	2	96	22	Georgia
	51,500	626	107,245	1,304	46,300 ⁴	561 ⁴	62,500	760	22,600	275	Germany
	144	6.2	11,570	496	112 ⁴	5.2 ⁴	997	43	17	0.7	Ghana
	5,975	537	13,799	1,239	986 ⁴	90 ⁴	3,640	326	1,507	135	Greece
	23	398	56	974	...	...	36	628	11	183	Greenland
	29	276	60	580	16 ⁴	155 ⁴	24	232	10	98	Grenada
	246	531	350 ⁴	790 ⁴	100 ⁴	217 ⁴	103	222	...	...	Guadeloupe
	66	373	33 ²	207 ²	...	...	85	484	2.7 ³	16 ³	Guam
	1,449	106	14,949	1,092	231 ⁴	18 ⁴	1,960	143	27 ⁶	2.2 ⁶	Guatemala
	45	...	32 ²	500 ²	...	...	46	720	...	...	Guernsey
	50	5.1	2,600	264	44 ⁴	55 ⁴	90	9.2	...	...	Guinea
	4.6	2.9	500	318	...	...	37	24	...	...	Guinea-Bissau
	125	164	281 ⁶	375 ⁶	29	39	205	269	2.0 ⁶	2.7 ⁶	Guyana
	108	11	3,200	324	...	...	1,000	101	...	...	Haiti
	826	113	6,211	849	110 ⁴	16 ⁴	659	90	...	...	Honduras
	4,108	588	11,374	1,629	4,172	593	4,124	591	1,948	279	Hong Kong
	3,094	309	12,224	1,221	1,476 ⁴	150 ⁴	5,500	549	1,542	154	Hungary
	187	593	342	1,084	142	483	284	900	100	317	Iceland
	37,900	32	346,890	294	17,000	15	81,000 ³	69 ³	5,280	4.5	India
	30,378	134	140,578	618	3,022 ⁴	144	30,000	132	295 ³	1.3 ³	Indonesia
	24,800	338	43,000	587	7,347 ⁴	105 ⁴	23,000	314	300	4.1	Iran
	1,082	36	17,529	582	...	...	300	10	...	...	Iraq
	2,202	496	5,048	1,138	2,011 ⁴	503 ⁴	2,830	638	891	201	Ireland
	...	...	...	...	...	...	...	...	...	...	Isle of Man
	2,900	411	8,982	1,274	5,037 ⁴	734 ⁴	2,106	299	1,600	227	Israel
	20,031	336	88,580	1,486	18,150 ⁴	317 ⁴	29,118	489	11,283	189	Italy
	317	117	2,723	1,006	166 ⁴	62 ⁴	1,540	569	98	36	Jamaica
	47,579	374	110,395	867	69,200 ⁴	542 ⁴	90,069	708	30,107	237	Japan
	74	...	61 ²¹	706 ²¹	...	...	29	317	...	...	Jersey
	519	85	5,314	866	300 ⁴	53 ⁴	1,501	245	128	21	Jordan
	3,410	220	14,911	961	...	...	2,300	148	661	43	Kazakhstan
	252	6.5	16,234	419	441 ⁴	144	3,360	87	18 ³	0.1 ³	Kenya
	4.0	41	1.0	10	2.0 ²	23 ²	2.0	21	...	...	Kiribati
	1,100 ⁸	50 ⁸	...	...	...	...	...	...	...	...	Korea, North
	21,325	443	45,607	947	26,201 ⁴	545 ⁴	37,476	778	15,475	321	Korea, South
	135 ¹	65 ¹	540 ¹	259 ¹	...	...	50 ¹	24 ¹	4.7 ⁶	2.3 ⁶	Kosovo
	541	185	2,907	996	600	223	1,000	343	25 ⁶	9.3 ⁶	Kuwait
	495	91	3,394	627	100	19	850	157	2.9	0.1	Kyrgyzstan
	98	16	1,822	294	100	17	130	21	3.6 ³	0.1 ³	Laos
	644	285	2,234	989	501 ⁴	219 ⁴	1,252 ³	552 ³	146 ³	64 ³	Latvia
	714	170	1,430	341	409	115	2,190	522	200 ³	48 ³	Lebanon
	65	32	581	284	...	...	73	36	...	...	Lesotho
	2.0	0.5	732	193	...	...	20	5.3	...	...	Liberia
	1,033	164	4,828	767	130 ⁴	23 ⁴	323	51	9.6 ¹	1.6 ¹	Libya
	20	550	34	954	...	...	23	646	14 ³	396 ³	Liechtenstein
	785	236	5,023	1,512	533 ⁴	155 ⁴	1,777	535	590	177	Lithuania
	261	542	707	1,471	290	624	387	805	143	298	Luxembourg
	176	334	933	1,772	130 ⁴	278 ⁴	259	492	121	231	Macao
	457	224	2,502	1,226	160	79	876	429	179	88	Macedonia
	165	8.6	4,835	253	91 ⁴	5.1 ⁴	316	17	6.2	0.3	Madagascar
	236	16	1,781	120	25	1.9	316	21	1.6 ³	0.1 ³	Malawi
	4,292	159	27,125	1,004	4,900 ⁴	197 ⁴	16,903	626	1,302	48	Malaysia
	47	154	436	1,482	36 ⁴	109 ⁴	72	235	16	52	Maldives
	83	6.5	3,267	257	45	4.0	125	9.8	5.3	0.4	Mali
	241	592	386	946	67	166	200	491	99	243	Malta
	4.4	73	1.0	16	5.0 ⁴	88 ⁴	2.2	36	...	...	Marshall Islands
	172	426	349 ⁴	884 ⁴	52 ²	130 ²	160	397	...	...	Martinique
	76	24	2,092	429	42 ⁴	14 ⁴	45 ³	14 ³	5.9	1.8	Mauritania
	365	285	1,033	807	344 ⁴	279 ⁴	380	297	73	57	Mauritius
	10	53	22 ²	15 ²	...	...	...	...	...	...	Mayotte
	20,539	189	75,304	694	14,000	131	23,260	214	7,605	70	Mexico
	8.7	79	34	308	...	...	16	145	—	—	Micronesia
	1,115	307	2,423	667	112 ⁴	26 ⁴	800	220	115	32	Moldova
	35	1,070	22	673	...	...	22	673	12 ³	377 ³	Monaco
	165	63	999	378	340	128	330	125	7.4 ³	2.8 ³	Mongolia
	362	582	...	...	...	...	294	472	26 ¹	42 ¹	Montenegro
	2,991	95	22,816	722	740	24	10,300	326	484	15	Morocco
	78	3.5	4,405	197	112 ⁴	5.9 ⁴	350	16	—	—	Mozambique
	829	17	376	7.6	400	8.5	46	0.9	1.5 ³	— ³	Myanmar (Burma)
	140	66	1,052	494	220 ⁴	109 ⁴	114	53	0.3 ³	0.1 ³	Namibia
	1.8	177	1.5 ²	130 ²	...	...	0.3 ²	26 ²	...	...	Nauru
	805	28	4,200	146	118 ⁴	4.6 ⁴	499	17	9.9 ³	0.4 ³	Nepal
	7,324	443	19,927	1,206	11,110 ⁴	685 ⁴	14,273	864	5,756	348	Netherlands
	88	451	200 ⁴	1,106 ⁴	...	...	2.0 ⁴	9.3 ⁴	...	...	Netherlands Antilles

Communications (continued)

country	publishing (latest)							postal services				telecommunications	
	books		periodicals		daily newspapers			post offices, 2004				television, 2000	
	number of titles	number of copies ('000)	number of titles	number of copies ('000)	number	average circulation ('000)	circulation per 1,000 adult persons	number	persons per office	pieces of mail handled ('000,000)	pieces handled per person	receivers (all types; '000)	receivers per 1,000 persons
New Caledonia	...	...	...	...	1	26	163	54	4,308	14	61	104	492
New Zealand	...	...	126	3,991	23	711	216	1,021	3,907	...	...	2,010	522
Nicaragua	...	...	...	...	6	175	48	183 ⁹	26,300 ⁹	8.3 ⁹	1.2 ⁹	350	69
Niger	5 ⁵	11 ⁵	...	...	1	4	0.6	52	259,952	1.9	0.2	388	37
Nigeria	1,314	18,800	...	...	25	510	6.5	5,342	24,094	391 ²	2.0 ²	7,840	68
Northern Mariana Islands	...	...	...	...	...	7	101	...	...	...	...	...	...
Norway	6,900 ²⁰	...	8,017	...	78	2,222	580	1,504	3,057	2,570	560	3,000	669
Oman	7 ⁵	21 ⁵	15	...	6	234	128	644	3,935	32	7.6	1,350	563
Pakistan	124	714	...	...	204	8,209	79	12,107	12,785	604	4.0	18,300	131
Palau	...	...	...	...	...	...	...	...	...	...	...	...	...
Panama	...	...	...	...	7	188	82	125	25,403	17	5.5	572	194
Papua New Guinea	122	...	...	...	2	55	15	...	...	...	...	88	17
Paraguay	152	...	...	...	4	125	30	264	22,792	4.6 ⁹	0.5 ⁹	1,200	218
Peru	612	1,836	...	...	73	4,250	154	1,947	14,156	21	0.7	3,840	148
Philippines	1,507 ⁵	14,718 ⁵	1,570	9,468	42	3,954 ¹⁹	68 ¹⁹	2,441	33,436	357	4.3	11,100	144
Poland	14,104	80,306	5,260	75,358	48	4,464	139	10,923	3,530	1,890	50	15,500	400
Portugal	7,868 ¹⁰	26,942 ¹⁰	984	10,208	16	1,065	128	3,026	3,451	1,950	186	6,380	630
Puerto Rico	...	...	...	...	5	580	188	...	...	...	...	1,260	330
Qatar	209 ¹⁶	2,205 ¹⁶	11	47	5	211	303	37	20,998	23	31	503	869
Réunion	69	...	...	...	3	72	130	...	...	...	...	127 ⁷	184 ⁷
Romania	7,199	38,374	987	...	51	1,413	79	6,821	3,195	402	19	8,340	381
Russia	36,237	421,387	2,751	387,832	485	15,300	105	40,140	3,585	4,634	34	61,500	421
Rwanda	...	...	15	101	1	0.5	0.1	19	467,493	2.5	0.3	10 ⁷	1.7 ⁷
St. Kitts and Nevis	...	...	10	44	1	3	103	7	6,027	3.1	66	12	260
St. Lucia	...	...	...	...	1	...	...	46	3,467	5.2	33	32 ⁷	208 ⁷
St. Vincent and the Grenadines	...	...	...	...	2	1.0	9.0	41 ⁷	2,680 ⁷	...	...	26	234
Samoa	...	...	...	...	2	...	...	38 ²	4,470 ²	0.9 ²	3.0 ²	11	61
San Marino	...	...	15	9	2	2.0	72	101 ⁴	3,000 ¹⁴	...	...	9.0 ⁷	346 ⁷
Sao Tome and Principe	...	...	...	...	1	...	...	9	16,996	0.3 ⁹	0.6 ⁹	34	228
Saudi Arabia	3,900 ⁵	14,493 ⁵ , 23	471	...	12	1,400	82	1,421 ⁹	14,200 ⁹	1,246 ⁹	45 ⁹	5,810	264
Senegal	...	...	...	...	18	47	5.0	137	83,109	12	1.1	376	40
Serbia	5,367 ²⁵	16,669 ²⁵	395 ²⁵	...	29 ²⁵	1,200	190	1,653 ²⁵	6,358 ²⁵	209 ²⁵	21 ²⁵	2,980 ²⁵	282 ²⁵
Seychelles	...	...	...	...	1	3.0	49	5	15,982	3.6	44	16	203
Sierra Leone	...	...	...	...	8	22	6.5	...	...	...	...	57	13 ²¹
Singapore	...	...	...	...	11	1,718	510	138	30,961	834	197	1,220	304
Slovakia	3,800	6,139	424	8,725	12	505	118	1,598	3,380	517	96	2,190	407
Slovenia	3,441	6,267	784	...	7	356	206	557	3,532	849	425	720	368
Solomon Islands	...	...	...	...	1	5	15	127 ⁹	3,150 ⁹	...	...	9.6	23
Somalia	...	...	...	...	8	21	4.1	...	...	...	...	102	14
South Africa	5,418	31,349	11	2,149	18	1,780	55	2,449 ⁹	17,200 ⁹	2,700	56	6,310	127
Spain	46,330	192,019	...	...	136	8,706	230	3,291	12,958	5,871	135	24,000	591
Sri Lanka	4,115	19,650	...	...	13	600	38	4,680	4,395	411	20	2,060	111
Sudan	...	...	...	...	10	92	4.0	209	169,966	2.7	0.1	9,580	273
Suriname	47 ⁵	21 ⁵	...	...	3	55	162	42	10,630	...	...	109	253
Swaziland	...	...	...	...	2	25	37	51	20,280	14	14	124	119
Sweden	13,496	...	373	19,242	95	4,595	601	1,720 ¹⁴	5,140 ¹⁴	4,570 ¹⁴	503 ¹⁴	5,090	574
Switzerland	15,371	...	60	4,561	93	3,695	576	2,585	2,801	5,674	761	3,940	548
Syria	598	310 ¹⁴	30	192	4	155	13	604	30,765	16	0.9	1,090	67
Taiwan	...	...	...	...	30	4,325	230	9,976	2,270	5,973	264	9,220 ⁸	417 ⁸
Tajikistan	132 ⁵	997 ⁵	11	130	—	217	47	593	10,844	24	3.6	2,010	326
Tanzania	172 ⁵	364 ⁵	...	...	19	115	5.2	418	90,017	38	1.1	650	20
Thailand	8,142	...	1,522	...	34	7,300	143	4,478	14,224	1,491	24	17,700	284
Togo	...	...	...	...	1	5	1.5	55	108,880	5.0	0.9	161	32
Tonga	...	...	...	...	—	—	—	...	...	...	...	2.0 ⁷	20 ⁷
Trinidad and Tobago	26	30	...	...	4	140	164	245 ⁹	5,220 ⁹	...	...	429	340
Tunisia	720	6,000 ²³	170	1,748	10	180	24	1,257	7,952	149	15	1,890	198
Turkey	6,546	...	3,554	...	81	5,165	97	4,381	16,485	925	13	30,300	449
Turkmenistan	450 ⁵	5,493 ⁵	...	...	2	45	14	190	25,084	91	19	911	196
Tuvalu	...	...	...	...	—	—	—	...	...	...	...	0.114	9.114
Uganda	288	2,229 ²⁰	26	158	5	100	6.6	329	84,561	25	0.9	620	27
Ukraine	6,225	68,876	717	2,521	38	3,836	95	15,554	3,021	1,230	26	22,500	456
United Arab Emirates	293 ²³	5,117 ²³	80	922	6	868	246	356	12,035	164	38	948	292
United Kingdom	107,263	...	...	...	109	18,041	358	14,609	4,071	21,865	361	38,800 ⁸	652 ⁸
United States	68,175	...	11,593	...	1,457	53,878	226	37,159	7,950	206,649	703	241,000	854
Uruguay	934	1,970	...	...	4	135	51	1,409	1,245	18	5.4	1,760	531
Uzbekistan	1,003	30,914	81	684	5	30	1.6	2,961	8,851	77	3.0	6,830	276
Vanuatu	...	...	...	...	1	3	21	...	...	...	...	2.3	12
Venezuela	3,468 ⁵	7,420 ⁵	...	...	92	2,480	139	355	74,034	58	2.2	4,490	185
Vietnam	5,581	83,000	338	2,710	10	2,820	45	3,061	27,152	545	6.7	14,500	185
Virgin Islands (U.S.)	...	...	...	...	1	17	...	10	2,175	1.8	17	65	594
West Bank ¹⁷	...	...	...	...	3	35	15	...	...	...	...	...	...
Western Sahara	...	...	...	...	1	...	...	...	...	...	...	6.0 ¹⁴	24 ¹⁴
Yemen	...	...	...	...	3	40	3.3	251	80,993	6.5	0.3	5,100	283
Zambia	...	...	...	...	3	54	8.7	195 ⁹	45,000 ⁹	20	1.8	1,400	134
Zimbabwe	232	...	28	680	3	115	15	1,162	11,133	137 ⁹	9.4 ⁹	2,074 ⁸	183 ⁸

											country
telephones, 2008		cellular phones, 2008		personal computers, 2005		Internet users, 2008		broadband, 2008			
main lines		cellular subscriptions ('000)	subscriptions per 1,000 persons	units ('000)	units per 1,000 persons	number ('000)	users per 1,000 persons	subscriptions ('000)	subscriptions per 1,000 persons		
('000)	per 1,000 persons										
	63 1,750 312 65 1,308	256 414 55 4.4 8.6	197 4,620 3,039 1,898 62,989	798 1,092 536 129 417	... 1,924 ⁴ 220 10 867 ⁴	... 493 ⁴ 43 0.7 6.8 ⁴	85 3,047 185 80 11,000	345 720 33 5.4 73	26 915 191 0.2 ⁶ 26	103 216 3.4 ¹ — ⁶ 0.2	New Caledonia New Zealand Nicaragua Niger Nigeria
	25 1,928 274 4,416 7.5	289 405 98 25 368	21 ¹ 5,287 3,219 88,020 ...	260 ¹ 1,109 1,156 497 ...	... 2,630 ⁴ 118 ⁴ 600 ^{2,1} ...	... 578 ⁴ 40 ⁴ 4.2 ^{2,1} ...	10 ⁴ 4,237 469 18,500 5.4 ³	0.1 ⁴ 889 168 105 270 ³	... 1,608 32 168 ...	... 337 12 0.9 ...	Northern Mariana Islands Norway Oman Pakistan Palau
	496 60 363 2,878 3,905	146 9.1 58 100 43	3,805 600 5,791 20,952 68,102	1,119 91 928 727 754	147 367 ⁴ 460 2,800 3,684 ⁴	46 63 ⁴ 75 100 45 ⁴	779 120 694 7,128 5,618	229 18 111 247 62	158 ... 94 726 496 ³	46 ... 1.5 25 5.6 ³	Panama Papua New Guinea Paraguay Peru Philippines
	10,336 4,121 1,038 263 444	271 386 262 206 539	44,004 14,910 3,354 ⁶ 1,683 579 ³	1,155 1,396 848 ⁶ 1,314 750 ³	7,362 ⁴ 1,402 ⁴ ... 133 ⁴ 322 ¹	191 ⁴ 139 ⁴ ... 215 ⁴ 452 ¹	18,671 4,451 1,000 436 280	490 417 252 340 343	3,428 ³ 1,692 118 ⁶ 103 57 ⁴	90 ³ 159 30 ⁶ 81 73 ⁴	Poland Portugal Puerto Rico Qatar Réunion
	5,036 44,200 17 20 41	236 313 1.7 400 240	24,467 187,500 1,323 80 170	1,145 1,326 136 1,567 995	2,450 ⁴ 17,400 ... 11 ⁴ 26 ⁴	110 ⁴ 121 ... 239 ⁴ 173 ⁴	6,131 45,400 300 16 100	287 321 31 313 587	2,510 9,280 4.2 9.6 ³ 14	118 66 0.4 190 ³ 82	Romania Russia Rwanda St. Kitts and Nevis St. Lucia
	23 29 21 7.7 4,100	209 161 683 4.8 163	130 124 18 49 36,000	1,192 693 568 31 1,429	16 ⁴ 1 ² 8,476 ⁴	132 ⁴ 6.7 ² 340 ⁴	66 9.0 16 25 7,700	605 5.0 514 155 306	9.4 0.1 ⁶ 4.0 0.3 ³ 1,048	86 0.4 ⁶ 128 2.0 ³ 42	St. Vincent and the Grenadines Samoa San Marino Sao Tome and Principe Saudi Arabia
	238 3,085 23 32 1,857	20 314 277 5.7 402	5,389 9,619 85 1,009 6,376	441 978 1,018 181 1,382	250 389 ^{4, 25} 16 ... 3,939 ⁴	21 37 ^{4, 25} 198 14 913 ⁴	1,020 2,361 32 14 3,370	84 240 382 2.5 730	47 451 3.4 ... 1,003	3.9 46 41 ... 217	Senegal Serbia Seychelles Sierra Leone Singapore
	1,098 1,010 8.0 100 4,425	203 501 16 11 89	5,520 2,055 14 627 45,000	1,022 1,020 27 70 906	1,929 808 22 6.2 ² 3,966	357 411 46 0.8 ² 84	2,771 992 10 102 4,187	513 492 20 11 84	619 427 1.0 ³ ... 378 ³	115 212 2.0 ³ ... 7.8 ³	Slovakia Slovenia Solomon Islands Somalia South Africa
	20,200 3,446 356 82 44	454 172 8.6 158 38	49,682 11,082 11,187 416 457	1,117 552 271 808 391	12,000 530 ⁴ 3,250 19 ⁴ 36 ⁴	281 28 ⁴ 90 42 ⁴ 33 ⁴	25,223 1,148 3,800 50 48	567 57 92 97 41	8,995 100 43 ³ 2.7 ¹ ...	202 5.5 1.1 ³ 5.9 ¹ ...	Spain Sri Lanka Sudan Suriname Swaziland
	5,323 4,820 3,633 14,273 360	578 639 171 620 53	10,988 8,780 7,056 25,413 265 ⁶	1,194 1,164 332 1,103 41 ⁶	6,861 ¹ 6,430 800 11,924 ⁴ ...	761 ¹ 862 42 524 ⁴ ...	8,100 5,739 3,565 15,143 600	880 761 168 657 88	2,905 2,480 11 5,024 ...	316 329 0.5 218 ...	Sweden Switzerland Syria Taiwan Tajikistan
	124 7,024 141 26 307	2.9 104 22 247 230	13,007 62,000 1,547 51 1,505	306 920 240 487 1,129	278 ⁴ 3,716 ⁴ 185 5.0 ⁴ 137 ⁴	7.4 ⁴ 59 ⁴ 30 48 ⁴ 105 ⁴	520 12,130 350 8.4 227	12 180 54 81 170	... 913 ³ 1.9 0.7 36 ³	... 14 ³ 0.3 7.0 27 ³	Tanzania Thailand Togo Tonga Trinidad and Tobago
	1,239 17,502 495 1.5 169	122 237 98 152 5.3	8,569 65,824 452 ... 8,555	843 891 90 ... 270	568 3,703 ⁴ 250	56 51 ⁴ 8.7	2,800 24,483 75 4.2 2,500	275 331 15 430 79	227 5,750 ... 0.4 ³ 4.8	22 79 ... 36 ³ 0.2	Tunisia Turkey Turkmenistan Tuvalu Uganda
	13,177 1,508 33,209 150,000 959	287 336 542 481 286	55,695 9,358 75,565 270,500 3,508	1,211 2,087 1,234 868 1,047	1,810 450 ⁴ 35,890 ⁴ 220,000 ⁴ 430 ⁴	39 120 ⁴ 604 ⁴ 741 ⁴ 133 ⁴	10,354 2,922 48,755 230,630 1,340	225 652 796 740 400	1,600 529 17,276 79,014 288	35 118 282 254 86	Ukraine United Arab Emirates United Kingdom United States Uruguay
	1,850 10 6,304 29,591 74	68 45 224 340 677	12,734 36 27,084 70,000 80 ⁶	468 154 963 804 718 ⁶	... 3 ⁴ 2,145 ⁴ 1,044 ⁴ ...	... 14 ⁴ 82 ⁴ 13 ⁴ ...	2,469 17 7,167 20,834 30	91 73 255 239 274	66 0.1 ⁶ 1,097 2,049 3.0 ⁶	2.4 0.3 ⁶ 39 24 27 ⁶	Uzbekistan Vanuatu Venezuela Vietnam Virgin Islands (U.S.)
	349 ⁶ ... 1,117 91 354	94 ⁶ ... 49 7.2 2.8	1,095 ⁶ ... 3,700 3,539 1,655	296 ⁶ ... 161 280 134	169 ⁴ ... 300 ⁴ 113 ⁴ 1,200	46 ⁴ ... 15 ⁴ 10 ⁴ 101	243 ⁶ ... 370 700 1,421	66 ⁶ ... 16 56 114	... ... ... 5.7 ³ 15 ³	... ... ... 0.4 ³ 1.2 ³	West Bank ¹⁷ Western Sahara Yemen Zambia Zimbabwe

¹2006. ²2002. ³2007. ⁴2004. ⁵First editions only. ⁶2005. ⁷1997. ⁸1999. ⁹1998. ¹⁰Including reprints. ¹¹Foreign dispatched and foreign received only. ¹²Millions of copies. ¹³Only free dailies. ¹⁴1996. ¹⁵Only free dailies 2003–05 and 2007. ¹⁶School textbooks and government publications only. ¹⁷West Bank includes Gaza Strip. ¹⁸Foreign received only. ¹⁹Only free dailies figures in 2003 and 2004. ²⁰Excludes government publications and textbooks. ²¹2001. ²²Government publications only. ²³School textbooks only. ²⁴Domestic and foreign received only. ²⁵Includes Montenegro.

Health services

The provision of health services in most countries is both a principal determinant of the quality of life and a large and growing sector of the national economy. This table summarizes the basic indicators of health personnel; hospitals, by kind and utilization; mortality rates that are most indicative of general health services; external controls on health (adequacy of food supply and availability of safe drinking water); and sources and amounts of expenditure on health care. Each datum refers more or less directly to the availability or use of a particular health service in a country, and, while each may be a representative measure at a national level, each may also conceal considerable differences in availability of the particular service to different segments of a population or regions of a country. In the United States, for example, the availability of physicians ranges from about one per 730 persons in the least well-served states to one per 260 in the best-served, with a rate of one per 150 in the national capital. In addition, even when trained personnel exist and facilities have been created, limited financial resources at the national or local level may leave facilities underserved; or lack of good transportation may prevent those most in need from reaching a clinic or hospital that could help them.

Definitions and limits of data have been made as consistent as possible in the compilation of this table. For example, despite wide variation worldwide in the nature of the qualifying or certifying process that permits an individual to represent himself as a physician, organizations such as the World Health Organization (WHO) try to maintain more specific international standards for training and qualification. International statistics presented here for "physicians" refer to persons qualified according to WHO standards and exclude traditional health practitioners, whatever the local custom with regard to the designation "doctor." Statistics for health personnel in this table uniformly include all those actually working in the health service field, whether in the actual provision of services or in teaching, administration, research, or other tasks. One group of practitioners for whom this type of guideline works less well is that of midwives, whose

training and qualifications vary enormously from country to country but who must be included, as they represent, after nurses, perhaps the largest and most important category of health auxiliary worldwide.

Hospitals also differ considerably worldwide in terms of staffing and services. In this tabulation, the term hospital refers generally to a permanent facility offering inpatient services and/or nursing care and staffed by at least one physician. Establishments offering only outpatient or custodial care are excluded. These statistics are broken down into data for general hospitals (those providing care in more than one specialty), specialized facilities (with care in only one specialty), local medical centres, and rural health-care centres; the last two generally refer to institutions that provide a more limited range of medical or nursing care, often less than full-time. Hospital data are further analyzed into three categories of administrative classification: public, private nonprofit, and private for profit. Statistics on number of beds refer to beds that are maintained and staffed on a full-time basis for a succession of inpatients to whom care is provided.

Data on hospital utilization refer to institutions defined as above. Admission and discharge, the two principal points at which statistics are normally collected, are the basis for the data on the amount and distribution of care by kind of facility. The data on numbers of patients exclude babies born during a maternal confinement but include persons who die before being discharged. The bed-occupancy and average length-of-stay statistics depend on the concept of a "patient-day," which is the annual total of daily censuses of inpatients. The bed-occupancy rate is the ratio of total patient-days to potential days based on the number of beds; the average length-of-stay rate is the ratio of total patient-days to total admissions. Bed-occupancy rates may exceed 100% because stays of partial days are counted as full days.

Two measures that give health planners and policy makers an excellent indication of the level of ordinary health care are those for mortality of children under age five and for maternal mortality. The former reflects the

Health services

country	health personnel							hospitals									
	year	physicians	dentists	nurses	pharma- cists	midwives	popu- lation per physi- cian	year	number	kinds (%)			ownership (%)			total number of hos- pital beds	hos- pital beds per 10,000 pop.
										gen- eral	spe- cial- ized	medical centres/ other	public	private non- profit	private for profit		
Afghanistan	2002	3,617	630 ¹	8,891	767	...	5,675	2002	73	...	...	277	77.0	—	23.0	12,668	16
Albania	2002	4,110	1,360 ¹	12,570 ²	...	...	753	2002	51	...	...	...	100.0	—	—	9,514	31
Algeria	2002	28,642	8,618	87,571	5,198	...	1,095	2002	513	...	...	...	...	...	...	34,544	12
American Samoa	2003	49	15	127	2 ¹	1 ¹	1,253	2003	1	100.0	—	—	100.0	—	—	128	21
Andorra	2003	244	42	194	64	10 ²	296	2003	2	100.0	—	—	50.0	—	50.0	233	33
Angola	1997	736	...	10,942	...	492	12,985	1990	58	...	...	...	...	...	...	11,857	12
Antigua and Barbuda	1999	76	12 ³	233	13 ³	31 ³	867	2003	3	50.0	50.0	—	100.0	—	—	255	25
Argentina	2002	99,358	28,900 ¹	16,000 ¹	...	...	373	2001	1,235 ⁷	...	...	...	56.8 ⁷	—	43.2 ⁷	115,803	20
Armenia	2003	11,728	710 ⁹	18,379	121	1,541 ⁹	256	2003	137	...	...	...	100.0	...	...	14,208	44
Aruba	2004	126	22	277	20	6	740	2004	3	50.0	—	50.0	100.0	—	—	305	32
Australia	2004	54,800	9,400	159,600	13,756	11,649 ¹⁰	375	2001–02	1,283	...	...	...	58.1	—	41.9	79,311	40
Austria	2004	37,447	4,029 ¹⁰	17,767 ¹⁰	1,581	1,579 ¹⁰	216	2003	310	40.1	—	59.9	...	...	...	71,741	81
Azerbaijan	2004	30,000	2,116 ¹⁰	59,872 ¹⁰	2,143	11,800	278	2003	735	...	...	...	100.0	...	...	68,500	83
Bahamas, The	2001	458	21 ¹¹	1,323 ¹¹	52 ⁴	...	672	2002	5	60.0	20.0	20.0	60.0	—	40.0	1,540	34
Bahrain	2003	1,189	144 ¹⁰	2,861 ¹⁰	131	...	580	2003	12	58.3	42.7	—	75.0	16.7	8.3	1,912	28
Bangladesh	2001	32,498	938 ⁷	18,135	7,485 ⁴	15,794	4,306	2001	568	...	...	...	69.3 ⁷	—	30.7 ⁷	44,030	3
Barbados	2002	376	63 ¹	988 ¹	138 ¹²	377 ¹²	721	2002	9	66.7	33.3	—	77.8	—	22.2	501	19
Belarus	2003	44,800	4,492	123,192 ¹⁰	3,001 ¹⁰	6,160 ¹⁰	220	2003	279	55.4 ¹	—	44.6 ¹	100.0	...	...	112,007	114
Belgium	2002	46,268	7,360 ¹¹	109,187 ¹¹	14,772	6,602 ¹¹	223	2001	363 ¹¹	80.4 ¹¹	19.6 ¹¹	...	38.6 ¹¹	61.4 ¹¹	...	71,907	70
Belize	2003	251	32 ²	303 ²	30 ¹¹	230 ¹¹	1,620	1999	7	...	...	...	100.0	—	—	598	25
Benin	2001	923	16 ¹⁴	5,003	85 ¹⁴	432 ¹⁴	7,183	2001	...	...	...	...	...	...	...	923	1
Bermuda	2003	121	22 ³	522 ³	29 ³	...	525	2003	2	50.0	50.0	—	...	...	...	226	36
Bhutan	2002	122	9 ⁴	500	5 ⁴	326 ¹⁴	6,019	2002	29	...	...	...	...	...	...	1,023	14
Bolivia	2002	2,987	692 ¹⁰	9,068 ¹⁰	...	...	2,827	2003	230	10.7 ¹⁴	8.9 ¹⁴	80.3 ¹⁴	...	...	...	12,464	15
Bosnia and Herzegovina	2003	5,576	679 ¹⁰	16,708 ¹⁰	350 ¹⁰	1,159 ¹⁰	691	2003	...	...	...	...	...	...	...	11,981	31
Botswana	2003	510	38 ¹	4,090 ¹	142 ¹	...	3,261	2003	30 ¹⁵	53.3 ¹⁵	3.3 ¹⁵	43.3 ¹⁵	...	...	...	3,816	22
Brazil	2001	357,888	165,599	89,710	66,727	...	485	2002	6,493	—	100.0	—	35.0	—	65.0	487,058	27
Brunei	2003	309	64	1,678	90 ²	404 ²	870	2003	10	90.0	—	10.0	90.0	—	10.0	905	26
Bulgaria	2003	28,243	6,482 ¹⁰	35,621 ¹⁰	1,020 ¹⁰	3,518 ¹⁰	277	2004	258	54.7	—	45.3	...	...	...	49,171	70
Burkina Faso	2001 ¹⁶	490	36	3,381	60	476	23,943	2001	78 ⁵	—	14.1 ⁵	85.9 ⁵	100.0	—	—	15,801	19
Burundi	2000	323	9 ⁴	1,783	62	...	21,737	1999	...	...	...	...	...	...	...	3,380	6
Cambodia	2004	2,122	241	8,085 ²	564 ¹	3,040 ²	6,173	2004	188 ¹¹	...	...	...	100.0	—	—	7,482	6
Cameroon	1996	1,031	56	5,112	...	70	13,510	1988	629	—	27.0	73.0	72.3	—	27.7	29,285	27
Canada	2002	59,294	17,287 ²	310,733 ²	24,518 ¹	358 ²	529	2002–03	1,079 ³	81.8 ³	16.6 ³	1.6 ³	95.8 ³	—	4.2 ³	115,120	36
Cape Verde	2001	123	...	1,907	6 ³	...	3,604	2000	65 ³	8.0 ³	—	92.0 ³	100.0	—	—	689	16
Central African Republic	2001	189	16 ¹⁴	217	22 ⁴	179	20,291	2001	255	—	21.1 ¹⁷	78.9 ¹⁷	79.7 ¹⁷	—	20.3 ¹⁷	4,126	11
Chad	2001	205	2 ¹⁰	1,220	38	161	42,700	2001	...	...	...	...	...	...	...	4,105	5
Chile	2003	17,250	6,750	10,000	1,830 ³	5,369 ³	925	2002	847	...	...	...	90.1	—	9.9	42,163	25
China	2002	2,122,019 ^{18, 19}	19	1,345,706	368,852 ¹	44,517 ¹	687	2002	69,105 ³	11.2 ³	13.4 ³	75.4 ³	100.0	—	—	3,004,000	23
Colombia	2002	58,761	33,951	52,281	...	...	729	2003	1,165	...	...	...	...	...	...	49,000	12
Comoros	2004	48	6 ⁴	180 ⁷	6 ⁴	74 ⁷	12,417	1995	...	...	...	...	...	...	...	1,450	29
Congo, Dem. Rep. of the	1996	3,224	514	20,652	59 ⁴	...	14,492	1986	400	...	...	...	52.5	—	47.5	...	21
Congo, Rep. of the	1995	632	35 ⁴	4,663	175 ⁴	160	4,083	1990	...	...	...	...	...	...	...	4,817	33
Costa Rica	2004	6,600	1,594 ¹	9,425 ¹	1,289 ¹	...	644	2003	29 ¹	...	...	...	87.9 ¹	—	12.1 ¹	6,000	14
Côte d'Ivoire	2001	1,113	219 ⁴	6,110	135 ⁴	2,196 ³	14,297	2001	...	...	...	...	...	...	...	5,981	4
Croatia	2003	10,820	3,021 ¹⁰	22,185 ¹⁰	2,235	1,491 ¹⁰	410	2003	70	54.0	46.0	—	...	...	...	24,927	56
Cuba	2002	67,417	9,841	83,880	...	...	167	2003	266	...	...	...	100.0	—	—	69,534	62
Cyprus ²¹	2000	1,800	619	2,931	584	120 ²²	390	2003	115	71.8 ⁷	22.1 ⁷	6.1 ⁷	10.0 ²²	0.9 ²²	89.1 ²²	1,236	57
Czech Republic	2003	44,106	6,698 ¹⁰	97,077 ¹⁰	5,199 ¹⁰	4,895 ¹⁰	230	2003	357	68.9	31.1	—	69.0	—	31.0	66,492	65
Denmark	2002	19,600	4,834	51,990	2,638	1,312	365	2002	69 ¹⁰	43.0 ¹⁰	57.0 ¹⁰	—	43.1 ¹⁰	56.9 ¹⁰	—	22,600	41

probability of a newborn infant dying before age five. The latter refers to deaths attributable to delivery or complications of pregnancy, childbirth, the puerperium (the period immediately following birth), or abortion. A principal source for the former data was UNICEF Child Mortality and for the latter, the UNICEF Report: Maternal Mortality in 2000.

Levels of nutrition and access to safe drinking water are two of the most basic limitations imposed by the physical environment in which health-care activities take place. The nutritional data are based on reported levels of food supply (whether or not actually consumed), referred to the recommendations of the United Nations' Food and Agriculture Organization for the necessary daily intake (in calories) for a moderately active person of average size in a climate of a particular kind (fewer calories are needed in a hot climate) to remain in average *good* health. Excess intake in the many developed countries ranges to more than 40% above the minimum required to maintain health (the excess usually being construed to diminish, rather than raise, health). The range of deficiency is less dramatic numerically but far more critical to the countries in which deficiencies are chronic, because the deficiencies lead to overall poor health (raising health service needs and costs), to decreased productivity in nearly every area of national economic life, and to the loss of social and economic potential through early mortality. By "safe" water is meant only water that has no substantial quantities of chemical or biological pollutants—*i.e.*, quantities sufficient to cause "immediate" health problems. Data refer to the proportion of persons having "reasonable access" to an "adequate" supply of water within a "convenient" distance of the person's dwelling, as these concepts are interpreted locally.

The data on health care expenditure were excerpted from a joint effort by the WHO and the World Bank to create better analytical tools by which the interrelations among health policy, health care delivery systems, and human health might be examined against the more general frameworks of government operations, resource allocation, and development process.

Expenditures were tabulated for direct preventative and curative activities and for public health and public education programs having direct impact on health status—family planning, nutrition, and health education—but not more indirect programs like environmental, waste removal, or relief activities. Public, parastatal (semipublic, *e.g.*, social security institutions), international aid, and household expenditure reports and surveys were utilized to build up a comprehensive picture of national, regional, and world patterns of health care expenditures and investment that could not have been assembled from any single type of source. For reasons of space, public and parastatal are combined as the former. A principal source for expenditures was the World Bank Group Statistical Database, which includes national statistics, UN databases, and World Bank surveys.

Internet resources for further information:

- WHO Global Health Atlas <http://globalatlas.who.int>
- WHO Regional Office for Africa <http://www.afro.who.int>
- WHO Regional Office for Europe <http://www.euro.who.int>
- WHO Regional Office for the Eastern Mediterranean <http://www.emro.who.int/index.asp>
- Pan American Health Organization <http://www.paho.org>
- WHO Regional Office for South-East Asia <http://www.whosea.org>
- ECOWAS Social and Economic Indicators <http://www.ecostat.org/en/Socio-Economic/Health.pdf>
- UNICEF Maternal Mortality in 2000. Annex Tables A, F; WHO, 2004 <http://www.reliefweb.int/library/documents/2003/who-saf-22oct.pdf>
- UNICEF Report on Child Mortality <http://www.childinfo.org/areas/childmortality/u5data.php>
- Human Development Report 2004 <http://www.undp.org>
- World Bank Database <http://devdata.worldbank.org/hnpstats>

No comparable source exists for hospitals.

	admissions or discharges			bed occupancy rate (%)	average length of stay (days)	mortality		population with access to safe water 2002 (%)	food supply (% of FAO requirement) 2002	total health expenditures, 2001				country	
	rate per 10,000 pop.	by kinds of hospital (%)				under age 5 per 1,000 live newborn 2003	maternal mortality per 100,000 live births 2000			as percent of GDP	per capita (U.S.\$)	by source (percent)			external grants/loans
		general	specialized									medical centres/other	public			private
...	257	1,900	13	117	5.2	8	52.6	47.4	11.2	Afghanistan
...	21	55	97	118	3.7	45	64.6	35.4	3.4	Albania
371 ³	49.3 ⁴	5 ⁴	41	140	87	126	4.1	70	75.0	25.0	0.1	Algeria
965 ⁵	100.0	—	—	38.4 ⁵	4 ⁵	...	...	...	...	...	...	...	...	...	American Samoa
...	7	...	100	...	5.7	1,261	71.0	29.0	—	Andorra
...
238 ⁶	44.5 ⁶	16 ⁶	260	1,700	50	89	4.4	37	63.1	36.9	14.2	Angola
872 ⁶	50.0 ^{3, 6}	83 ⁶	12	150 ³	91	100	5.6	456	60.9	39.1	2.9	Antigua and Barbuda
560 ^{6, 7}	52.0 ^{6, 8}	6 ⁶	20	82	97 ⁹	127	9.5	680	53.4	46.6	0.3	Argentina
...	44.7	10	33	55	92	89	7.8	46	41.2	58.8	3.7	Armenia
1,183	88.7	8	...	...	100	...	...	...	...	...	...	Aruba
...
...	78.2	5	6	8	100	115	9.2	1,776	67.9	32.1	—	Australia
2,790	74.6	8	5	4	100	140	8.0	1,806	69.3	30.7	—	Austria
...	91	94	77	101	1.6	83	66.9	33.1	7.7	Azerbaijan
837 ^{3, 8}	85.4 ^{3, 8}	113 ⁸	14	60	97	114	5.7	1,084	57.0	43.0	0.3	Bahamas, The
...	15	28	100 ⁹	...	4.1	490	69.0	31.0	—	Bahrain
...	69	300	99	95	3.5	11	44.2	55.8	13.3	Bangladesh
810 ¹²	93.5 ¹²	6.5 ¹²	—	88.3 ¹²	32 ¹²	13	95	100	128	6.5	634	66.3	33.7	4.8	Barbados
...	17	35	100	117	5.5	82	86.7	13.3	—	Belarus
1,963 ¹¹	96.0 ¹¹	4.0 ¹¹	—	84.4 ¹¹	12 ¹¹	5	10	100	140	8.9	1,983	71.7	28.3	—	Belgium
265 ¹³	39	140	91	127	5.2	167	45.1	54.9	6.1	Belize
...
...	154	850	68	111	4.4	18	46.9	53.1	21.5	Benin
1,313 ³	97.0 ³	3.0 ³	—	75.0 ³	8 ³	...	...	...	88	...	...	...	...	...	Bermuda
...	85	420	62	...	3.9	9	90.6	9.4	38.2	Bhutan
250 ³	48.0 ³	6 ³	66	420	85	94	5.3	61	66.3	33.7	12.2	Bolivia
612 ⁶	17	31	98	114	7.5	113	36.8	63.2	2.4	Bosnia and Herzegovina
...
...	112	100	95	93	6.6	151	66.2	33.8	0.4	Botswana
740 ⁷	7	35	260	89	128	7.6	227	41.6	58.4	0.5	Brazil
...	6	37	90 ⁹	127	3.1	429	79.4	20.6	...	Brunei
...	15	32	100	114	4.8	112	82.1	17.9	2.1	Bulgaria
...	207	1,000	51	102	3.0	9	60.1	39.9	25.6	Burkina Faso
...
...	190	1,000	79	71	3.6	3	59.0	41.0	43.7	Burundi
...	140	450	34	92	11.8	30	85.1	14.9	19.7	Cambodia
...	166	730	63	98	3.3	28	37.1	62.9	6.3	Cameroon
860	82.5	7	6	6	100	135	9.5	2,124	70.8	29.2	—	Canada
...	35	150	80	138	4.5	64	83.9	16.1	16.6	Cape Verde
...
...	180	1,100	75	88	4.5	10	51.2	48.8	32.4	Central African Republic
...	200	1,100	34	89	2.6	12	78.0	24.0	62.0	Chad
749 ^{3, 6}	69.9 ^{3, 6}	73 ⁶	9	31	95	117	7.0	253	44.0	56.0	0.1	Chile
418 ¹⁴	—60.4 ¹⁴ —	39.6 ¹⁴	...	66.9 ¹⁴	15 ¹⁴	37	56	77	125	5.5	52	37.2	62.8	0.2	China
614 ²⁰	41.4 ²⁰	16.7 ²⁰	41.9 ²⁰	57.2 ²⁰	6 ²⁰	21	130	92	111	5.5	159	65.7	34.3	0.2	Colombia
...
...	73	480	94	75	3.1	7	60.0	40.0	39.9	Comoros
...	205	990	46	72	3.5	4	44.4	55.6	18.0	Congo, Dem. Rep. of the
...	108	510	46	97	2.1	17	63.8	38.2	3.3	Congo, Rep. of the
958 ⁵	78.2 ⁵	6 ⁵	10	43	97	128	7.2	358	68.5	31.5	1.3	Costa Rica
...	192	690	84	114	6.2	41	16.0	84	3.2	Côte d'Ivoire
...
1,700	72.0	28.0	—	82.0	11	7	8	96 ⁹	110	9.0	366	81.8	18.2	0.1	Croatia
1,376 ⁵	8	33	91	136	7.2	186	86.2	13.8	0.2	Cuba
522 ⁷	81.0	6	5	47	100	131	8.1	764	47.7	52.3	2.3	Cyprus ²¹
1,835	98.0	2.0	—	81.2	9	4	9	100	128	7.4	408	91.4	8.6	—	Czech Republic
1,857	87.0	13.0	—	90.0	9	4	5	100	128	8.4	2,565	82.4	17.8	—	Denmark

country	health personnel	hospitals
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					mortality	population with access to safe water 2002 (%)	food supply (% of FAO requirement) 2002	total health expenditures, 2001					country		
	admissions or discharges		bed occupancy rate (%)	average length of stay (days)				under age 5 per 1,000 live newborn 2003	maternal mortality per 100,000 live births 2000	as percent of GDP	per capita (U.S.\$)	by source (percent)		external grants/loans	
	rate per 10,000 pop.	by kinds of hospital (%)										public			private
		general	specialized	medical centres/other											
...	138	730	80	96	7.0	51	58.8	41.2	30.0	Djibouti
1,026 ¹¹	94.6 ¹¹	8 ¹¹	14	657	97	114	6.0	203	71.3	28.7	0.9	Dominica
470 ¹²	35	150	93	104	6.1	155	36.1	63.9	1.8	Dominican Republic
...	124	660	52	130	9.8	51	59.5	40.5	9.8	East Timor
508 ¹⁴	53.1 ¹⁴	6 ¹⁴	27	130	86	120	4.5	80	50.3	49.7	1.0	Ecuador
...
317 ¹¹	39	84	98	133	3.9	59	48.9	51.1	2.0	Egypt
...	54.9 ^{8, 12}	6 ^{8, 12}	36	150	82	113	8.0	169	46.7	53.3	0.9	El Salvador
...	146	880	44	72	2.0	65	60.4	39.6	10.6	Equatorial Guinea
...	95	650	57	65	5.7	9	65.1	34.9	52.3	Eritrea
1,934	76.7 ¹⁵	21.5 ¹⁵	1.8 ¹⁵	67.7	9	9	63	100	117	5.5	224	77.8	22.2	—	Estonia
...
278	86.4 ¹⁵	12 ¹⁵	...	850	22	80	3.5	5	40.5	59.5	34.3	Ethiopia
...	20	75	45	127	4.0	79	67.1	32.9	10.1	Faroe Islands
2,592	72.0	10	5	6	100	114	7.0	1,628	75.6	24.4	—	Fiji
2,480	5	17	100	145	9.6	2,103	76.0	24.0	—	Finland
...	France
1,714 ²²	70.3 ²²	8 ²²	...	...	88 ⁹	127	...	...	...	...	...	French Guiana
...	100	126	...	...	...	...	...	French Polynesia
...	91	420	87	113	3.6	151	47.9	52.1	1.8	Gabon
...	123	540	82	96	6.4	21	49.4	50.6	26.6	Gambia, The
752 ¹⁴	74.9 ¹⁴	3 ¹⁴	24	100	...	...	...	...	...	...	...	Gaza Strip
...	45	32	76	92	3.6	22	37.8	62.2	6.1	Georgia
1,812 ²²	82.8 ²²	13 ²²	5	8	100	131	10.8	2,418	74.9	25.1	—	Germany
...	95	540	79	116	4.7	15	59.6	40.4	23.2	Ghana
1,530	83.4	16.6	—	75.0	8	5	9	99 ⁹	149	9.4	1,044	56.0	44.0	—	Greece
2,188	29.2	—	70.8	70.1	6	...	...	...	...	...	...	...	...	...	Greenland
...
774 ⁵	100.0	—	—	59.1 ⁵	7 ⁵	23	...	95	121	5.3	262	71.9	28.1	—	Grenada
2,154 ³	84.0 ³	10 ³	...	...	95 ⁹	113	...	...	...	...	...	Guadeloupe
...	100	...	...	...	...	...	...	Guam
...	47	240	95	101	4.8	86	48.3	51.7	1.4	Guatemala
1,115 ¹	100.0	—	—	...	...	...	...	...	...	7.2	2,780	...	...	...	Guernsey
...
...	160	740	51	104	3.5	20	54.1	45.9	20.5	Guinea
...	204	1,100	59	88	5.9	9	53.8	46.2	38.6	Guinea-Bissau
...	69	170	83	119	5.3	50	79.9	20.1	2.2	Guyana
...	118	680	71	92	5.0	31	53.4	46.6	42.0	Haiti
459 ²²	41	110	90	104	6.1	60	53.1	46.9	7.5	Honduras
...
1,917	6	7	100	134	4.7	720	19.5 ¹	80.5 ¹	—	Hong Kong
2,768	79.0	8	8	16	99	132	6.8	375	75.0	25.0	—	Hungary
2,828 ¹²	94.0 ¹²	6.0 ¹²	—	86.5 ¹²	12 ¹²	4	6	100	122	9.2	2,478	82.9	17.1	—	Iceland
...	87	540	86	111	5.1	29	17.9	82.1	0.4	India
...	41	230	78	134	2.4	21	25.1	74.9	6.5	Indonesia
...	39	76	93	128	6.3	79	43.5	56.5	0.1	Iran
645 ⁴	42.4 ⁴	4 ⁴	125	250	81	91	3.2	12	31.8	68.2	0.1	Iraq
1,520	100.0	—	—	84.5	7	6	5	100 ⁹	145	6.5	1,839	76.0	24.0	5.0	Ireland
...	Isle of Man
1,912	94.0	11	6	17	100	143	8.7	1,754	69.2	30.8	0.1	Israel
...
1,820 ¹⁰	91.1 ¹⁰	8.9 ¹⁰	—	73.7 ¹⁰	8 ¹⁰	4	5	100	146	8.4	1,562	75.3	24.7	—	Italy
2423.8	81.7 ^{3, 8}	18.3 ^{3, 8}	—	53.7 ³	5 ³	20	87	93	120	6.8	178	42.1	57.9	3.0	Jamaica
...	4	10	100	118	8.0	2,558	77.9	22.1	—	Japan
1,718 ⁴	84.0 ⁴	16.0 ⁴	—	...	...	...	...	...	...	7.5	2,600	...	...	...	Jersey
512	73.5	5	28	41	91	109	9.5	163	47.0	53.0	4.4	Jordan
...	73	210	86	105	3.1	48	60.4	39.6	3.5	Kazakhstan
...	123	1,000	62	90	7.8	18	21.4	78.6	9.8	Kenya
...	66	...	64	125	8.6	40	98.8	1.2	4.4	Kiribati
...	55	67	100	92	2.5	...	73.4	26.6	3.0	Korea, North
629 ¹⁴	97.5 ¹⁴	2.5 ¹⁴	—	65.5 ¹⁴	13 ¹⁴	5	20	92	130	6.0	524	44.4	55.6	—	Korea, South
...
950 ^{8, 15}	72.2 ^{8, 15}	27.8 ^{8, 15}	—	64.9 ^{8, 15}	7 ^{8, 15}	7	5	100	124	3.9	539	78.8	21.2	—	Kosovo
1,775	95.5	—	4.5	75.6	15	68	110	76	117	4.0	13	48.7	51.3	13.0	Kuwait
...	91	650	43	104	3.1	10	55.5	44.5	21.1	Kyrgyzstan
2,210	78.4 ¹⁵	4.6 ¹⁵	17.0 ¹⁵	76.5	13	12	42	100	115	6.4	190	52.5	47.5	0.7	Laos
...	31	150	100	129	12.2	583	28.1	71.9	0.2	Latvia
221 ⁶	84	550	76	116	5.5	23	78.9	21.1	6.0	Lebanon
...	235	760	62	82	4.3	5	75.9	24.1	57.2	Lesotho
...	16	97	72	139	2.9	158	56.0	44.0	—	Liberia
...	11	...	100	...	...	...	...	...	—	Libya
...	Liechtenstein
...
2,200 ²³	76.9 ²³	11 ²³	11	13	100	130	6.0	216	70.5	29.5	1.0	Lithuania
1,941 ¹⁵	94.6 ¹⁵	5.4 ¹⁵	—	94.3	12	5	28	100	137	6.0	2,614	89.9	10.1	—	Luxembourg
726	64.4 ¹⁵	16 ¹⁵	...	...	...	108	...	...	...	...	...	Macau
995 ¹⁵	67.2 ¹⁵	6.1 ¹⁵	26.7 ¹⁵	68.5 ³	14 ³	11	23	...	105	6.8	102	84.9	15.1	6.8	Macedonia
...	126	55	45	88	2.0	5	65.9	34.1	36.8	Madagascar
...
...	178	1,800	67	93	7.8	14	35.0	65.0	26.5	Malawi
717 ^{8, 20}	7	41	95	129	3.8	143	53.7	46.3	—	Malaysia
413 ²⁷	25.0 ²⁷	3 ²⁷	72	110	84	115	6.7	99	83.5	16.5	1.9	Maldives
...	220	1,200	48	93	4.3	11	38.6	61.4	20.8	Mali
...	6	21	100	145	8.8	830	68.5	31.5	—	Malta
...
1,060	4	61	...	85	...	9.8	190	64.7	35.3	25.4	Marshall Islands
2,092 ¹⁴	73.7 ¹⁴	10 ¹⁴	...	...	94 ¹⁵	118	...	...	...	...	...	Martinique
...	183	480	56	120	3.6	10	72.4	27.6	23.2	Mauritania
1,512 ⁸	744											

Health services (continued)

country	health personnel							hospitals									
	year	physicians	dentists	nurses	pharma- cists	midwives	popu- lation per physi- cian	year	number	kinds (%)			ownership (%)			total number of hos- pital beds	hos- pital beds per 10,000 pop.
										gen- eral	spe- cial- ized	medical centres/ other	public	private non- profit	private for profit		
Montenegro	2005	1,257	...	...	...	...	496	2005	...	...	...	...	...	...	...	18,400	295
Morocco	2003	13,955	2,304 ¹⁰	26,277	6,467	874	2,123	2002 ⁸	2017	48.87	...	51.27	100.0	—	—	26,153	8
Mozambique	2003	500	138 ²	3,664 ²	419 ²	1,414 ²	37,000	1997	238	4.2	95.8		100.0	—	—	12,630	1
Myanmar (Burma)	2000	14,356	984 ¹	12,642	...	10,307 ²	3,114	2000	737	...	...	...	...	...	...	28,943	6
Namibia	2000	620	677	3,800	915	1,954 ⁷	7,545	1992	47	...	...	...	91.5	8.5		6,379	40
Nauru	2003	15	1	64	...	...	672	2004	...	...	...	...	...	...	...	60	60
Nepal	2003	1,259	451 ⁴	6,216	21	1,621 ¹⁴	19,837	2003	83	94.0	6.0		...	...	...	5,190	2
Netherlands, The	2003	52,602	7,623	213,128 ¹⁰	3,148 ²³	1,825	307	2002	129	67.3	32.7	—	...	...	...	90,747	57
Netherlands Antilles	2001	333	60	1,198	47	9	652	2001	13	30.8	53.8	15.4	...	...	...	1,466	78
New Caledonia	2002	476	126	1,128	91 ¹⁰	64 ¹⁰	454	2002	9	12.5 ⁴	12.5 ⁴	75.0 ⁴	62.5 ⁴	37.5 ⁴		888	41
New Zealand	2002	12,505	1,582	34,660	3,808 ¹⁰	2,288 ¹⁰	306	2002	445	...	...	...	19.1	80.9		23,825	60
Nicaragua	2003	8,986	1,585	5,862	...	...	2,538	2003	561 ⁵	46.41 ⁵	7.11 ⁵	46.41 ⁵	...	...	...	5,031	10
Niger	2002	386	21	2,668	63	461	30,977	2001	...	...	...	...	...	...	...	...	5
Nigeria	2002	25,914	2,180 ²	119,400 ¹⁰	8,642 ²	62,386 ²²	4,722	2002	13,964 ⁵	6.4 ⁵	0.6 ⁵	93.0 ⁵	86.2 ⁵	13.8 ⁵		54,872	5
Northern Mariana Islands	1999	31	3	123	4	14	2,249	2000	1	100.0	—	—	100.0	—	—	82	11
Norway	2003	12,232	5,627 ¹⁰	92,791 ¹⁰	1,781 ¹⁰	3,089 ¹⁰	370	2003	...	...	...	...	...	...	...	22,662	43
Oman	2003	3,478	395	8,001	662	65 ³	659	2002	57	8.4		91.6	26.3	73.7		5,168	20
Pakistan	2002	101,635	4,560	44,520	45,390	23,084	1,516	2003	5,496	16.5		83.5	...	...	...	98,264	7
Palau	2003	21	2	261 ¹¹	1	1	967	2003	1	...	...	...	...	...	...	70	50
Panama	2003	4,286	903	3,048	756 ¹¹	...	727	2003	63	...	...	...	...	...	...	7,553	24
Papua New Guinea	2000	275	90	2,841	...	...	19,269	1993	...	...	...	...	...	...	...	14,119	34
Paraguay	2001	6,400	1,947	1,089	433 ¹⁴	1,547 ¹⁴	1,977	2002	...	...	...	...	...	...	...	6,759	12
Peru	2004	32,619	2,809 ¹	17,108 ¹	4,789 ³	3,832 ³	658	2003	481	...	...	...	50.2 ³	49.8 ³		43,074	14
Philippines	2004	93,862	45,903	352,398	47,463	14,675	885	2003	1,723	96.5 ³	3.1 ³	0.5 ³	38.4	61.6		91,000	11
Poland	2004	87,617	10,737	181,291	25,217	21,129	446	2004	782	93.6	6.4	—	84.4	15.6		188,038	69
Portugal	2001	35,536	4,370 ²	37,477 ²	8,056 ²	827 ¹¹	310	2002	215	43.01 ⁴	18.81 ⁴	38.21 ⁴	74.31 ⁴	14.71 ⁴	11.01 ⁴	38,802	36
Puerto Rico	2001	5,980	2,507	11,959 ⁷	829 ²⁶	120 ²⁰	642	2002	687	79.47	20.67		35.37	64.77		12,669	32
Qatar	2002	1,518	145	3,139	279	...	399	2002	5	25.0	75.0	—	60.0	40.0		1,357	24
Réunion	2003	1,179	382	2,027	277	176 ¹¹	449	2000	18	85.5	14.5		71.0	29.0		2,124	30
Romania	2004	42,538	4,919	109,668	1,275	6,497 ¹⁰	511	2004	427	...	...	...	98.8	1.2		162,558	66
Russia	2003	686,000	46,209	1,551,000	10,215	67,825 ¹⁰	208	2003	10,100	37.41 ⁵	17.21 ⁵	45.41 ⁵	98.6	1.4		1,653,000	105
Rwanda	2002	155	4	1,735	11	10	52,722	1990	198	...	...	...	100.0	—	—	12,152	17
St. Kitts and Nevis	2001	49	15	294	21 ¹¹	...	936	2003	4	50.0	50.0		...	...	...	178	55
St. Lucia	2002	92	91 ⁰	331 ¹⁰	137	...	1,609	2002	6	25.01 ²	25.01 ²	50.0	...	...	...	285	19
St. Vincent	2003	61	61 ¹¹	267 ¹¹	27 ⁵	...	1,429	2003	11	...	...	...	77.81 ²	22.21 ²		209	15
Samoa	2002	43	6	333	5	3	4,115	2004	161 ⁰	12.51 ⁰	87.51 ⁰		100.0	—	—	661	36
San Marino	2002	117	...	...	6	...	230	2002	1	...	...	...	...	...	...	134	52
São Tomé and Príncipe	1998	63	7	171	22 ⁶	40	2,126	...	...	...	...	...	...	...	...	...	...
Saudi Arabia	2001	31,983	3,672 ¹⁰	69,421	5,420	...	650	2002	324	...	...	...	74.1 ³	25.9 ³		46,622	22
Senegal	2001	1,008	93 ³	4,339	322 ³	628	10,511	2003	18	...	...	...	...	...	...	3,582	4
Serbia ³⁰	2001	27,769	4,209 ⁷	62,022	1,929	...	300	2002	...	...	...	...	...	...	...	51,785	60
Seychelles	2003	107	16	422	8	...	774	2003	7 ⁸	14.6 ⁸	14.6 ⁸	70.8 ⁸	100.0	—	—	419	51
Sierra Leone	2001	282	4	786	...	218 ³	16,333	2003	44	25.61 ⁴		74.41 ⁴	...	...	...	3,364	14
Singapore	2004	6,492	1,227	18,964	1,288	365	653	2004	29	55.6	44.4		44.8	55.2		11,795	34
Slovakia	2002	20,466	2,378	39,428	1,044 ²⁶	965 ¹⁰	263	2003	111 ¹¹	72.11 ¹¹	27.91 ¹¹	—	100.0	—	—	41,768	73
Slovenia	2002	4,636	1,199	14,205	778	...	430	2003	28	57.7	42.3	—	...	...	...	12,130	50
Solomon Islands	2003	57	26 ¹	338 ¹¹	281	231	8,491	2003	11	100.0	—	—	75.0	25.0	—	881	19
Somalia	1997	265	13	1,327	70	5401 ¹¹	25,034	1997	...	...	...	...	...	...	...	2,786	4
South Africa	2001	29,788	4,648	172,338	10,742	...	1,453	2001	612	...	...	...	51.11 ¹¹	48.91 ¹¹		144,364	35
Spain	2003	190,665	20,005	185,000	56,501	6,314 ³	223	2001	738	58.2	15.5	26.3	43.1	56.9		160,815	36
Sri Lanka	2002	9,518	461	16,924	830 ¹	7,725 ¹	2,492	2002	576	71.4	28.6		100.0	—	—	59,144	22
Sudan, The	2000	4,973	218	26,730	311	...	9,395	2002	...	...	...	...	...	...	...	36,419	7
Suriname	2000	313	4	688	14 ³	40 ³	2,000	2003	...	...	...	...	...	...	...	1,449	15
Swaziland	2000	184	20	3,345	46	...	5,560	2000	24 ³	41.7 ³		58.3 ³	...	...	...	1,570	15
Sweden	2001	25,200	13,446 ⁷	86,512 ²	5,317 ²	5,979 ²	354	2001	...	...	...	...	...	...	...	29,122	33
Switzerland	2002	25,921	3,468 ²	59,833 ²	4,450 ²	2,033 ²	281	2002	...	...	...	...	...	...	...	44,316	60
Syria	2003	25,147	12,206 ¹⁰	32,938 ¹⁰	8,862 ¹⁰	4,909 ²	699	2003	393	75.1	24.9		16.6	83.4		26,202	15
Taiwan	2003	20,020	5,220	57,820	13,670	490	714	2003	610	...	...	...	15.2	84.8		133,398	59
Tajikistan	2002	13,393	1,051 ¹⁰	26,887 ¹⁰	680	3,932 ¹⁰	472	2003	449 ¹¹	...	...	...	98.21 ⁵	1.81 ⁵		40,387	61
Tanzania	2002	822	218 ¹⁴	13,292	365	13,953 ¹⁴	42,085	1993	173 ⁵	...	...	...	...	...	...	...	10
Thailand	2002	17,529	3,553	85,392,													

	admissions or discharges				bed occupancy rate (%)	average length of stay (days)	mortality		population with access to safe water 2002 (%)	food supply (% of FAO requirement) 2002	total health expenditures, 2001				country	
	rate per 10,000 pop.	by kinds of hospital (%)					under age 5 per 1,000 live newborn 2003	maternal mortality per 100,000 live births 2000			as percent of GDP	per capita (U.S.\$)	by source (percent)			external grants/loans
		general	specialized	medical centres/other									public	private		
...	Montenegro	
255 ⁷	63.8 ²²	8 ²²	39	220	80	126	5.1	53	39.3	60.7	1.4	Morocco
...	158	1,000	42	89	5.9	10	67.4	32.5	36.9	Mozambique
...	107	360	80	136	2.1	229	17.8	82.2	0.2	Myanmar (Burma)
...	68.0	9	65	300	80	100	7.0	114	67.8	32.2	3.8	Namibia
...	30	...	...	...	7.5	...	88.7	11.3	...	Nauru
...	82	740	84	112	5.2	11	29.7	70.3	9.4	Nepal
939	95.4	4.6	—	...	65.8	9	5	16	100	125	8.9	1,974	63.3	36.7	—	Netherlands, The
...	106	...	...	...	...	...	Netherlands Antilles
1,165 ^{4, 6}	84.8 ^{4, 6}	8 ^{4, 6}	...	...	...	116	...	...	...	...	...	New Caledonia
...
1,332 ^{3, 8}	64.0 ^{3, 8}	6 ^{3, 8}	6	7	100	122	8.3	1,056	76.8	23.2	—	New Zealand
769 ¹⁵	—	76.2 ¹⁵	—	23.8 ¹⁵	...	...	38	230	81	102	7.8	59	48.5	51.5	7.7	Nicaragua
...	262	1,600	46	91	3.7	7	39.1	60.9	16.9	Niger
...	198	800	60	116	3.4	20	23.2	76.8	7.1	Nigeria
1,670	100.0	—	—	...	56.4	4	...	...	98	...	...	...	...	...	...	Northern Mariana Islands
...
1,714	92.1	7.9	—	...	79.0 ⁶	5 ⁶	4	16	100	130	8.0	3,352	85.5	14.5	—	Norway
1,052	55.0	4	12	87	79	...	3.0	232	80.7	19.3	—	Oman
...	103	500	90	105	3.9	12	24.4	75.6	1.9	Pakistan
1,718	65.0	6	28	...	84	...	9.2	424	92.0	8.0	11.8	Palau
1,239 ¹¹	52.5 ¹¹	8 ¹¹	24	160	91	98	7.0	336	69.0	31.0	0.6	Panama
...	93	300	39	95	4.4	24	89.0	11.0	21.2	Papua New Guinea
...	59.6	...	29	170	83	111	8.0	102	38.3	61.7	2.0	Paraguay
...	34	410	81	109	4.7	94	55.0	45.0	1.7	Peru
538 ³	62.1 ³	5 ³	36	200	85	105	3.3	30	45.2	54.8	3.5	Philippines
1,730 ⁶	75.9 ⁶	8 ⁶	7	13	100 ⁹	129	6.1	292	71.9	28.1	—	Poland
...
1,146 ¹⁴	86.3 ¹⁴	10.5 ¹⁴	3.2 ¹⁴	...	74.5 ¹⁴	10 ¹⁴	5	5	100 ⁹	153	9.2	994	69.0	31.0	—	Portugal
1,101 ¹⁵	94.0 ¹⁵	4.3 ¹⁵	1.7 ¹⁵	...	70.3 ⁷	6 ⁷	...	25	...	...	...	...	...	...	...	Puerto Rico
364 ²⁹	72.5 ²⁹	7 ²⁹	15	7	100	...	3.1	862	73.5	26.5	...	Qatar
2,011	71.8	6	...	41	...	146	...	...	...	...	...	Réunion
...	20	49	57	130	6.5	109	79.2	20.8	1.0	Romania
...
2,640	87.4	12	21	67	96	116	5.4	128	68.2	31.8	3.1	Russia
...	203	1,400	73	90	5.5	11	55.5	44.5	24.7	Rwanda
1,037	68.4	8	22	130 ¹¹	99	108	4.8	443	66.3	33.7	5.6	St. Kitts and Nevis
983	18	307	98	123	4.5	227	64.5	35.4	0.6	St. Lucia
728 ⁷	68.2 ⁷	7 ⁷	27	431	93	107	6.1	166	63.5	36.5	0.3	St. Vincent
...
700 ¹⁰	70.8 ¹²	—	29.2 ¹²	...	32.9 ¹²	5 ¹²	24	...	88	122	5.8	74	82.2	17.8	15.6	Samoa
...	51.5	6	5	...	100	...	6.8	2,315	78.0	23.0	—	San Marino
...	118	...	79	105	2.3	33	67.7	32.3	56.4	São Tomé and Príncipe
...	26	23	97 ⁹	118	4.8	360	74.6	25.4	—	Saudi Arabia
...	137	690	72	96	4.8	25	58.8	41.2	20.2	Senegal
...
1,434	74.0	12	14	11	93	105	8.2	90	79.2	20.8	1.4	Serbia ³⁰
1,346 ³¹	58.0 ³¹	5 ³¹	15	...	87	105	6.0	388	68.2	31.8	11.9	Seychelles
...	284	2,000	57	84	4.3	7	61.0	39.0	25.1	Sierra Leone
956	74.0	5	3	15	100	...	3.9	816	33.5	66.5	—	Singapore
1,720	95.1	4.9	—	...	74.9	11	8	10	100	117	5.6	223	89.3	10.7	—	Slovakia
...
1,710	75.2	10	4	17	100	118	8.4	821	74.9	25.1	—	Slovenia
...	22	130	70	99	5.0	38	93.5	6.5	15.9	Solomon Islands
...	225	1,100	29	71	2.6	6	44.6	55.4	9.3	Somalia
...	66	230	87	121	8.6	224	41.4	58.6	0.4	South Africa
1,123	79.6	9	4	4	100	137	7.6	1,065	71.4	28.6	—	Spain
...
2,043	15	92	78	103	3.6	30	48.9	51.1	3.1	Sri Lanka
...	93	590	69	95	3.5	18	18.7	81.3	2.7	Sudan, The
766 ^{11, 32}	68.8 ^{11, 32}	10 ^{11, 32}	39	110	92	117	9.4	147	60.2	39.8	12.2	Suriname
...	153	370	52	103	3.3	73	68.5	31.5	7.9	Swaziland
1,906 ¹⁵	82.2 ¹⁵	8 ¹⁵	3	2	100	118	8.7	2,169	85.2	14.8	—	Sweden
...
...	83.0	10	5	7	100	131	11.0	3,774	57.1	42.9	—	Switzerland
1,058	75.5 ^{8, 22}	3 ^{8, 22}	18	160	79	123	5.4	61	43.9	56.1	0.3	Syria
...	8	8	100 ⁹	...	4.2	323	53.0	47.0	—	Taiwan
1,492 ¹⁵	70.2 ¹⁵	15 ¹⁵	118	100	58	71	3.3	6	71.1	28.9	7.4	Tajikistan
...	165	1,500	73	85	4.4	14	46.7	53.3	29.5	Tanzania
...	26	44	85	111	3.7	66	57.1	42.9	0.1	Thailand
...	140	570	51	102	2.8	88	48.6	51.4	8.1	Togo
622 ¹²	56.2 ¹²	10 ¹²	19	...	97	...	5.5	88	61.6	38.4	20.7	Tonga
1,050 ⁶	70.7 ^{6, 8}	6 ^{6, 8}	20	160	91	113	4.0	244	43.3	56.7	3.8	Trinidad and Tobago
...	24	120	82	135	6.4	120	75.7	24.3	0.6	Tunisia
...
709 ¹⁵	39	70	93	133	5.0	137	71.0	29.0	—	Turkey
...	102	31	71	107	4.1	58	73.3	26.7	0.6	Turkmenistan
1,368 ¹	40.9 ¹	—	59.1 ¹	...	51.5 ⁶	12.2 ⁶	51	...	93	...	5.4	380	53.4	46.6	29.4	Tuvalu
...	140	880	56	103	5.9	18	57.5	42.5	24.8	Uganda
...	20	35	98	119	4.3	34	67.8	32.2	0.7	Ukraine
...	8	54	100	133	3.5	824	75.8	24.2	—	United Arab Emirates
...	6	13	100	135	7.6	1,837	82.2	17.8	—	United Kingdom
1,200 ³³	62.4 ³³	4.9 ³³	8	17	100	143	14.9	4,873	45.9	54.1	—	United States
482	78.8 ^{7, 8}	9 ^{7, 8}	14	27	98	106	10.9	597	46.3	53.7	0.5	Uruguay
165	69	24	89	88	3.8	25	74.5	25.5	1.7	Uzbekistan
...
567 ¹⁴	41.9 ¹⁴	6 ¹⁴	38	...	60	113	3.8	42	59.2	40.8	8.4	Vanuatu
6017 ⁸	69.7 ^{7, 8}	6 ^{7, 8}	21	96	83	95	6.0	261	62.1	37.9	0.1	Venezuela
...	23	130	73	119	5.1	21	28.5	71.5	2.5	Vietnam
...
711 ¹⁴	80.9 ¹⁴	4 ¹⁴	24	100	94	...	...	...	...	...	...	Virgin Islands (U.S.)
...	West Bank ²⁴
...	Western Sahara
1,249 ³⁴	—	75.7 ³⁴	—	24.3 ³⁴	68.5 ³³	7 ³³	113	570	69	84	4.5	23	34.1	65.9	3.7	Yemen
546 ²²	69.8 ²²	7 ²²	182	729	51	83	5.7	20	53.1	46.9	48.7	Zambia
...	126	1,100	83	81	6.2	55	45.3	54.7	7.8	Zimbabwe

includes Gaza Strip. ²⁵Registered personnel; all may not be present and working in the country. ²⁶Number of pharmacies. ²⁷Central Hospital only. ²⁸Nurses include midwives. ²⁹Hamad General Hospital only. ³⁰Includes Montenegro. ³¹Victoria Hospital only. ³²Paramaribo Hospital (1,213 beds) only. ³³4,927 community hospitals only. ³⁴1987.

Social protection

This table summarizes three principal areas of social protective activity for the countries of the world: social security, crime and law enforcement, and military affairs. Because the administrative structure, financing, manning, and scope of institutions and programmed tasks in these fields vary so greatly from country to country, no well-accepted or well-documented body of statistical comparisons exists in international convention to permit objective assessment of any of these subjects, either from the perspective of a single country or internationally. The data provided within any single subject area do, however, represent the most consistent approach to problems of international comparison found in the published literature for that field.

The provision of social security programs to answer specific social needs, for example, is summarized simply in terms of the existence or nonexistence of a specific type of benefit program because of the great complexity of national programs in terms of eligibility, coverage, term, age limits, financing, payments, and so on. Activities connected with a particular type of benefit often take place at more than one governmental level, through more than one agency at the same level, or through a mixture of public and private institutions. The data shown here are summarized from the U.S. Social Security Administration's *Social Security Programs Throughout the World* (regional coverage; Africa 2007, Asia 2008, Europe 2008, The Americas 2007). A bullet symbol (●) indicates that a country has at least one program within the defined area (a circle [○] indicates data is for 2007); in some cases it may have several. A blank space indicates that no program existed providing the benefit shown; ellipses (...) indicate that no information was available as to whether a program existed.

Data given for social security expenditure as a percentage of total central governmental expenditure are taken from the International Monetary Fund's *Government Finance Statistics Yearbook*, which provides the most comparable analytic series on the consolidated accounts of central governments, governmentally administered social security funds, and independent national agencies, all usually separate accounting entities, through which these services may be provided in a given country.

Data on the finances of social security programs are taken in large part from the International Labour Office's *The Cost of Social Security* (triennial), supplemented by national data sources.

Figures for criminal offenses known to police, usually excluding civil offenses and minor traffic violations, are taken in part from Interpol's *International Crime Statistics* (annual) and a variety of national sources. Statistics are usually based on the number of offenses reported to police, not the number of offenders apprehended or tried in courts. Attempted offenses are counted as the offense that was attempted. A person identified as having committed multiple offenses is counted only under the most serious offense. Murder refers to all acts involving the voluntary taking of life, including infanticide, but excluding abortion, or involuntary acts such as those normally classified as manslaughter. Assault includes "serious," or aggravated, assault—that involving injury, endangering life, or perpetrated with the use of a dangerous instrument. Burglary involves theft from the premises of another; although Interpol statistics are reported as "breaking and entering," national data may not always distinguish cases of forcible entry. Automobile theft excludes brief use of a car without the owner's

Social protection

country	social security					expenditures, latest (% of total central govt.) ^f	finances, latest								
	programs available, 2007 or 2008						receipts					expenditures			
	old-age, invalidity, death ^a	sickness and maternity ^b	work injury ^c	unemployment ^d	family allowances ^e										
							total ('000,000 natl. cur.)	insured persons (%)	em-ployers (%)	government (%)	other (%)	total ('000,000 natl. cur.)	benefits (%)	administration (%)	other (%)
Afghanistan	●	●	●			4.5	...	...	...	...	...	...	...	...	...
Albania	●	●	●	●	●	9.7	967.0	—	—	88.8	11.2	1,440.0	99.5	0.5	...
Algeria	○	○	○	○	○	...	27,700.0	...	...	...	...	28,748.0	61.8	30.6	7.6
American Samoa	●	...	...	...	...	...	...	...	...	...	...	13.0	100.0	—	—
Andorra	●	●	●			...	11,832.2	...	...	...	...	7,937.2	90.2	4.6	5.2
Angola	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Antigua and Barbuda	○	○				...	13.0	29.2	48.7	—	22.1	4.2	66.1	33.9	—
Argentina	○	○	○	○	○	33.6	1,015,837.0	28.8	45.0	16.6	9.6	989,009.0	95.0	5.0	—
Armenia	●	●	●	●	●	28.1	...	...	...	...	...	...	...	...	...
Aruba	○	...	○	...	...	5	197.1 ^s	...	...	...	...	179.0 ^s	...	...	...
Australia	●	●	●	●	●	40.4	...	...	...	...	1.9	41,825	99.6	0.3	—
Austria	●	●	●	●	●	47.2	425,417.0	30.1	45.9	21.1	2.9	412,134.0	96.5	2.3	1.2
Azerbaijan	●	●	●	●	●	40.8	...	...	...	...	...	...	...	...	...
Bahamas, The	○	○	○			10.5	95.9	22.9	38.5	2.1	36.5	43.5	71.1	27.2	1.7
Bahrain	●		●	●		12.9	39.6	12.3	40.2	—	47.5	9.7	69.8	20.9	9.3
Bangladesh	7	●	●			9.7	73.6	12.4	37.5	2.4	47.7	34.1	94.0	6.0	—
Barbados	○	○	○	○		33.7	191.7	38.0	40.8	1.5	19.7	149.1	93.5	5.8	0.7
Belarus	●	●	●	●	●	41.8	3,199.0	—	—	93.2	6.8	3,199.0	100.0	—	—
Belgium	●	●	●	●	●	47.9	1,347,070.0	24.4	39.7	31.6	4.3	1,322,636.0	94.5	4.3	1.2
Belize	○	○	○			...	15.3	8.9	53.2	—	38.0	3.9	56.7	43.3	—
Benin	○	○	○		○	...	3,551.9	16.8	81.4	—	1.8	4,500.9	69.3	28.1	2.6
Bermuda	○	9				...	...	...	...	...	...	...	...	...	...
Bhutan	...	...	...	...	...	5.2	...	...	...	...	...	26.0	...	...	...
Bolivia	○	○	○	○	○	17.4	346.6	29.3	47.7	11.2	11.8	340.2	84.9	14.3	0.8
Bosnia and Herzegovina	●	●	●	●	●	38.9	...	...	...	...	...	...	...	...	...
Botswana	○ ¹⁰		○			1.1	—	...	...	...	...	65.0	...	...	...
Brazil	○	○	○	○	○	47.3	71,847.0	24.4	51.0	20.0	4.6	68,957.0	61.9	18.6	19.5
Brunei	●	...	●	...	...	...	...	...	...	...	...	39.5	...	...	...
Bulgaria	●	●	●	●	●	42.3	6,016.8	—	71.4	28.1	0.5	6,000.1	96.6	3.3	0.1
Burkina Faso	○	○	○			3.7	8,816.5	15.6	62.9	—	21.5	4,975.3	69.5	30.4	0.1
Burundi	○		○		○	13.9	1,991.5	31.6	47.6	—	20.8	1,563.9	74.8	16.8	8.4
Cambodia	...	...	○	...	○	7.8	...	...	...	...	...	...	...	...	...
Cameroon	○	○	○		○	0.5	41,331.8	13.1	64.8	—	22.1	41,332.0	70.6	28.8	0.6
Canada	○	○	○	○	○	42.1	130,306.6	9.9	15.6	64.4	10.1	115,764.2	96.9	2.5	0.6
Cape Verde	○	○	○		○	...	697.7	26.5	58.5	—	15.0	316.7	82.4	16.1	1.5
Cayman Islands	○	○	○		○	...	...	...	...	...	...	...	...	...	...
Central African Republic	○	○	○		○	...	3,604.0	8.4	76.0	—	15.6	3,247.0	64.6	32.9	2.5
Chad	○	○	○		○	...	1,172.8	12.6	77.6	—	9.8	634.5	43.0	51.4	5.6
Chile	○	○	○	○	○	25.4	1,186,056.0	32.8	2.7	37.9	26.6	798,770.0	83.9	14.7	1.4
China	●	●	●	●	●	22.4	57,446.2	—	99.4	—	0.6	54,654	98.4	0.6	1.0
Colombia	○	○	○	○	○	22.4	294,438.0	24.8	56.0	0.2	19.0	257,455.0	85.5	11.5	3.0
Comoros	...	...	...	...	...	...	40.7	100.0	—	—	—	54.3	17.4	62.3	20.3
Congo, Dem. Rep. of the	○	○	○		○	0.1	1,238.3	28.6	60.2	—	11.2	1,044.2	27.9	72.1	—
Congo, Rep. of the	○	○	○		○	3.3	15,272.8	12.1	80.2	—	7.7	7,256.7	66.6	21.3	12.1
Costa Rica	○	○	○	○	○	24.1	36,407.3	33.2	44.4	1.2	21.2	31,049.8	89.0	4.1	6.9
Côte d'Ivoire	○	○	○		○	10.5	27,288.4	19.3	75.4	—	5.3	20,593.5	100.0	—	—
Croatia	●	●	●	●	●	45.4	...	...	...	...	...	...	...	...	...
Cuba	○	○	○		○	...	2,284.8	—	37.4	62.6	—	2,284.8	96.7	—	3.3
Cyprus ¹⁷	●	●	●	●	●	30.2	217.5	24.7	40.3	17.3	17.7	117.7	98.4	1.6	—
Czech Republic	●	●	●	●	●	45.9	...	...	...	...	...	...	...	...	...
Denmark	●	●	●	●	●	17.6	225,965.6	4.3	5.0	88.2	2.5	218,258.2	97.0	3.0	—
Djibouti	...	...	...	...	...	...	1,352.2	...	...	...	...	1,115.7	...	...	...
Dominica	○	○	○			...	12.3	22.6	50.9	—	26.5	4.4	68.0	32.0	—
Dominican Republic	○	○	○		○	9.0	77.9	20.1	72.9	—	6.8	74.3	75.9	24.1	—
East Timor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

permission, "joyriding," and implies intent to deprive the owner of the vehicle permanently. Criminal offense data for certain countries refer to cases disposed of in court, rather than to complaints. Police manpower figures refer, for the most part, to full-time, paid professional staff, excluding clerical support and volunteer staff. Personnel in military service who perform police functions are presumed to be employed in their principal activity, military service.

The figures for military manpower refer to full-time, active-duty military service and exclude reserve, militia, paramilitary, and similar organizations. Because of the difficulties attached to the analysis of data on military manpower and budgets (including problems such as data withheld on national security grounds, or the publication of budgetary data specifically intended to hide actual expenditure, or the complexity of long-term financing of purchases of military matériel [how much was actually spent as opposed to what was committed, offset by nonmilitary transfers, etc.]), extensive use is made of the principal international analytic tools: publications such as those of the International Institute for Strategic Studies (*The Military Balance*) and the U.S. Arms Control and Disarmament Agency (*World Military Expenditures and Arms Transfers*), both annuals.

The data on military expenditures are from the SIPRI Military Expenditure Database, as well as from the IMF's *Government Finance Statistics Yearbook* and country statistical publications.

The following notes further define the column headings:

a. Programs providing cash payments for each of the three types of long-term benefit indicated to persons (1) exceeding a specified working age

(usually 50–65, often 5 years earlier for women) who are qualified by a term of covered employment, (2) partially or fully incapacitated for their usual employment by injury or illness, and (3) qualified by their status as spouse, cohabitant, or dependent minor of a qualified person who dies.

b. Programs providing cash payments (jointly, or alternatively, medical services as well) to occupationally qualified persons for both of the short-term benefits indicated: (1) illness and (2) maternity.

c. Programs providing cash or medical services to employment-qualified persons who become temporarily or permanently incapacitated (fully or partially) by work-related injury or illness.

d. Programs providing term-limited cash compensation (usually 40–75% of average earnings) to persons qualified by previous employment (of six months minimum, typically) for periods of involuntary unemployment.

e. Programs providing cash payments to families or mothers to mitigate the cost of raising children and to encourage the formation of larger families.

f. Includes welfare.

g. A police officer is a full-time, paid professional, performing domestic security functions. Data include administrative staff but exclude clerical employees, volunteers, and members of paramilitary groups.

h. Includes all active-duty personnel, regular and conscript, performing national security functions. Excludes reserves, paramilitary forces, border patrols, and gendarmeries.

	crime and law enforcement (latest)						military protection						country		
	offenses reported to the police per 100,000 population					population per police officers	manpower, 2008 ^h		expenditure, 2007					arms trade ('000,000 U.S.\$)	
	total	personal		property			total ('000 U.S.\$)	per 1,000 population	total '000,000	per capita	% of central government expenditure (2005)	% of GDP or GNP		imports 1999	exports 2005
		murder	assault	burglary	automobile theft										
	...	...	...	...	...	...	53.4 ¹	1.9	153	5.6	11.4	1.6	0	0	Afghanistan
	168.8	26.2	5.8	10.7	14.1	550	14.3	4.5	233	13	5.3	1.1	30	0	Albania
	178.0	0.7	67.6	13.7	1.7	840	147.0	4.3	4,270	126	12.6 ²	3.3	550	0	Algeria
	3,006	8.0	494.0	588.0	6.0	460	3	3	...	...	...	...	...	...	American Samoa
	2,616	0	16.7	515.2	110.6	220	—	—	...	...	...	...	...	...	Andorra
	143.5	8.7	15.3	30.5	3.7	14 ⁴	107.0	8.5	2,260	184	41.1 ²	3.9	350	0	Angola
	4,977	4.7	475.0	1,984.4	35.9	120	0.2	1.9	5.2	61	...	0.5	...	...	Antigua and Barbuda
	631.0	6.0	68.2	43.0	117.1	1,270	76.0	1.9	2,090	53	3.0	0.8	90	0	Argentina
	264.4	4.1	4.7	16.6	0.7	...	42.1	14.0	296	99	15.5	3.1	10	0	Armenia
	5,461	1.2	180.0	451.3	202.5	...	5	5	—	—	—	—	...	...	Aruba
	7,003	3.7	708.5	2,926.2	684.8	438	54.7	2.6	20,200	968	6.1	2.2	1,100	593 ⁶	Australia
	6,095	1.4	3.0	944.0	34.7	470	34.9	4.2	3,100	372	2.1	0.8	30	318	Austria
	176	4.2	2.4	10.3	0.4	...	66.9	8.2	936	115	11.1	2.9	10	0	Azerbaijan
	4,870	27.1	61.5	1,560.2	415.7	125	0.9	2.6	58	175	3.0	0.8	...	...	Bahamas, The
	1,390	1.6	0.5	380.1	207.6	180	8.2	7.6	539	720	14.2	3.0	70	0	Bahrain
	90	2.8	4.3	4.3	1.1	2,560	157.1	1.1	998	10	9.9	1.5	80	0	Bangladesh
	3,813	8.6	161.9	1,080.8	105.5	280	0.6	2.2	28	94	2.0 ⁶	0.8	0	0	Barbados
	1,282.4	11.6	20.6	197.9	59.9	...	72.9	7.5	572 ⁸	59 ⁸	3.3	1.3 ⁸	0	310 ²	Belarus
	8,478	5.3	535.8	2,031.3	376.5	640	38.8	3.6	5,000	472	2.7	1.1	350	318	Belgium
	...	12.8	20.0	600.0	4.0	290	1.1	3.3	18	59	4.8 ⁶	1.4	0	0	Belize
	297	5.1	102.0	4.6	0.6	3,250	4.8	0.6	55	7	5.0 ⁶	0.9	5	0	Benin
	8,871	5.1	221.7	1,949.2	...	370	3	3	—	—	—	—	...	...	Bermuda
	...	...	...	...	...	...	...	...	8	11	...	1.0	0	0	Bhutan
	660	28.6	59.4	0.9	...	...	46.1	4.8	162	17	5.1	1.2	10	0	Bolivia
	402	2.5	2.6	...	...	...	8.5	2.2	196	51	6.2	1.4	40	0	Bosnia and Herzegovina
	8,281	12.7	431.9	1.9	73.1	750	9.0	4.9	317	168	3.9	2.7	40	0	Botswana
	779.1	11.2	255.7	5.2	61.2	...	326.4	1.7	20,550	108	9.3	1.6	180	20 ²	Brazil
	932.9	1.5	1.2	79.8	57.5	100	7.0	17.5	346	880	11.5 ²	2.8	20	0	Brunei
	1,170.7	7.3	1.9	402.9	94.5	...	40.7	5.4	881	115	5.9	2.2	10	285	Bulgaria
	9	0.4	1.7	—	—	...	10.8	0.8	95	7	6.7	1.3	0	0	Burkina Faso
	156	9.7	10.8	2.0	0.2	...	20.0 ¹¹	2.3	78	9	27.7	7.8	60	0	Burundi
	...	...	...	...	...	1,980	124.3	8.7	137	10	24.1	1.6	5	0	Cambodia
	78	0.4	1.2	1.2	5.1	1,170	14.1	0.8	297	16	9.5	1.5	5	0	Cameroon
	8,121	4.0	140.3	1,044.4	529.4	8,640	64.4	1.9	18,400	559	6.5	1.3	1,000	500	Canada
	...	...	...	...	...	110	1.2	2.4	8	16	...	0.6	5	0	Cape Verde
	...	...	...	...	...	...	3	3	...	...	...	...	—	—	Cayman Islands
	135	1.6	22.8	2.7	...	...	3.2	0.7	18	4	...	1.1	0	0	Central African Republic
	...	...	...	...	...	990	25.4	2.5	70	7	...	1.1	10	0	Chad
	1,366	4.5	84.8	488.0	12.9	470	60.6	3.7	5,230	315	6.8	3.2	100	10 ²	Chile
	128	0.2	5.2	45.2	6.9	...	2,185.0	1.6	46,100	35	7.3	1.4	675	900	China
	790	56.3	61.8	57.9	75.3	420	267.2	6.0	5,350	125	18.9	3.1	60	0	Colombia
	...	...	...	...	...	960	12	12	...	...	...	...	...	...	Comoros
	...	...	...	...	...	910	13	13	166	3	...	1.4	110	0	Congo, Dem. Rep. of the
	32	1.5	4.7	0.2	0.2	870	10.0	2.6	94	25	9.5 ¹⁴	1.1	0	0	Congo, Rep. of the
	868	5.3	11.1	232.4	23.1	480	—	—	...	...	...	...	0	0	Costa Rica
	67	2.5	73.1	19.5	11.9	4,640	17.1 ¹⁵	0.9 ¹⁵	290	15	3.4 ²	1.4	0	0	Côte d'Ivoire
	1,216	6.1	24.1	290.9	38.6	...	18.6	4.2	843	190	4.1	1.7	10	10	Croatia
	...	...	...	...	...	650	49.0	4.4	1,700 ¹⁶	124 ¹⁶	...	3.8 ¹⁶	0	0	Cuba
	689	1.9	17.7	203.3	3.0	180	...	...	498	476	5.6	2.3	340	0	Cyprus ¹⁷
	4,142	2.6	71.7	831.4	263.0	...	24.1	2.3	2,660	258	4.6	1.5	220	109	Czech Republic
	9,300	4.1	20.8	1,899	638.1	600	29.6	5.4	4,020	737	4.6	1.3	290	109	Denmark
	252	4.2	124.2	45.0	0.5	...	10.5	20.7	17	33	...	1.9	0	0	Djibouti
	9,567	7.9	682.4	1,736	77.6	300	18	18	...	...	...	...	...	...	Dominica
	...	15.8	28.4	154.0	14.0	580	49.9	5.2	271	29	4.5 ¹⁴	0.7	20	0	Dominican Republic
	...	...	...	...	...	...	1.3 ¹⁹	1.2 ¹⁹	4 ⁶	5 ⁶	...	1.3 ⁶	...	...	East Timor

Social protection (continued)

country	social security					expenditures, latest (% of total central govt.) ^f	finances, latest									
	programs available, 2007 or 2008						receipts						expenditures			
	old-age, invalidity, death ^a	sickness and maternity ^b	work injury ^c	unemployment ^d	family allowances ^e		total ('000,000 natl. cur.)	insured persons (%)	employers (%)	government (%)	other (%)	total ('000,000 natl. cur.)	benefits (%)	administration (%)	other (%)	
Ecuador	○	○	○	○		1.9	71,286.0	37.0	50.0	—	13.0	52,032.4	86.0	14.0	—	
Egypt	○	○	○	○		11.2	2,443.5	22.8	41.0	2.0	34.2	1,685.6	93.4	6.6	—	
El Salvador	○	○	○			13.5	465.3	27.1	51.7	—	21.2	368.3	78.1	21.9	—	
Equatorial Guinea	○	○	○		○	...	141.0	7.1	92.9	—	—	134.0	49.3	50.7	—	
Eritrea	
Estonia	●	●	●		●	34.2	90.1	...	...	...	...	...	...	...	...
Ethiopia	○		○			7.3	190.9	32.8	65.3	—	1.9	153.7	98.3	1.7	—	
Faroe Islands	●	●	
Fiji	●		●			5.4	153.5	20.9	33.8	0.8	44.5	75.5	95.3	4.7	—	
Finland	●	●	●	●	●	47.1	118,589.0	7.7	41.1	44.0	7.2	106,235	96.3	3.7	—	
France	●	●	●	●	●	49.1	1,700,202.0	77.7	—	20.4	1.9	1,669,096.0	95.5	3.7	0.8	
French Guiana	○	...	○	...	○	...	1,071.5	...	...	...	...	997.1	...	...	...
French Polynesia	○	...	○	...	○	...	19,268.0	...	...	...	...	17,832.0	...	...	...
Gabon	○	○	○		○	...	3,415.0	—	44.3	29.3	26.4	2,737.0	55.2	44.8	—	
Gambia, The	○		○			1.0	—	...	...	...	...	5.6	...	...	...
Gaza Strip	—	
Georgia	●	●	●	●	●	12.2	...	...	...	...	...	...	...	...	...
Germany	●	●	●	●	●	72.1	...	...	...	...	...	...	...	...	...
Ghana	○		○			4.7	17,920.8	21.1	52.9	—	26.0	4,147.7	13.3	64.0	22.7	
Greece	●	●	●	●	●	10.4	1,314,421.0	24.9	38.4	30.8	5.9	1,349,693.0	92.5	7.5	—	
Greenland	●	●	
Grenada	○	○	○			8.6	24.1	20.1	60.3	3.2	16.3	13.5	93.1	6.9	—	
Guadeloupe	○	○	...	2,607.3	...	...	...	...	5,883.4	...	...	...
Guam	○	○	7.3	...	...	...
Guatemala	○	○	○			7.0	348.5	29.1	54.8	—	16.1	279.7	82.7	14.6	2.7	
Guernsey	●	●	●	●	●	...	103,560	—	45.0	—	14.3	85,468	94.8	5.2	...	
Guinea	○	○	○		○	5.1	3,387.0	0.4	90.3	—	9.3	1,108.1	54.9	45.1	—	
Guinea-Bissau	8.8	138.0	22.8	63.4	10.3	3.8	61.9	59.6	40.4	—	
Guyana	○	○	○			...	1,070.8	...	...	...	...	1,373.7	...	...	...
Haiti	○		○			5.1	...	...	...	...	...	...	...	...	...
Honduras	○	○	○			...	166.2	23.9	40.8	3.3	32.0	76.8	84.6	15.4	—	
Hong Kong	●	●	●	●	●	24.1	...	...	...	...	...	26,939	...	...	...
Hungary	●	●	●	●	●	40.4	798,000.0	—	—	—	—	737,000.0	...	...	...
Iceland	●	●	●	●	●	18.2	14,799	—	—	—	—	96,094	98.2	1.8	—	
India	●	●	●	●	●	...	43,913.8	23.8	27.7	5.3	43.2	13,775.8	90.0	8.2	1.8	
Indonesia	●		●			6.0	239,477.0	50.7	49.3	—	—	181,499.0	12.3	15.8	71.9	
Iran	...	●	●	●	●	16.5	346,460.0	83.2	0.1	8.2	8.5	167,879.0	43.4	6.3	50.0	
Iraq	33.1	...	...	...	...	...	...	...	...	...
Ireland	●	●	●	●	●	...	4,627.5	16.3	24.8	57.7	1.2	4,612.9	95.2	4.7	0.1	
Isle of Man	●	●	●	●	●	14.4	...	...	...
Israel	●	●	●	●	●	22.1	13,851.1	31.1	27.7	35.0	6.2	13,593.3	81.7	15.4	2.9	
Italy	●	●	●	●	●	43.0	278,383.0	16.5	51.4	30.0	2.1	100,251.0	89.3	2.0	8.7	
Jamaica	○	○ ²⁴	○		○	2.3	374.3	11.5	13.6	43.8	31.1	273.6	92.6	7.4	—	
Japan	●	●	●	●	●	48.9	59,571,299.0	27.4	31.6	24.4	16.6	46,684,159.0	94.3	1.7	4.0	
Jersey	●	●	●	●	●	9.5	60.9	—	63.8	—	23.4	52.8	...	...	...
Jordan	●		●			16.7	53.6	28.7	55.3	—	16.0	9.5	77.4	14.0	8.6	
Kazakhstan	●	●	●	●	●	22.3	...	...	...	...	...	...	...	...	...
Kenya	○	9	○			2.7	4,262.0	18.2	13.7	10.0	58.1	1,857.8	53.8	46.1	0.1	
Kiribati	●		●			
Korea, North	
Korea, South	●	9	●	●		13.7	7,425,400.0	—	62.2	—	—	9,656,600.0	...	...	...
Kosovo	
Kuwait	●		9.2	445.8	7.1	13.2	54.3	25.4	206.5	97.0	3.0	—	
Kyrgyzstan	●	●	●	●	●	11.6	...	...	...	...	...	...	...	...	...
Laos	●	●	●	
Latvia	●	●	●	●	●	28.7	...	...	...	...	...	...	...	...	...
Lebanon	●	9				6.8	...	...	...	...	...	...	...	...	...
Lesotho	1.1	—	...	...	...	...	12.0	...	...	...
Liberia	○		○			...	2.9	—	69.0	13.8	17.2	2.6	54.4	45.6	—	
Libya	○	○	○			...	314.3	21.6	25.4	50.2	2.8	260.0	77.5	19.5	3.0	
Liechtenstein	●	●	●	●	●	
Lithuania	●	●	●	●	●	34.2	...	...	...	...	...	24,981.7	...	...	...
Luxembourg	●	●	●	●	●	51.8	72,471.8	24.2	34.6	34.4	6.8	65,214.4	97.2	2.4	0.4	
Macau	6.2	223.2	...	...	...	...	207.4	...	...	...
Macedonia	○	○	○	○	○	...	24,482	...	...	...	...	...	...	...	...
Madagascar	○	○	○		○	1.5	15,229.0	22.2	77.8	—	—	14,542.0	81.2	18.8	—	
Malawi	...	9	○			...	—	...	...	...	...	5.4	...	...	...
Malaysia	●	9	●			5.8	7,958.7	20.7	40.2	—	39.1	2,826.5	97.0	3.0	—	
Maldives	7.1	...	...	...
Mali	○	○	○		○	...	8,128.8	16.6	74.3	—	9.1	7,924.6	63.7	34.7	1.6	
Malta	●	●	●	●	●	31.7	82.2	26.1	31.6	42.3	—	110.7	92.5	7.5	—	
Marshall Islands	●	9				...	...	...	...	...	...	...	...	...	...
Martinique	○	○	...	3,913.1	...	...	...	...	8,429.6	...	...	...
Mauritania	○	○	○		○	...	808.4	1.5	90.4	—	8.1	735.2	63.5	31.2	5.3	
Mauritius	○	9	○		○	23.5	1,733.5	2.9	47.9	31.7	17.5	1,072.7	95.2	3.0	1.8	
Mayotte	
Mexico	○	○	○	○	○	20.1	16,011,795.0	20.9	54.8	12.9	11.4	14,562,293.0	79.9	15.5	4.6	
Micronesia	●					
Moldova	●	●	●		●	36.8	...	...	...	...	...	...	...	...	...
Monaco	●	●	●	30	●	...	...	...	...	...	...	...	...	...	...
Mongolia	●	●	●	26.9	2,431.6	—	—	20.8	79.2	2,304.6	100.0	—	—	
Montenegro	
Morocco	○	○	○		○	11.2	4,660.5	20.6	47.5	12.9	19.0	3,040.7	94.8	5.0	0.2	
Mozambique	228.2	—	86.2	13.7	0.1	145.0	100.0	—	—	
Myanmar (Burma)	...	○	○			2.3	44.3	19.9	59.6	18.5	2.0	35.9	51.5	15.6	32.9	

	crime and law enforcement (latest)						military protection								country
	offenses reported to the police per 100,000 population					population per police officers	manpower, 2008 ^b		expenditure, 2007				arms trade ('000,000 U.S.\$)		
	total	personal		property			total ('000 U.S.\$)	per 1,000 population	total '000,000	per capita	% of central government expenditure (2005)	% of GDP or GNP	imports 1999	exports 2005	
		murder	assault	burglary	automobile theft										
	587	25.9	35.6	164.5	52.9	260	58.0	4.3	773	58	...	1.8	20	0	Ecuador
	3,693	1.6	0.7	...	3.1	580	468.5	6.3	3,160	43	10.1 ⁶	2.4	700	0	Egypt
	879	36.9	71.1	...	82.0	1,000	15.5	2.7	111	16	3.9	0.5	10	0	El Salvador
	...	...	...	...	...	190	1.3	2.5	71 ⁶	141 ⁶	16.5 ²	0.1 ¹⁶	0	0	Equatorial Guinea
	161.9	2.7	10.3	5.8	...	...	201.8	40.1	230 ¹⁴	49 ¹⁴	51.1 ²	24.1 ¹⁴	170	20 ²	Eritrea
	3,565	13.8	28.3	1,659.2	169.8	...	5.3	4.0	344	257	4.5 ²	1.6	10	0	Estonia
	258.3	6.5	77.8	1.4	1.4	...	138.0	1.8	336	4	16.5 ⁶	1.9	270	0	Ethiopia
	...	...	...	...	...	...	3	3	—	—	—	—	...	...	Faroe Islands
	2,370	2.9	44.1	427.9	44.4	407	3.5	4.2	50	60	6.0	1.6	0	0	Fiji
	14,350	0.7	34.9	1,739.7	33.2	640	29.3	5.5	3,150	595	4.4	1.3	400	128	Finland
	6,097	3.4	162.7	632.4	511.0	630	352.8	5.7	60,660	983	4.8	2.4	800	1,600	France
	8,936	27.2	178.7	1,367.3	150.6	...	3	3	—	—	—	—	...	...	French Guiana
	1,799	0.9	98.9	232.7	...	...	3	3	—	—	—	—	...	...	French Polynesia
	114	1.4	17.9	2.3	7.5	1,290	4.7	3.2	123	92	8.1 ¹⁴	1.1	0	0	Gabon
	89	0.4	10.6	5.6	...	3,310	0.8	0.5	4	2	6.6	0.6	0	0	Gambia, The
	4,355	...	...	...	...	...	—	—	...	...	...	...	...	...	Gaza Strip
	286	4.7	99.5	21.1	0.8	...	21.2	4.9	573	124	19.1	5.6	10	30 ²	Georgia
	7,682	3.5	139.6	1,377.4	114.3	...	244.3	3.0	42,100	512	3.6	1.3	1,300	2,027	Germany
	...	2.2	418.9	1.5	...	620	13.5	0.6	104	5	10 ⁶	0.7	0	0	Ghana
	3,641	3.0	68.2	356.8	166.5	380	156.6	13.9	8,650	773	5.6 ¹⁴	2.7	1,900	36	Greece
	9,360	18.1	845.0	1,883.5	...	340	3	3	—	—	—	—	...	...	Greenland
	8,543	7.8	98.9	582.2	...	230	...	...	...	...	...	...	...	...	Grenada
	5,793	13.2	215.2	821.5	453.9	...	3	3	—	—	—	—	...	...	Guadeloupe
	10,080	7.9	169.3	634.2	333.6	...	3	3	—	—	—	—	...	...	Guam
	510	27.4	77.1	27.9	58.1	670	15.5	1.2	166	13	2.4	0.4	0	0	Guatemala
	...	...	...	...	...	...	3	3	—	—	—	—	...	...	Guernsey
	18.4	0.5	0.7	0.7	0.1	1,140	9.6	1.0	52	6	4.5 ¹⁴	1.1	0	0	Guinea
	129	0.5	8.7	4.0	0.2	...	6.5	4.3	15	10	8.2	4.2	0	0	Guinea-Bissau
	1,277	19.1	246.0	365.8	32.2	190	1.1	1.5	14 ⁸	19 ⁸	2.0 ²	1.8 ⁸	0	0	Guyana
	701	...	...	...	...	400	20	20	15 ¹⁶	21 ⁶	...	0.4 ¹⁶	0	0	Haiti
	392	154.0	44.4	4.3	25.8	1,040	12.0	1.6	76	10	2.6 ²	0.6	10	0	Honduras
	1,122	1.0	117.1	133.4	15.3	221	3	3	—	—	—	—	...	...	Hong Kong
	5,011	4.1	76.6	804.4	41.3	237	25.2	2.5	1,530	152	4.1	1.1	80	15	Hungary
	31,332	0.7	15.8	920.3	...	940	...	—	—	—	—	—	10	0	Iceland
	594	4.6	...	15.6	...	820	1,281.2	1.1	27,200	24	19.1	2.4	700	57	India
	120.9	1.0	4.4	1.8	1.7	1,119	302.0	1.3	3,570	15.4	6.6	0.8	450	100 ²	Indonesia
	77	0.5	47.7	...	...	...	523.0	7.2	7,450 ²¹	105 ²¹	13.0	2.9 ²¹	150	10 ²	Iran
	197	7.1	34.7	...	...	140	227.0 ²²	8.0 ²²	...	...	...	...	5	0	Iraq
	1,696	1.4	12.4	479.8	16.3	310	10.5	2.3	1,320	305	2.1	0.5	40	37	Ireland
	2,867	0.7	12.3	921.4	60.6	...	3	3	—	—	—	—	—	—	Isle of Man
	6,254	2.2	491.8	990.1	501.7	210	176.5	25.1	11,610 ²³	1,683 ²³	22.3	7.2 ²³	2,400	2,600	Israel
	4,214	4.4	46.4	...	537.0	680	293.0	4.9	37,700	638	4.8	1.8	700	1,034	Italy
	1,871	37.2	511.4	135.7	7.2	430	2.8	1.1	108	40	1.8	1.0	10	0	Jamaica
	1,773	1.0	16.0	206.0	34.0	480	230.3	1.8	44,100 ⁸	345 ⁸	2.6	0.9 ⁸	3,000	20 ²	Japan
	...	...	...	...	...	...	3	3	—	—	—	—	...	...	Jersey
	1,256	6.3	14.0	31.0	52.2	630	100.5	17.2	1,620	273	12.3	10.2	70	0	Jordan
	932	15.9	...	...	3.4	...	49.0	3.1	1,160	74	4.7	1.1	160	10 ²	Kazakhstan
	484	6.4	54.1	76.9	9.7	1,500	24.1	0.6	681	18	8.1 ¹⁴	2.5	5	0	Kenya
	261	5.1	11.6	38.6	...	330	—	—	...	...	...	...	...	...	Kiribati
	...	...	...	...	...	460	1,106.0	46.3	3,300 ⁶	72 ⁶	...	7.3 ⁶	30	140 ²	Korea, North
	3,494	2.1	64.6	7.0	...	506	687.0	13.7	26,500 ⁸	547 ⁸	10.4	2.7 ⁸	2,200	420 ¹⁴	Korea, South
	...	...	...	...	...	...	25	25	...	...	...	...	...	...	Kosovo
	1,346	1.5	36.4	75.9	56.7	80	15.5	4.4	3,750	1,138	16.5	3.3	725	0	Kuwait
	987	...	12.6	482.4	...	...	10.9	2.1	39	7	7.5 ¹⁴	1.1	0	0	Kyrgyzstan
	...	...	...	...	...	280	29.1	4.9	15	2.5	10.4 ¹⁴	0.4	0	0	Laos
	2,097	9.3	18.6	56.1	129.0	...	5.2	2.3	453	199	4.0	1.7	5	0	Latvia
	3,063	5.5	209.7	78.0	30.0	530	56.0 ²⁶	13.5 ²⁶	733	179	9.8	3.3	10	0	Lebanon
	2,357	50.4	156.9	250.4	30.8	1,130	2.0	1.0	40	20	5.0 ¹⁴	2.3	0	0	Lesotho
	...	...	...	...	...	1,570	2.4 ²⁷	0.7 ²⁷	46 ⁶	16 ⁶	9.4 ⁶	11.0 ⁶	0	0	Liberia
	1,065	2.1	5.4	...	...	...	76.0	12.9	656	103	6.4 ⁶	1.1	20	30 ²	Libya
	...	...	114.3	614.3	153.6	660	28	28	—	—	—	—	...	...	Liechtenstein
	2,029	9.0	10.4	585.6	96.7	...	8.9	2.6	447	132	4.5	1.2	20	0	Lithuania
	6,280	17.2	89.0	1,152.8	182.0	829	0.9	1.8	279	597	0.7	0.6	50	0	Luxembourg
	1,698	5.4	34.0	250.5	26.6	...	3	3	...	...	...	...	...	...	Macau
	1,102	5.4	26.9	...	44.7	...	10.9	5.3	157	77	6.4	2.1	20	0	Macedonia
	112	0.6	12.0	0.7	0.1	2,900	13.5	0.7	82	4	5.0 ¹⁴	1.1	0	0	Madagascar
	850	3.1	82.2	13.1	...	1,670	5.3	0.4	42	3	2.2 ²	1.8	0	0	Malawi
	604	3.1	25.9	155.6	20.8	760	109.0	4.1	4,020	151	7.0	2.1	925	0	Malaysia
	2,353	1.9	3.3	36.1	...	35,710	...	...	6	20	10.1	1.2	...	...	Maldives
	10.0	0.7	1.5	0.8	0.3	160	7.4	0.6	157	13	8.7 ²	2.1	0	0	Mali
	1,841	3.0	35.2	1,079.2	243.9	230	2.0	4.7	44	106	2.2	0.6	0	0	Malta
	2,273	...	...	...	...	400	29	29	—	—	—	—	...	...	Marshall Islands
	6,305	5.8	184.9	641.2	192.8	...	3	3	—	—	—	—	...	...	Martinique
	95.4	0.8	27.0	7.3	2.5	710	15.9	5.0	19	6	13.2	0.5	0	0	Mauritania
	2,712	2.9	7.8	116.0	...	240	—	—	27	21	0.7	0.4	0	0	Mauritius
	...	...	...	...	...	...	3	3	—	—	—	—	...	...	Mayotte
	108	7.3	30.2	...	...	...	255.5	2.4	3,980	37	3.0 ⁶	0.4	160	30 ²	Mexico
	...	...	...	...	...	...	29	29	...	...	...	...	...	...	Micronesia
	957	9.9	11.1	50.4	15.6	...	6.0	1.6	19	5	1.3	0.4	0	20 ²	Moldova
	3,430	—	46.7	106.7	70.0	...	—	—	...	...	...	...	...	...	Monaco
	1,010	30.0	74.7	486.0	2.1	120	10.0	3.8	43	16	5.9 ⁶	1.1	0	0	Mongolia
	...	...	...	...	...	...	4.5	7.2	59	95	...	2.3	...	...	Montenegro
	366	1.4	6.7	...	...	840	195.8	6.2	2,400	77	13.5 ²	3.2	130	0	Morocco
	166	4.2	9.2	45.9	...	...	11.2	0.5	57	3	9.1 ²	0.7	5	0	Mozambique
	64.5	1.9	26.9	0.1	0.1	650	406.0	8.5	7,000	147	21.5 ¹⁴	3.3	60	0	Myanmar (Burma)

Social protection (continued)

country	social security																	
	programs available, 2007 or 2008					expenditures, latest (% of total central govt.) ^f	finances, latest											
							receipts					expenditures						
	old-age, invalidity, death ^a	sickness and maternity ^b	work injury ^c	unemployment ^d	family allowances ^e										total ('000,000 natl. cur.)	insured persons (%)	em-ployers (%)	government (%)	other (%)	total ('000,000 natl. cur.)	benefits (%)	admin-istration (%)	other (%)
Namibia	○	12.2
Nauru	○	○	○	...	○
Nepal	●	9	●	...	...	4.6	...	...	...	...	...	59.3	...	...	...	...	...
Netherlands	●	●	...	●	●	44.0	154,427.0	37.3	30.3	19.0	13.4	135,609.0	96.9	3.1	...	...	...
Netherlands Antilles ⁵	...	...	○	○	...	12.9	317.0	100.0	—	—	—	275.0	...	...	...	...	...
New Caledonia	...	...	...	...	○	...	15,834.0	...	...	...	...	14,598.0	...	...	...	...	...
New Zealand	●	●	●	●	●	32.9	14,266.0	1.0	4.7	92.5	1.8	14,372.3	95.6	2.8	1.6	...	...
Nicaragua	○	○	○	○	○	11.3	647,454.8	13.5	49.1	7.6	29.8	452,038.6	82.4	17.6	...	...	...
Niger	○	○	○	...	○	...	5,634.9	9.4	90.6	—	—	3,804.2	62.5	—	37.5	...	...
Nigeria	○	...	○	...	...	...	54.0	50.0	50.0	—	—	22.6	42.5	57.5	...	...	...
Northern Mariana Islands	○	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Norway	○	○	○	○	○	43.0	158,105.0	18.3	31.4	46.6	3.7	131,578.2	98.7	1.3	...	...	...
Oman	●	...	●	...	...	3.5	—	...	...	...	...	...	...	...	...	...	...
Pakistan	●	●	●	...	...	...	9,321.4	1.3	8.0	84.3	6.4	8,092.0	97.4	1.2	1.4	...	...
Palau	●	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Panama	○	○	○	...	...	23.1	496.7	31.0	39.5	7.1	22.4	452.8	94.0	4.8	1.2	...	...
Papua New Guinea	●	9	●	...	...	0.9	45.0	40.5	32.1	8.0	19.4	9.4	82.3	9.7	8.0	...	...
Paraguay	○	○	○	...	...	14.9	...	...	...	...	...	253,341	...	...	...	...	...
Peru	○	○	○	...	...	15.7	1,363,280.6	30.2	65.1	4.7	—	1,435,134.1	78.5	21.5	...	...	...
Philippines	●	●	●	...	...	2.1	19,213.6	22.2	32.3	—	45.5	7,878.3	87.3	12.3	...	...	...
Poland	●	●	●	●	●	45.3	11,572,248.0	2.1	70.2	25.1	2.6	11,452,165.0	98.8	1.2	...	...	...
Portugal	●	●	●	●	●	41.7	833,442.5	31.3	50.1	13.4	5.2	756,410.8	94.6	4.2	1.2	...	...
Puerto Rico	○	○	○	○	○	...	...	...	...	...	...	1,041.3	100.0	...	...	...	...
Qatar	...	...	...	...	...	...	80.0	—	—	100.0	—	80.0	100.0	...	...	...	...
Réunion	...	...	...	...	...	...	...	...	...	...	...	13,200.0	...	...	...	...	...
Romania	●	●	●	●	●	35.8	90,561.2	—	48.9	51.1	—	90,561.2	100.0	...	...	...	...
Russia	●	●	●	●	●	40.4	...	...	...	...	...	...	...	...	...	...	...
Rwanda	○	○	○	...	...	...	2,350.0	23.9	39.8	—	36.3	965.8	60.8	39.2	...	...	...
St. Kitts and Nevis	○	○	○	...	...	4.9	14.3	...	...	...	...	7.9	...	...	...	...	...
St. Lucia	○	○	○	...	...	...	14.6	28.6	28.6	—	42.8	3.4	61.4	38.6	...	...	...
St. Vincent and the Grenadines	○	○	○	...	...	8.8	—	...	...	...	...	—	...	...	...	...	...
Samoa	●	...	●	...	...	...	...	...	...	...	...	...	...	...	...	...	...
San Marino	●	●	●	●	●	30.1	51,673.0	12.0	48.7	36.1	3.2	46,179.0	95.7	3.7	0.6	...	...
Sao Tome and Principe	○	○	○	...	...	...	46.4	37.7	56.3	—	6.0	23.7	100.0	...	...	...	...
Saudi Arabia	●	...	...	...	...	...	1,761.4	26.8	73.2	—	—	4,292.9	100.0	...	...	...	...
Senegal	7	○	○	...	○	1.8	17,202.0	—	47.6	51.4	1.0	15,371.0	84.6	11.1	4.3	...	...
Serbia	●	●	...	●	●	50.9	...	...	...	...	...	...	...	...	...	...	...
Seychelles	○	9	○	...	...	14.2	69.1	30.1	60.2	—	9.7	42.7	69.6	4.9	25.5	...	...
Sierra Leone	○	...	○	...	...	...	...	...	...	...	...	153.0	100.0	...	...	...	...
Singapore	●	●	●	...	...	18.1	7,531.9	49.1	35.3	0.1	15.6	5,045.8	78.0	0.6	21.4	...	...
Slovakia	●	●	●	●	●	49.6	74,205	...	...	...	...	87,916	...	...	...	...	...
Slovenia	●	●	●	●	●	44.2	...	...	...	...	...	...	...	...	...	...	...
Solomon Islands	●	...	...	●	...	...	20.9	27.8	41.1	—	31.1	17.4	89.7	10.3	...	...	...
Somalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Africa	○	9	○	○	○	2.2	2,034	—	100.0	—	—	2,260.0	...	...	...	...	...
Spain	●	●	●	●	●	46.6	8,320,972.0	15.9	53.9	27.9	2.3	8,038,090.0	94.3	2.6	3.1	...	...
Sri Lanka	○	24	○	○	○	20.4	15,399.9	22.0	24.4	29.1	24.5	5,819.0	98.5	1.3	0.2	...	...
Sudan	○	...	...	...	...	0.6	62.0	24.9	0.5	—	74.6	14.7	37.5	62.5	...	...	...
Suriname	○	...	...	...	○	...	73.0	24.7	75.3	—	—	70.6	100.0	...	...	...	...
Swaziland	○	...	○	...	...	0.4	10.7	31.4	31.4	—	37.2	3.9	45.8	54.2	...	...	...
Sweden	●	●	●	●	●	46.9	446,909.7	2.8	37.9	50.8	8.5	439,997.3	93.7	3.3	3.0	...	...
Switzerland	●	●	●	●	●	47.8	45,800.1	45.6	22.6	25.9	5.9	41,745.7	91.5	3.0	5.5	...	...
Syria	●	...	...	...	...	5.3	3,147.9	30.4	60.9	...	5.6	1,455.9	95.7	4.2	0.1	...	...
Taiwan	●	●	●	●	●	13.8	...	...	...	...	...	...	...	...	...	...	...
Tajikistan	●	●	●	●	●	12.2	...	...	...	...	...	...	...	...	...	...	...
Tanzania	○	○	○	...	...	...	3,275.8	25.9	25.9	—	48.2	2,780.7	5.8	14.1	80.1	...	...
Thailand	●	●	●	●	●	7.8	654.0	—	60.2	—	39.8	260.0	88.2	11.8	...	...	...
Togo	○	9	○	...	○	...	10,162.0	8.1	61.5	—	30.4	5,844.0	77.5	22.5	...	...	...
Tonga	...	...	...	...	...	0.8	...	...	...	...	...	...	...	...	...	...	...
Trinidad and Tobago	○	○	○	...	...	19.3	584.9	12.0	24.1	39.7	24.2	438.4	85.6	11.1	3.3	...	...
Tunisia	○	○	○	○	○	21.2	325.3	36.9	63.1	—	—	358.3	...	...	...	...	...
Turkey	●	●	●	●	●	4.2	12,075,809.0	28.5	32.9	22.8	15.8	10,241,427.0	97.2	2.2	0.6	...	...
Turkmenistan	●	●	●	●	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuvalu	○	...	...	...	...	...	...	...	...	...	...	0.1	67.6	32.4	...	...	...
Uganda	○	...	○	...	...	2.2	265.9	32.1	64.3	1.1	2.5	145.0	0.3	76.8	22.9	...	...
Ukraine	●	●	●	●	●	48.9	20,350.0	—	—	—	—	20,350.0	100.0	...	...	...	...
United Arab Emirates	...	...	...	...	...	3.2	182.2	17.3	6.2	0.5	76.0	182.2	100.0	...	...	...	...
United Kingdom	●	●	●	●	...	28.9	92,157.0	18.1	24.9	52.9	4.1	88,294.0	93.8	3.3	2.9	...	...
United States	○	○	○	○	○	42.2	804,909.0	25.5	33.9	28.8	11.8	627,653.0	95.5	3.3	1.2	...	...
Uruguay	○	36	○	○	○	38.1	535,507.0	31.4	37.3	26.0	5.3	548,591.0	93.6	5.4	1.0	...	...
Uzbekistan	●	●	●	●	●	...	...	...	...	...	...	...	...	...	...	...	...
Vanuatu	●	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Venezuela	○	○	○	○	36	11.2	7,457.6	21.3	40.7	12.7	25.3	6,355.7	86.1	14.9	...	...	...
Vietnam	●	●	●	●	...	10.5	...	...	...	...	...	...	...	...	...	...	...
Virgin Islands (U.S.)	○	...	...	○	○	...	...	...	...	...	...	...	...	...	...	...	...
West Bank	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Western Sahara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yemen	●	...	●	...	...	10.5	—	...	...	...	...	—	...	...	...	...	...
Zambia	○	9	○	...	...	1.3	179.2	28.4	28.4	—	43.2	67.7	40.6	59.4	...	...	...
Zimbabwe	○	9	○	...	...	...	167.0	25.9	7.6	64.2	2.3	112.2	93.7	6.2	0.1	...	...

¹As of October 2008 U.S. forces numbered 20,600, and NATO-sponsored security forces numbered 30,465. ²1999. ³Political dependency; defense is the responsibility of the administering country.

⁴Includes civilian militia. ⁵Netherlands Antilles includes Aruba. ⁶2003. ⁷Old age benefits only. ⁸Excludes expenditure on military pensions. ⁹Medical care only. ¹⁰Old age and orphan's benefits only.

¹¹Excludes 31,050 paramilitary forces. ¹²Military defense is the responsibility of France. ¹³As of November 2008 there were 139,251–151,251 active forces; as of April 2009 UN peacekeeping troops numbered 18,638. ¹⁴2004. ¹⁵As of April 2009 UN troops numbered 8,385. ¹⁶2005. ¹⁷Republic of Cyprus only. ¹⁸No regular military forces; Commonwealth of Dominica Police Force. ¹⁹UN forces of 1,611 military police are stationed in East Timor as of August 2009. ²⁰Haitian Army was disbanded in 1995, and a National Police Force of 5,300 was formed; in August 2009 there were 7,057 UN troops

	crime and law enforcement (latest)					military protection									country
	offenses reported to the police per 100,000 population				population per police officers	manpower, 2008 ^h		expenditure, 2007				arms trade ('000,000 U.S.\$)			
	total	personal		property		total ('000 U.S.\$)	per 1,000 population	total '000,000	per capita	% of central government expenditure (2005)	% of GDP or GNP	imports 1999	exports 2005		
		murder	assault	burglary automobile theft											
	2,006	26.3	533.6	602.0	65.8	...	9.2	4.4	239	115	8.4 ¹⁴	3.2	130	0	Namibia
	...	25.0	400.0	100.0	...	110	—	—	...	...	...	...	...	...	Nauru
	9	2.8	1.1	0.8	...	1,000	69.0	2.4	167	6	12.4	2.1	0	0	Nepal
	7,808	10.9	242.8	3,100.4	239.0	510	40.5	2.5	11,140	680	3.6	1.4	775	1,461	Netherlands
	5,574 ³¹	...	396	3,455	...	330	3	3	—	—	—	—	...	...	Netherlands Antilles ⁵
	...	...	...	...	...	...	3	3	—	—	—	—	...	...	New Caledonia
	13,854	3.9	546.3	2,352.9	788.6	630	9.3	2.2	1,560	372	2.5	1.2	575	0	New Zealand
	1,069	25.6	203.8	110.7	...	90 ⁴	12.0	2.1	36	6	2.9 ²	0.6	0	0	Nicaragua
	99	0.9	16.6	1.0	0.7	2,350 ³²	5.3	0.4	46	3	6.4 ²	1.0	0	0	Niger
	312	...	...	...	...	1,140	80.0	1.2	980	7	8.1 ²	0.7	0	0	Nigeria
	245	3.8	92.6	73.7	20.8	...	3	3	—	—	—	—	...	...	Northern Mariana Islands
	9,769	2.3	66.1	95.0	465.8	660	19.1	4.0	5,540	1,178	4.6	1.4	480	382	Norway
	331	1.5	1.8	...	14.9	430	42.6	16.1	3,230	1,245	35.3 ⁶	8.1	30	0	Oman
	318	7.1	2.2	10.4	9.0	720	617.0	3.8	4,530	28	19.8	3.1	1,000	100	Pakistan
	...	...	...	323.0	...	...	29	29	—	—	—	—	...	...	Palau
	419	2.0	11.8	25.1	77.7	180	—	—	200	60	...	1.0	5	0	Panama
	766	8.6	66.7	63	22.0	720	3.1	0.5	34	5	2.4 ⁶	0.7	0	0	Papua New Guinea
	418	11.5	54.2	21.4	30.5	310	10.7	1.7	100	16	3.9 ²	0.8	10	0	Paraguay
	218	3.2	24.1	7.8	3.6	730	114.0	4.0	1,220	44	12.3 ²	1.1	30	0	Peru
	...	13.1	14.9	...	3.3	1,160	106.0	1.2	1,130	13	4.5	0.8	110	0	Philippines
	2,901	2.8	79.2	936.8	185.0	370	121.8	3.2	7,980	209	3.5	1.9	40	361	Poland
	661	3.1	1.5	115.3	40.4	660	42.9	4.0	3,380	318	3.3 ¹⁴	1.5	60	9	Portugal
	2,339	16.2	101.8	412.4	1,521	380	3	3	—	—	—	—	...	...	Puerto Rico
	1,079	2.1	7.1	34.1	11.5	...	11.8	8.2	1,090	1,296	9.6 ¹⁴	1.5	120	0	Qatar
	2,097	7.8	123.1	181.3	137.9	220	3	3	—	—	—	—	...	...	Réunion
	2,206	7.1	5.8	367.8	30.4	...	73.2	3.4	3,040	141	5.0 ⁶	1.8	200	36	Romania
	20,514	21.3	32.6	669.1	25.6	...	1,027.0	7.2	32,200	256	34.6	2.5	470	6,126	Russia
	...	45.1	114.3	...	0.3	4,650	33.0	3.3	62	6	22.7 ²	2.1	30	0	Rwanda
	3,808	12.0	434.0	1,790	...	300	—	—	...	...	...	...	...	...	St. Kitts and Nevis
	4,386	17.0	1,193.0	778.0	...	430	—	—	...	...	...	...	...	...	St. Lucia
	3,977	10.3	986.9	...	...	250	—	—	...	...	...	...	...	...	St. Vincent and the Grenadines
	...	...	...	...	...	...	33	33	—	—	—	—	...	...	Samoa
	...	4.1	...	...	...	...	—	—	...	...	...	...	...	...	San Marino
	558	4.0	...	...	...	400	—	—	0.6	4	1.3	1.2	0	0	Sao Tome and Principe
	149	0.5	0.2	...	45.4	280	221.5	8.9	35,400	1,462	14.4	9.4	7,700	0	Saudi Arabia
	123	0.5	8.8	2.1	8.2	730	13.6	1.1	193	32	7.3 ¹⁴	1.6	0	0	Senegal
	...	...	...	...	...	...	24.3	3.3	985	104	...	2.7	10	0	Serbia
	5,361	3.7	43.4	378.0	40.9	120	0.2	2.3	11	130	3.8	1.9	...	...	Seychelles
	...	...	...	...	...	600	10.5	1.8	29	5	13.5	1.7	10	0	Sierra Leone
	783	1.0	2.4	40.1	55.2	230	72.5	15.0	7,010	1,536	28.8 ¹⁴	4.4	950	20 ²	Singapore
	1,740	2.4	204.6	504.3	142.4	...	17.4	3.2	1,350	250	4.5	1.7	20	62	Slovakia
	3,138	3.6	20.7	427.3	25.6	...	7.2	3.5	741	368	3.1	1.6	10	0	Slovenia
	...	...	...	...	...	620	—	—	...	...	...	...	0	0	Solomon Islands
	144	1.5	8.0	31.2	...	540	34	34	...	...	...	...	20	0	Somalia
	7,140.8	121.9	595.6	896.6	262.7	870	62.1	1.3	3,680	77	4.2 ⁶	1.4	50	410 ⁶	South Africa
	4,449	2.7	23.4	562.8	343.3	580	221.8	4.8	17,490	386	4.3	0.5	750	521	Spain
	280	8.2	10.8	54.7	...	860	150.9	7.8	975	49	10.5	3.0	40	0	Sri Lanka
	...	10.2	46.3	66.6	4.7	740	109.3	2.8	502 ¹⁶	131 ⁶	27.5 ⁶	1.8 ¹⁶	10	0	Sudan
	17,819	7.6	1,824.4	...	...	...	1.8	3.6	22	43	11.0 ¹⁴	1.0	10	0	Suriname
	3,962	18.1	471.7	706.8	54.1	610	—	—	491 ⁴	391 ⁴	4.6	1.8 ¹⁴	0	0	Swaziland
	12,982	4.5	42.5	1,615.1	658.9	330	16.9	1.8	6,770	740	5.4	1.5	230	1,416	Sweden
	7,030	2.7	73.3	1,065.9	1,065.5	640	3.8	0.5	3,520	462	8.1 ¹⁴	0.8	1,100	207	Switzerland
	42	1.0	—	15.6	2.7	1,970	292.6	15.0	1,460	77	23.6 ²	3.9	210	0	Syria
	799	8.2	...	...	124.9	720	290.0	12.6	9,580	418	10.3	2.5	2,600	20 ²	Taiwan
	317	2.5	4.6	...	...	...	8.8	1.2	87	13	2.0 ¹⁴	2.4	0	0	Tajikistan
	1,714	7.7	1.7	96.6	0.9	1,330	27.0	0.7	162	4	10.1 ²	1.1	5	0	Tanzania
	351	7.7	25.4	9.9	3.3	530	306.6	4.8	3,330	52	1.6	1.4	330	0	Thailand
	11	...	...	...	...	1,970	8.6	1.3	42	6	9.4 ²	1.6	0	0	Togo
	2,727	1.0	108.5	541.7	14.8	330	33	33	21 ⁴	231 ⁴	...	1.0 ¹⁴	...	...	Tonga
	1,170	9.7	31.0	452.7	80.6	280	4.0	3.1	55	42	2.2 ⁶	0.3	0	0	Trinidad and Tobago
	1,419	1.2	165.1	60.1	10.2	340	35.8	3.5	470	46	5.0	1.3	10	0	Tunisia
	547	3.9	120.0	...	28.9	1,570	510.6	7.2	13,640	184	6.7 ⁶	2.1	3,200	337	Turkey
	...	...	...	...	...	...	22.0	4.2	209	41	16.0 ²	1.7	10	0	Turkmenistan
	...	...	...	...	...	290	—	—	...	...	...	...	...	...	Tuvalu
	316	9.9	54.8	19.3	8.3	1,090	45.0	1.5	230	8	8.9 ⁶	1.9	30	0	Uganda
	1,115	10.0	14.7	224.3	7.6	...	129.9	2.8	1,800	39	4.5	1.3	10	500 ⁶	Ukraine
	2,604.7	3.0	10.1	5.1	23.0	140	51.0	11.1	10,080	2,268	30.1 ²	5.5	950	0	United Arab Emirates
	9,823 ³⁵	2.8 ³⁵	405.2 ³⁵	1,832.7 ³⁵	752.9 ³⁵	350	160.2	2.6	63,200	1,038	6.0	2.3	2,600	12,985	United Kingdom
	5,374	9.0	430.2	1,041.8	591.2	318	1,540.0	5.0	552,000	1,826	20.1	4.0	1,600	11,552	United States
	3,002	7.7	162.5	52.3	130.1	170	25.4	7.6	304	91	5.2	1.3	10	0	Uruguay
	328	3.2	3.0	33.2	2.3	...	67.0	2.5	94	8	5.3 ²	0.5	0	10 ²	Uzbekistan
	...	...	...	...	...	450	—	—	...	...	...	...	...	...	Vanuatu
	1,106	22.1	152.2	358.2	239.4	320	115.0	4.1	2,560	107	5.0	1.1	310	0	Venezuela
	74	1.5	8.5	...	...	...	455.0	5.1	3,700	42	...	5.3	70	0	Vietnam
	10,441	22.3	1,943.2	3,183.7	954	240	3	3	—	—	—	—	...	...	Virgin Islands (U.S.)
	2,226	...	...	...	...	...	—	—	...	...	...	...	...	...	West Bank
	...	...	...	...	...	...	3	3	—	...	...	...	...	...	Western Sahara
	...	5.3	3.2	1.2	3.6	1,940	66.7	2.9	908	41	18.8 ²	4.2	30	0	Yemen
	666	9.8	9.5	153.5	9.6	540	15.1	1.3	247	22	3.9 ²	2.2	0	0	Zambia
	5,619	9.0	198.4	435.9	13.4	750	29.0	2.6	132 ¹⁶	11 ¹⁶	12.1 ²	2.3 ¹⁶	10	0	Zimbabwe

in Haiti. ²¹Includes public order. ²²As of November 2008 U.S. and allied coalition forces numbered 143,000 and 6,500, respectively. ²³Includes U.S. military aid of U.S.\$2 billion annually.

²⁴Maternity benefits only. ²⁵As of June 2009 NATO-led Kosovo Force numbered 13,800 troops. ²⁶As of August 2009 UN peacekeeping troops numbered 12,235. ²⁷As of August 2009 there were 11,516 UN peacekeeping troops in Liberia. ²⁸Military defense is the responsibility of Switzerland. ²⁹Military defense is the responsibility of the United States. ³⁰Coverage provided through France's program. ³¹Curaçao only. ³²Includes paramilitary forces. ³³Military defense is the responsibility of New Zealand. ³⁴Following the 1991 revolution, no national armed forces have yet been formed. ³⁵England and Wales. ³⁶Coverage is provided under other programs.

Education

This table presents international data on education analyzed to provide maximum comparability among the different educational systems in use among the nations of the world. The principal data are, naturally, numbers of schools, teachers, and students, arranged by four principal levels of education—the first (primary); general second level (secondary); vocational second level; and third level (higher). Whenever possible, data referring to preprimary education programs have been excluded from this compilation. The ratio of students to teachers is calculated for each level. These data are supplemented at each level by a figure for enrollment ratio, an indicator of each country's achieved capability to educate the total number of children potentially educable in the age group usually represented by that level. At the first and second levels this is given as a net enrollment ratio and at the third level as a gross enrollment ratio. Two additional comparative measures are given at the third level: students per 100,000 population and proportion (percentage) of adults age 25 and over who have achieved some level of higher or post-secondary education. Data in this last group are confined as far as possible to those who have completed their educations and are no longer in school. No enrollment ratio is provided for vocational training at the second level because of the great variation worldwide in the academic level at which vocational training takes place, in the need of countries to encourage or direct students into vocational programs (to support national development), and, most particularly, in the age range of students who normally constitute a national vocational system (some will be as young as 14, having just completed a primary cycle; others will be much older).

At each level of education, differences in national statistical practice, in national educational structure, public-private institutional mix, training and deployment of teachers, and timing of cycles of enrollment or completion

of particular grades or standards all contribute to the problems of comparability among national educational systems.

Reporting the number of schools in a country is not simply a matter of counting permanent red-brick buildings with classrooms in them. Often the resources of a less developed country are such that temporary or outdoor facilities are all that can be afforded, while in a developed but sparsely settled country students might have to travel 80 km (50 mi) a day to find a classroom with 20 students of the same age, leading to the institution of measures such as traveling teachers, radio or television instruction at home under the supervision of parents, or similar systems. According to UNESCO definitions, therefore, a “school” is defined only as “a body of students . . . organized to receive instruction.”

Such difficulties also limit the comparability of statistics on numbers of teachers, with the further complications that many at any level must work part-time, or that the institutions in which they work may perform a mixture of functions that do not break down into the tidy categories required by a table of this sort. In certain countries teacher training is confined to higher education, in others as a vocational form of secondary training, and so on. For purposes of this table, teacher training at the secondary level has been treated as vocational education. At the higher level, teacher training is classified as one more specialization in higher education itself.

The number of students may conceal great variation in what each country defines as a particular educational “level.” Many countries do, indeed, have a primary system composed of grades 1 through 6 (or 1 through 8) that passes students on to some kind of postprimary education. But the age of intake, the ability of parents to send their children or to permit them to finish that level, or the need to withdraw the children seasonally for agricul-

Education

country	year	first level (primary)					general second level (secondary)					vocational second level ^a	
		schools	teachers ^b	students ^c	student/ teacher ratio	net enroll- ment ratio ^d	schools	teachers ^b	students ^c	student/ teacher ratio	net enroll- ment ratio ^d	schools	teachers ^b
Afghanistan	2002	4,876	58,312	3,900,000	52.9	29	1,994	34,271	400,000	18.1	14	...	...
Albania	2000–01	1,811	28,293	523,253	18.5	95	409 ¹	5,780	100,082	17.3	77	...	2,174 ¹
Algeria	2002–03	15,426 ¹	167,529	4,612,574	27.5	95	3,954 ¹	155,356	3,192,247	20.5	67	...	14,896
American Samoa	2001	32	524 ²	11,343	...	...	10	245 ²	4,217	...	...	1	21 ²
Andorra	1999–2000	12	...	5,996	...	89	6 ¹	...	2,655 ¹	...	71	...	...
Angola	1997–98	...	31,062 ³	1,342,116	...	61	...	5,138 ³	267,399	...	...	...	566 ³
Antigua and Barbuda	2000–01	55	525	10,427	19.9	...	14	381	5,794	10.0	...	1 ⁴	16 ⁴
Argentina	1999–2000	22,283	307,874	4,609,077	15.0	96	21,492 ⁵	127,718 ⁵	3,281,512 ⁵	25.7 ⁵	81	5	...
Armenia	2003–04	1,439 ⁷	46,000 ⁷	498,500 ⁷	10.8 ⁷	94	7	7	7	7	83	81	3,380
Aruba	2002	36	478	9,955	20.1	99	15	568	8,160	14.4	75	11	34
Australia	2003	9,607 ⁷	229,576 ⁷	3,330,300 ⁷	14.5 ⁷	97	7	7	7	7	88	1,949	32,300
Austria	2002–03	4,458 ⁸	67,152 ⁸	649,198 ⁸	9.7 ⁸	90	734 ⁹	41,840 ⁹	326,891 ⁹	7.8 ⁹	89	925	...
Azerbaijan	2004–05	4,553 ⁷	173,819 ⁷	1,634,341 ⁷	9.4 ⁷	80	7	7	7	7	76	59	7,028
Bahamas, The	2002–03	113 ¹	2,029	34,079	16.8	86	37	2,135	31,975	15.0	76	...	...
Bahrain	2000–01	241	9,970	150,054	15.1	90	...	...	40,946	...	87	...	...
Bangladesh	2002–03	63,658 ¹¹	315,055	17,561,828	55.7	84	16,095 ¹¹	312,348	10,897,971	34.9	45	138 ¹¹	8,431
Barbados	2002	109	1,823	29,502	16.2	100	32	1,389	21,436	15.4	90	...	...
Belarus	2003–04	4,460 ⁷	138,744 ⁷	1,369,000 ⁷	9.9 ⁷	94	7	7	7	7	85	248	14,772
Belgium	2002–03	4,596	89,445 ¹²	755,447	...	100	1,911	112,487	795,790	7.1	97	...	...
Belize	2003–04	275	2,618	62,074	23.7	99	43	1,074	15,344	14.3	69	...	...
Benin	2001–02	4,682	21,766	1,152,798	53.0	58	145 ¹³	4,447 ¹	188,035 ¹	42.0 ¹	20	14 ¹³	283 ¹³
Bermuda	2002	26 ¹	478 ¹	10,474	...	100	...	355 ¹	3,726 ¹	10.5 ¹	86	...	...
Bhutan	2004	433 ⁷	4,376 ⁷	135,988 ⁷	31.1 ⁷	...	7	7	7	7	...	8 ¹³	95 ¹³
Bolivia	2002	...	72,433	1,718,000	23.7	95	...	15,823	443,470	28.0	71	...	...
Bosnia and Herzegovina	2002–03	955 ¹	20,874	365,072	17.4	98	184 ¹	10,798	169,497	15.7	81	...	...
Botswana	2003	770	13,153	328,825	25.0	81	275	9,597	205,093	21.4	54	6	...
Brazil	2002	172,508	1,581,044	35,150,362	22.2	97	21,304	468,310	8,710,584	16.6	75	...	...
Brunei	2003	207 ¹²	4,828 ¹²	58,837 ¹²	12.2 ¹²	91	33	2,913	37,793	13.0	68	8	538
Bulgaria	2002–03	2,720 ⁷	61,354 ⁷	825,668 ⁷	13.5 ⁷	90	7	7	7	7	88	513	21,103
Burkina Faso	1996	3,568	14,037	702,204	50.0	36	252	4,152	137,257	33.0	9	41	731
Burundi	1998	1,512	12,107	557,344	46.0	57	400	3,548	56,872	16.0	9	...	...
Cambodia	2002–03	5,915	48,433	2,747,411	56.9	93	594	22,830	543,885	23.8	24	...	2,315 ¹
Cameroon	2002–03	9,459 ¹	49,042	2,798,523	57.1	67	700 ⁴	27,595	669,129	24.2	11 ⁴	324 ⁴	11,221
Canada	1999–2000	15,596 ⁷	302,977 ⁷	5,397,000 ⁷	17.8 ⁷	100	7	7	7	7	98	...	10,990 ¹⁸
Cape Verde	2002–03	370 ¹⁹	3,145	87,841	27.9	99	...	1,967	47,666	24.2	58	...	124
Central African Republic	1998	930 ¹⁹	3,125	284,398	91.0	53	46 ¹⁹	845 ¹⁹	42,253 ²	...	...	...	...
Chad	2002–03	2,660 ²⁰	16,471	1,119,242	67.9	63	153 ⁴	2,595 ¹⁴	187,659	...	10	18 ²⁰	148 ¹⁴
Chile	2003–04	8,702 ⁴	50,261	1,713,538	34.1	85	...	35,208	1,170,288	33.2	81	...	11,900
China	2003	425,846	5,703,000	116,897,000	20.5	100	79,490	4,537,000	85,832,000	18.9	73	9,908	488,000
Colombia	2003	33,957	190,961	5,207,772	27.3	87	12,293	168,587	3,603,949	21.4	56	...	...
Comoros	2002–03	346 ¹⁷	2,908	106,972	36.8	55	...	3,379	38,203	11.3	...	...	20
Congo, Dem. Rep. of the	1998	17,585	154,618	4,022,411	26.0	54	6,007	89,461	1,234,528	13.8	17 ⁴	...	...
Congo, Rep. of the	1998	1,166	4,515	270,451	59.9	96	...	5,094	114,450	22.5	...	...	1,746 ¹⁴
Costa Rica	2002–03	3,768 ¹⁷	24,142	545,509	22.6	90	468 ¹⁷	13,170	235,156	17.9	53	...	2,240
Côte d'Ivoire	2001–02	7,699 ¹⁴	40,529 ²⁰	1,662,285 ²⁰	41.0 ²⁰	61	428 ¹⁷	15,959 ²⁰	539,134	...	21	...	1,424 ⁴
Croatia	2003–04	2,138	28,335	393,421	13.9	89	665	20,073	195,340	9.7	87	442 ²¹	13,000 ²¹
Cuba	2002–03	9,397	86,641	925,325	10.9	94	2,032	80,372	938,047	11.7	86	...	27,267 ²⁰
Cyprus ²²	2001	367	3,756	63,367	16.9	96	123	4,724	59,526	12.6	93	11	597
Czech Republic	2003–04	3,870	65,615	956,324	14.6	87	344	12,175	142,167	11.7	91	1,344	31,874
Denmark	2003	2,690 ⁸	33,100 ^{8, 20}	705,974 ⁸	...	100	152	12,000 ^{9, 20}	68,313 ⁹	...	96	157	13,100 ²⁰

tural work all make even a simple enrollment figure difficult to assess in isolation. All of these difficulties are compounded when a country has instruction in more than one language or when its educational establishment is so small that higher, sometimes even secondary, education cannot take place within the country. Enrollment figures in this table may, therefore, include students enrolled outside the country.

Student-teacher ratio, however, usually provides a good measure of the ratio of trained educators to the enrolled educable. In general, primary and secondary students have been counted on the basis of full-time enrollment; tertiary students and teachers have been counted on the basis of both full-time and part-time enrollment or employment. At the primary and secondary levels, net enrollment ratio is the ratio of the number of children within the usual age group for a particular level who are actually enrolled to the total number of children in that age group ($\times 100$). This ratio is usually less than (occasionally, equal to) 100 and is the most accurate measure of the completeness of enrollment at that particular level. It is not always, however, the best indication of utilization of teaching staff and facilities. Utilization, provided here for higher education only, is best seen in a gross enrollment ratio, which compares total enrollment (of all ages) to the population within the normal age limits for that level. For a country with substantial adult literacy or general educational programs, the difference may be striking: typically, for a less developed country, even one with a good net enrollment ratio of 90 to 95, the gross enrollment ratio may be 20%, 25%, even 30% higher, indicating the heavy use made by the country of facilities and teachers at that level.

Literacy data provided here have been compiled as far as possible from data for the population age 15 and over for the best comparability inter-

nationally. Standards as to what constitutes literacy may also differ markedly; sometimes completion of a certain number of years of school is taken to constitute literacy; elsewhere it may mean only the ability to read or write at a minimal level testable by a census taker; in other countries studies have been undertaken to distinguish among degrees of functional literacy. When a country reports an official 100% (or near) literacy rate, it should usually be viewed with caution, as separate studies of "functional" literacy for such a country may indicate 10%, 20%, or even higher rates of inability to read, or write, effectively. Substantial use has been made of UNESCO literacy estimates, both for some of the least developed countries (where the statistical base is poorest) and for some of the most fully developed, where literacy is no longer perceived as a problem, thus no longer in need of monitoring.

Finally, the data provided for public expenditure on education are complete in that they include all levels of public expenditure (national, state, local) but are incomplete for certain countries in that they do not include data for private expenditure; in some countries this fraction of the educational establishment may be of significant size. Occasionally data for external aid to education may be included in addition to domestic expenditure.

The following notes further define the column headings:

a. Usually includes teacher training at the second level.

b. Full-time and part-time.

c. Full-time; may include students registered in foreign schools.

d. Latest.

students ^c student/ teacher ratio		third level (higher)							literacy (2000–04)			public expenditure on education (percent of GNP) ^d	country
		institutions	teachers ^b	students ^c	student/ teacher ratio	gross enroll- ment ratio ^d	students per 100,000 popula- tion ^d	percent of population age 25 and over with post- secondary education ^d	over age 15				
									total (%)	male (%)	female (%)		
...	...	1	462	13,000	28.1	2	60	3.0	29.0	43.0	14.0	2.0	Afghanistan
18,495 ¹	8.5 ¹	...	2,927	42,160	14.4	16	1,367	...	98.7	99.2	98.3	3.2	Albania
356,237	23.9	...	57,747	682,775	11.8	21	2,176	...	69.8	79.5	60.1	4.9 ¹	Algeria
160 ²	7.6 ²	1	77	1,178	15.3	...	2,003	22.6	99.4	99.4	99.5	8.1	American Samoa
...	...	1	...	1,341	...	...	2,093	...	100.0	100.0	100.0	...	Andorra
22,401 ²	...	1	776	8,327	10.7	1	87	...	66.8	82.1	53.8	3.4	Angola
464 ⁵	2.9 ⁴	1 ¹¹	16 ¹	46 ¹	2.9 ¹	...	73	11.6	86.6	...	...	4.0	Antigua and Barbuda
5	5	1,744	126,224	1,336,800	10.6	60	3,673	17.0 ⁶	97.2	97.2	97.2	4.3	Argentina
28,600	8.4	20	6,628	55,900	8.4	27	1,863	20.3	99.4	99.7	99.2	3.1	Armenia
178	5.2	2	21	203	9.7	30	214	16.2	97.3	97.3	97.3	4.1	Aruba
1,717,800	53.8	46	84,435	929,752	11.0	74	4,671	31.0 ⁶	100.0	100.0	100.0	5.0	Australia
243,440	...	86	19,002	268,005	14.1	49	3,315	14.0	100.0	100.0	100.0	5.8	Austria
55,794	7.9	42	13,630	127,248	9.3	17	1,532	14.2	98.8	99.5	98.2	3.4	Azerbaijan
...	...	1 ¹⁰	160 ^{1, 10}	3,463 ^{1, 10}	21.6 ^{1, 10}	18	1,198	15.2 ⁶	95.5	94.7	96.4	4.0	Bahamas, The
3,522	...	2	696	14,187	20.4	33	2,225	12.5 ⁶	87.7	92.5	83.0	4.4 ¹	Bahrain
126,355	15.0	13 ¹¹	61,321	877,335	14.3	6	667	3.7	41.1	50.3	31.4	2.3	Bangladesh
...	...	4	339	11,226	33.1	38	4,143	11.2	99.7	99.7	99.7	7.9	Barbados
138,593	9.4	58	21,684	337,000	15.5	62	3,413	12.5	99.6	99.8	99.4	2.1	Belarus
...	...	226	26,454	298,387	11.3	61	2,888	33.0	100.0	100.0	100.0	6.2	Belgium
...	...	12 ¹	228 ¹	2,853	...	2	1,240	10.2	76.9	76.7	77.1	5.7	Belize
4,873 ¹³	17.2 ¹³	16 ¹³	962 ¹⁴	14,085 ¹⁴	14.6 ¹⁴	4	253	1.3	33.6	46.4	22.6	3.3	Benin
...	...	1	...	544	...	62	...	26.8 ⁶	98.0	98.0	98.0	3.7 ¹	Bermuda
1,822 ³	12.2 ³	14	321	3,381	10.5	...	448	...	42.2	56.2	28.1	5.9	Bhutan
...	...	...	13,929	298,668	21.4	39	3,537	16.7 ¹⁵	86.5	92.9	80.4	6.5	Bolivia
...	...	56 ¹	2,838	34,477	12.1	...	901	...	85.5	96.5	76.6	...	Bosnia and Herzegovina
2,899 ¹⁶	...	1	697 ¹⁷	12,286 ¹⁶	...	5	731	1.4	78.9	76.1	81.5	8.6 ¹	Botswana
483,670	...	1,180	197,712	2,694,245	13.5	21	1,530	6.8	88.4	88.3	88.6	4.4	Brazil
3,024	5.6	2	392	3,805	9.7	13	1,090	12.9	92.7	95.2	90.2	3.0	Brunei
217,313	10.3	42	18,710	215,712	11.5	39	2,741	15.0	98.6	99.1	98.2	3.6	Bulgaria
9,539	13.0	9	632	9,531	15.1	1	84	...	26.6	36.8	16.6	3.6 ¹⁴	Burkina Faso
...	...	8	379	5,037	13.3	2	92	0.6	58.9	66.8	51.9	4.0	Burundi
9,983 ¹	4.3 ¹	...	1,001 ¹	8,901 ¹	8.9 ¹	3	75	1.0	73.6	84.7	64.1	1.9	Cambodia
150,829	13.4	...	3,166	81,318	25.7	6	510	...	67.9	77.0	59.8	4.1	Cameroon
298,071 ¹⁸	27.1 ¹⁸	274	61,633	1,220,651	19.8	60	3,977	17.1	100.0	100.0	100.0	6.9	Canada
1,856	15.0	...	290	2,215	7.6	...	492	...	75.7	85.4	68.0	8.1	Cape Verde
...	...	1	154 ¹⁶	6,474 ¹⁶	42.0 ¹⁶	2	160	2.0	48.6	64.8	33.5	2.3 ¹⁹	Central African Republic
3,668	...	8	288 ²⁰	5,901 ¹⁷	...	1	71	...	25.5	40.6	12.7	2.0	Chad
386,832	32.5	...	...	567,114	...	42	3,555	11.5	95.9	96.1	95.7	4.3	Chile
10,306,000	21.1	1,592	725,000	11,086,000	15.3	16	860	3.7	90.9	95.1	86.5	2.3	China
...	...	266 ²⁰	75,568 ²⁰	673,353 ²⁰	8.9 ²⁰	24	1,768	10.4	94.2	93.7	94.6	5.4	Colombia
69	3.5	...	125	1,707	13.7	2	298	0.2	56.2	63.5	49.1	3.9	Comoros
...	...	...	3,788	60,341	15.9	2	124	1.3	82.8	88.9	77.1	1.0	Congo, Dem. Rep. of the
23,606 ¹⁴	13.5 ¹⁴	...	1,341 ⁴	16,602 ⁴	12.4 ⁴	4	582	3.0	80.7	87.5	74.4	4.4	Congo, Rep. of the
53,809	24.0	52	3,874	77,283	19.9	19	1,910	12.7	95.8	95.7	95.9	5.2	Costa Rica
11,037 ⁴	7.8 ⁴	...	1,657 ⁴	87,565	...	7	396	0.9	48.1	60.1	38.2	4.8	Côte d'Ivoire
150,792 ²¹	11.6 ²¹	89 ¹⁶	7,622 ¹⁶	100,297 ¹⁶	13.2 ¹⁶	39	2,257	11.9	98.1	99.3	97.1	4.6	Croatia
244,253 ²⁰	9.0 ²⁰	64	24,199	235,997	9.8	34	2,110	5.9	99.8	99.8	99.8	8.7	Cuba
4,497	7.5	32	1,077	11,934	11.1	23	1,702	22.3	96.8	98.6	95.1	6.4	Cyprus ²²
399,524	12.5	193 ²³	17,458	264,123	15.1	36	2,589	9.5	100.0	100.0	100.0	4.6	Czech Republic
172,225	...	162	9,600 ²⁰	183,694	...	67	3,410	25.8	100.0	100.0	100.0	8.6	Denmark

Education (continued)

country	year	first level (primary)					general second level (secondary)					vocational second level ^{1a}	
		schools	teachers ^b	students ^c	student/ teacher ratio	net enroll- ment ratio ^d	schools	teachers ^b	students ^c	student/ teacher ratio	net enroll- ment ratio ^d	schools	teachers ^b
Djibouti	2000–01	73	1,127	37,938	33.7	36	26 ^{5, 19}	628 ^{4, 5}	16,121 ⁵	...	21	5	5
Dominica	2002–03	632 ¹	550	10,460	19.0	81	152 ¹	441	7,455	16.9	72	...	19
Dominican Republic	2002–03	4,001 ⁴	35,867	1,374,624	38.3	96	...	24,723 ⁵	658,164 ⁵	26.0 ⁵	36	5	5
East Timor	2003	...	4,080	183,600	45.0	...	...	1,103	38,180	34.6	20	...	...
Ecuador	2002–03	17,367 ¹⁴	83,736	1,987,465	23.7	99	...	73,284 ⁵	972,777 ⁵	13.3 ⁵	50	...	5
Egypt ²⁴	2002–03	24,198	533,831	11,433,939	21.4	91	1,942	91,458	1,249,706	13.7	81	1,959	151,792
El Salvador	2000	5,090	26,209	1,212,622	46.3	90	...	9,255 ²⁰	147,867	...	49	...	...
Equatorial Guinea	1998	483	1,322	74,940	56.7	84	...	763	18,602	24.6	26	...	122 ¹³
Eritrea	2001–02	695	6,706	330,278	49.3	46	196	2,671	151,065	56.6	22	12	174
Estonia	2002–03	592	15,762 ¹¹	200,500	...	95	284	10,361	106,000	10.2	88	79	1,779 ¹¹
Ethiopia	1999–2000	11,490	115,777	6,462,503	55.8	51	410	13,154	571,719	43.5	18	62	1,309
Faroe Islands	2001–02	38	...	5,579	...	...	23	...	2,019	...	...	11	...
Fiji	2003	712	5,127	142,531	27.8	100	157	3,935	68,178	17.3	76	64	1,023 ¹⁶
Finland	2003	3,808	43,783 ¹⁶	597,414	...	98	440	7,480 ¹⁶	121,816	...	94	340	19,698 ¹⁶
France	2000–01	39,131 ¹⁴	211,192	3,839,770	18.2	99	11,052 ¹⁴	483,493	5,399,433	11.2	94	...	...
French Guiana	2001–02	92	1,871 ¹²	22,851	...	...	36	1,919	21,439	11.2	...	...	210 ¹⁴
French Polynesia	2000–01	173	2,811 ¹⁴	26,249	...	100	82	2,035 ²¹	24,743	...	64	...	316 ²
Gabon	2002–03	1,175	7,764	279,816	36.0	78	88	2,504	97,604	39.0	...	11 ⁴	412 ⁴
Gambia, The	2002–03	331 ²¹	4,708	178,288	37.9	79	85 ²¹	2,349	59,793	25.5	33	...	...
Gaza Strip ²⁵	2002–03	...	...	...	...	...	...	...	...	...	...	...	...
Georgia ²⁷	2003–04	3,148 ⁷	69,700 ⁷	654,600 ⁷	9.4 ⁷	77	7	7	7	7	74	85	2,146 ¹⁴
Germany	2002–03	17,829 ²¹	235,179	3,303,737	14.0	83	19,668 ²¹	515,596	6,716,720	13.1	88	9,754 ²¹	79,792
Ghana	2003–04	13,115 ²¹	71,330	2,678,912	37.6	59	8,906 ²¹	51,875	1,257,998	24.2	36 ²¹	99	453
Greece	2002–03	6,018	52,788	647,642	12.3	94	3,162	53,366	576,613	10.8	86	602	16,658
Greenland	2001–02	87 ⁷	1,191 ⁷	11,368 ⁷	9.5 ⁷	...	7	7	7	7	...	...	...
Grenada	2002–03	581 ⁴	888	16,598	18.7	84	19 ⁴	740	14,860	20.1	96	...	...
Guadeloupe	2001–02	348 ¹⁷	2,984	38,092 ¹³	...	...	88 ⁵	3,955 ⁵	51,366 ^{3, 5}	...	...	5	5
Guam	2000–01	24	1,063	17,001	16.0	...	11	1,010	18,217	18.0	...	2	370 ³
Guatemala	2002–03	17,905 ¹⁷	68,901	2,075,694	30.1	87	3,118 ^{5, 17}	44,435 ⁵	434,830 ⁵	9.8 ⁵	30	5	5
Guernsey ²⁷	2004	10	600 ⁷	9,000 ⁷	15.0 ⁷	...	6	7	7	7	...	...	...
Guinea	2002–03	5,765	23,859	1,073,458	45.0	66	557	8,360	301,491	36.1	21	41	1,268 ²⁰
Guinea-Bissau	2000–01	...	3,518	155,033	44.1	45	...	1,783	25,648	14.4	9	...	...
Guyana	2002–03	428 ²⁸	4,202	111,854	26.6	99	109 ²⁸	3,321	69,426	20.9	78	728	512 ²⁸
Haiti	2002–03	360	30,205 ⁴	1,110,398 ⁴	36.8 ⁴	26	144	...	195,418 ⁴	...	22 ⁴	18	...
Honduras	2001	9,746	32,568	1,109,242	34.0	87	1,000	15,647	195,072	12.5	21 ¹⁷	...	...
Hong Kong	2002–03	803	23,988	468,800	19.5	98	542	25,742	471,100	18.3	74	1	1,008
Hungary	2003–04	3,747	89,784	913,000	10.2	91	1,622	38,479	531,400	13.8	94	622	9,716
Iceland	2002	193	4,437	44,695	10.1	100	36	2,258	21,379	9.5	86	...	...
India	2001–02	664,041	1,928,075	113,883,060	59.0	88	311,061	2,486,715	64,882,221	26.1	...	...	...
Indonesia	2001–02	148,516	1,164,808	25,850,849	22.2	92	28,627	700,976	10,490,634	15.0	54	4,522	139,359
Iran	2002–03	68,627	297,711	7,028,924	23.6	86	49,008	352,518	8,694,127	24.7	72	69	970
Iraq	2003–04	11,066	206,953	4,280,602	20.7	91	2,968	74,681	1,454,775	19.5	37	259	7,677
Ireland	2000–01	3,286	22,850	439,560	19.2	96	419	12,476	197,376	15.8	83	247	5,788
Isle of Man	2001	32	...	6,611	...	...	5	...	5,374	...	...	...	...
Israel	2002–03	2,178	60,600	758,798	12.5	19	1,768	75,938	451,027	5.9	89	180	...
Italy	2002–03	18,854 ²⁹	256,650	2,778,877	10.8	100	7,906 ²⁹	410,577	3,829,583	9.3	91	6,637 ²⁹	307,279 ²⁹
Jamaica	2002–03	788 ²	10,968	325,302	29.7	95	135 ¹¹	11,315 ⁵	229,701 ⁵	20.3 ⁵	75	...	...
Japan	2003	23,633	414,000	7,227,000	17.5	100	16,584	511,000	7,558,000	14.8	100	62 ¹	99,862 ¹⁶
Jersey	2002	21	...	7,380	...	...	10	...	5,715	...	...	...	...
Jordan	2002–03	2,708	55,900	1,222,400	21.9	92	912	15,200	179,800	11.8	80	214	3,026
Kazakhstan ²⁷	2002–03	8,254	60,509	1,120,000	18.5	92	...	170,190	1,976,400	11.6	87	357	5,893
Kenya	2002–03	15,906 ⁴	166,758	5,590,143	33.5	67	2,878 ⁴	57,181	1,362,131	23.8	25	62 ⁴	...
Kiribati	2002–03	88 ³⁰	660	14,823	22.5	...	19 ³⁰	324 ³⁰	10,334 ³⁰	31.9 ³⁰	...	230	393 ³⁰
Korea, North	2000	4,886	59,000 ³¹	1,609,865	...	...	4,772	111,000 ³¹	2,181,524	...	...	...	...
Korea, South	2003	5,463	154,075	4,175,626	27.1	100	4,881	215,546	3,621,170	16.8	88	169	12,714
Kosovo	...	...	...	...	...	...	...	...	...	...	...	...	...
Kuwait ³²	2000–01	349 ⁸	17,385 ⁸	193,582 ⁸	11.1 ⁸	83	117 ⁹	9,234 ⁹	76,221 ⁹	8.3 ⁹	77	40	1,107
Kyrgyzstan	1999–2000	1,985	19,200	466,200	24.3	89	1,474 ¹³	36,600	633,900	17.3	...	53 ¹³	5,100
Laos	2002–03	7,896 ¹⁴	28,571	875,300	30.6	85	750 ³	13,421	348,309	30.0	35	...	350
Latvia	2004	1,026 ⁷	34,500 ⁷	301,000 ⁷	8.7 ⁷	86	7	7	7	7	88	103	3,666
Lebanon	2002–03	2,160 ¹⁴	26,428	449,311	17.0	91	...	34,613	350,211	10.1	...	275 ¹⁴	11,595
Lesotho	2002–03	1,249 ¹⁴	8,908	418,668	47.0	86	187 ⁴	3,384	81,130	24.0	23	9 ¹³	162
Liberia	1999–2000	...	10,047 ²¹	496,253	...	70	...	6,621 ²¹	84,643	...	18	...	...
Libya	2002–03	2,733 ¹³	122,020 ²⁰	743,997	...	96 ¹⁴	...	17,668 ²⁰	619,940	...	62 ¹⁴	480 ²⁰	...
Liechtenstein	2003–04	14 ²¹	242	2,266	9.2	...	12 ⁵	198 ^{5, 21}	4,113 ⁵	...	...	5	5
Lithuania	2002–03	2,172 ⁷	50,200 ⁷	594,300 ⁷	11.8 ⁷	91	7	7	7	7	94	82	4,700
Luxembourg	2002–03	...	2,966	32,004	10.8	90	...	3,279 ⁵	9,963	...	80	...	5
Macau	2003–04	82	1,615	39,378	24.4	87	47	1,666	41,830	25.1	74	2	125
Macedonia	2001–02	1,010	13,508	242,707	18.0	95	95	5,550 ⁵	92,068 ⁵	16.6 ⁵	53	5	5
Madagascar	2002–03	14,438 ²¹	55,309	2,856,480	51.6	79	...	19,471	436,211	22.4	...	...	1,092 ²¹
Malawi	2002–03	3,706 ²⁰	45,780	2,846,589	62.2	100	...	11,360	517,690	45.6	29	...	475 ²⁰
Malaysia	2003	7,498	174,189	2,996,780	17.2	93	1,682	113,032	1,951,225	17.3	70	86	7,126
Maldives	2000	230	2,221	68,242	30.7	92	298	2,212	52,327	23.7	51	...	...
Mali	2002–03	2,871 ²⁹	22,577	1,294,672	57.3	45	307 ²	4,549 ²⁰	311,717	...	52 ¹	...	21,731 ²¹
Malta	1999–2000	126	1,501	34,261	22.8	96	75	2,561	27,354	10.7	87	23	526
Marshall Islands	2002–03	100	703	10,957	15.6	84	16	202	3,147	15.6	65	...	...
Martinique	2001–02	273	3,280	53,347	16.4	...	78	4,257	51,057	12.0	...	15 ⁴	896 ⁴
Mauritania	2002–03	2,676 ²¹	9,606	394,401	41.1	68	...	2,980	81,278	27.3	16	...	257
Mauritius	2002–03	291	5,256	132,432	25.2	97	175	5,553	99,687	18.0	74	114	433
Mayotte	2001–02	112	555 ²	28,591	...	...	14	246 ²	15,626	...	...	2 ³	17 ³
Mexico	2001–02	99,230	609,654	14,843,400	24.3	99	39,691	536,579	8,600,700	16.0	63	6,610 ¹⁴	65,712
Micronesia	1997–98	171	1,486	25,915	18.6	...	24	418	6,809	16.2	...	...	...
Moldova	2003–04	1,576 ⁷	42,600 ⁷	578,800 ⁷	13.6 ⁷	79	7	7	7	7	69	83	2,200
Monaco	2002–03	7	127 ¹⁴	1,899	...	...	4	192 ¹⁴	3,140	...	...	4 ¹⁴	891 ¹⁴
Mongolia	2001–02	700 ⁷	20,076 ⁷	510,300 ⁷	25.4 ⁷	79	7	7					

		third level (higher)							literacy (2000–04)			public expenditure on education (percent of GNP) ^d	country
students ^c	student/teacher ratio	institutions	teachers ^b	students ^c	student/teacher ratio	gross enrollment ratio ^d	students per 100,000 population ^d	percent of population age 25 and over with post-secondary education ^d	over age 15				
									total (%)	male (%)	female (%)		
5	5	1 ¹⁹	13 ¹⁹	476	...	1	110	...	65.5	76.1	55.5	3.4	Djibouti
406	21.4	2 ²¹	34 ²	461 ¹⁴	14.2 ²	...	630	2.8	94.0	...	...	5.5	Dominica
5	5	...	11,111	286,957	25.8	35	3,351	12.9	87.7	88.0	87.3	2.4	Dominican Republic
...	...	...	...	4,500 ¹⁶	...	12	552	1.4	58.6	65.0	52.0	...	East Timor
5	5	21 ¹⁴	12,856 ¹⁴	115,554	...	20	894	15.5	91.0	92.3	89.7	1.1	Ecuador
2,214,152	14.6	293	...	1,239,441	...	29	1,842	4.6	55.6	67.2	43.6	4.8	Egypt ²⁴
...	...	...	7,501	114,675	15.3	17	1,827	6.4	79.7	82.4	77.1	2.9	El Salvador
2,105 ¹³	17.3 ¹³	...	58 ¹³	578 ¹³	10.0 ¹³	3	164	...	84.2	92.1	76.4	2.2	Equatorial Guinea
1,992	11.4	1 ²¹	198 ²¹	3,096 ²¹	15.6 ²¹	2	89	1.7	58.6	69.9	47.6	3.3	Eritrea
28,095	...	47	3,052	63,625	20.8	66	4,683	14.1	99.8	99.8	99.8	6.0	Estonia
12,551	9.6	6	1,779	40,894	23.0	2	64	1.4	41.5	49.2	33.8	4.6	Ethiopia
2,195 ¹⁴	...	1	19 ¹⁴	173 ¹⁴	9.1 ¹⁴	...	397	...	99.0	99.0	99.0	...	Faroe Islands
9,706	...	1	365 ¹¹	15,393 ^{11, 25}	11.3 ¹¹	12	1,856 ²⁵	6.7	93.7	95.5	91.9	5.9	Fiji
304,688	...	20 ¹¹	7,728 ¹⁶	169,846	...	88	3,258	28.0	100.0	100.0	100.0	6.4	Finland
...	...	1,062 ⁴	134,107	2,119,149	15.8	56	3,594	11.4	98.8	98.9	98.7	5.6	France
2,404 ¹⁴	11.4 ¹⁴	1	194	637	3.3	...	375	6.7	83.0	83.6	82.3	...	French Guiana
3,730 ²	11.8 ²	1	54	1,600	29.6	1	681	...	95.0	94.9	95.0	9.8 ²⁰	French Polynesia
7,587	...	24, 23	585 ²³	7,473 ²³	12.6 ²³	7	606	...	71.0	80.0	62.0	4.6	Gabon
428	...	4 ²¹	155 ¹³	1,169 ²¹	...	2	98	...	40.1	47.4	33.1	3.0	Gambia, The
...	...	...	...	...	...	...	...	...	...	...	...	...	Gaza Strip ²⁶
20,355	...	26	7,390	123,900	16.8	38	2,702	...	99.5	99.7	99.4	4.3	Georgia ²⁷
1,729,839	21.7	296 ²¹	284,116	2,334,569	8.2	51	2,829	23.0	100.0	100.0	100.0	4.6	Germany
18,672	41.2	15 ²¹	1,432 ¹⁴	25,372 ¹⁴	17.7 ¹⁴	3	147	...	54.1	62.9	45.7	4.2	Ghana
147,612	8.9	18	20,932 ¹⁸	272,037 ¹⁸	13.0 ¹⁸	74	2,480	9.0	91.0	94.0	88.3	4.0	Greece
...	...	1	14	100	7.1	...	177	...	100.0	100.0	100.0	...	Greenland
...	...	1	111	1,106	10.0	...	1,090	1.5	85.0	...	...	5.7	Grenada
5	5	1	168	4,144	24.7	9	958	5.2	90.1	89.7	90.5	...	Guadeloupe
4,369 ²¹	...	1	192 ³	3,533 ²¹	...	...	2,343	39.9	99.0	99.0	99.0	8.5 ²¹	Guam
5	5	...	13,105 ¹⁷	111,739	...	8	954	4.0	69.1	75.4	63.3	1.7 ⁴	Guatemala
...	...	1	...	...	...	...	...	...	100.0	100.0	100.0	...	Guernsey ²⁷
7,172	...	7	860	16,361	19.0	1	76	...	41.1	55.1	27.0	2.0	Guinea
...	...	...	...	...	...	...	...	0.1	36.8	53.0	21.4	2.3	Guinea-Bissau
6,266 ²⁸	12.2 ²⁸	1	371 ²⁸	4,848	...	6	645	6.7	98.6	99.0	98.2	4.5	Guyana
...	...	2	899 ^{4, 23}	12,348 ^{4, 23}	13.7 ^{4, 23}	10	169	0.7	51.9	53.8	50.0	1.1	Haiti
...	...	10	3,704	64,142	17.3	15	982	3.1	80.0	79.8	80.2	3.6 ¹⁷	Honduras
59,400	58.9	9	5,620	86,900	14.9	31	1,280	13.4	93.5	96.5	90.2	4.3	Hong Kong
134,800	13.9	68	23,798	390,458	16.4	51	3,854	10.1	99.3	99.4	99.3	5.8	Hungary
...	...	11	2,620	13,884	5.3	63	4,820	19.9	100.0	100.0	100.0	7.8	Iceland
...	...	42,057	758,706	10,453,229	13.8	12	1,042	7.3	61.0	73.4	47.8	4.1	India
2,027,464	5	1,634 ²⁸	194,828 ²⁸	3,126,307 ²⁸	16.0 ²⁸	16	1,514	2.2	87.9	92.5	83.4	1.3	Indonesia
9,729	10.0	72 ⁴	84,579	1,673,757	19.8	21	2,476	...	77.0	83.5	70.4	4.9	Iran
128,981	16.8	65	14,700	288,670 ¹¹	...	14	1,198	4.1	58.0	70.7	45.0	...	Iraq
96,842	16.7	29	6,925	119,131	17.2	52	3,134	21.0	100.0	100.0	100.0	5.3	Ireland
...	...	1	...	1,128 ¹⁷	...	...	1,512	...	...	...	...	...	Isle of Man
138,361	...	7	10,171	219,763	21.6	57	3,458	11.2	96.9	98.3	95.6	7.8	Israel
2,565,029 ²⁹	8.3 ²⁹	74 ¹⁸	54,856 ¹⁸	1,913,352	...	57	3,355	3.8	98.5	98.9	98.1	4.8	Italy
5	5	1	2,006	45,770	22.8	18	1,717	4.2	87.6	83.8	91.4	5.3	Jamaica
1,047,720 ¹⁶	10.5 ¹⁶	1,227	170,000	3,054,000	18.0	51	2,395	34.4	100.0	100.0	100.0	3.5	Japan
...	...	1	...	582 ³⁰	...	...	667	...	100.0	100.0	100.0	...	Jersey
43,861	14.5	22	6,036	153,965	25.5	35	3,076	9.4	89.9	95.1	84.7	5.0	Jordan
250,900	42.6	180	37,600	658,100	17.3	45	4,365	10.0	99.5	99.7	99.2	3.2	Kazakhstan ²⁷
27,687	...	14 ²³	4,392 ^{23, 23}	98,607 ²³	...	3	322	...	73.6	77.7	70.2	7.1	Kenya
1,501 ³⁰	38.5 ³⁰	...	...	...	...	...	...	...	90.0	...	...	6.3 ¹⁴	Kiribati
...	...	519 ¹⁴	27,000 ³¹	390,000 ³¹	14.4 ³¹	...	...	...	95.0	...	...	...	Korea, North
949,515	74.7	742 ¹	163,606	3,223,431	19.7	85	6,736	21.1	97.8	99.2	96.4	4.2	Korea, South
...	...	...	...	...	...	...	...	...	...	...	...	...	Kosovo
2,997	2.7	1	918	17,747	19.0	21	...	...	82.9	84.7	81.0	5.0	Kuwait ³²
52,200	10.2	44	8,400	159,200	19.0	42	3,282	...	98.7	99.3	98.1	3.2	Kyrgyzstan
5,053	14.4	9 ³	1,794	28,117	15.7	5	508	0.4	68.7	77.0	60.9	2.8	Laos
45,000	12.3	56	5,360	131,000	24.4	73	5,670	13.9	99.7	99.8	99.7	5.8	Latvia
46,271	4.0	20 ¹⁴	11,196	144,050	12.9	44	4,152	0.6	87.4	93.1	82.2	2.7	Lebanon
1,128	7.0	1	545	6,108	11.2	3	298	...	81.4	73.7	90.3	8.4	Lesotho
45,067	...	...	633 ²¹	44,107	...	2	1,483	...	55.9	72.3	39.3	5.7	Liberia
178,052	...	13	...	375,028	...	58	6,795	2.7	81.7	91.8	70.7	7.1	Libya
5	...	2	309	2,858 ³³	7.5	...	8,269	11.6	100.0	100.0	100.0	...	Liechtenstein
44,400	9.4	15	14,200	168,200	11.8	72	4,849	12.6	99.6	99.6	99.6	6.0	Lithuania
22,093	...	5	...	8,644 ³⁴	...	12	1,937	10.8	100.0	100.0	100.0	4.0	Luxembourg
2,349	18.8	7	1,164	13,680	11.8	81	2,460	5.9	91.3	95.3	87.8	3.0	Macau
5	...	30	1,519	45,624	30.0	28	2,263	8.7 ⁹	96.1	98.2	94.1	3.5	Macedonia
8,138 ²¹	7.5 ²¹	6 ²¹	1,857	32,593	17.6	2	190	1.5 ⁸	70.6	76.4	65.2	2.9	Madagascar
2,228 ²⁰	4.7 ²⁰	6 ²⁰	453	4,565	10.1	1	39	0.7	64.1	74.9	54.0	6.1	Malawi
38,387	5.4	48 ¹⁴	34,955	632,309	18.1	29	2,524	6.8	88.7	92.0	85.4	8.7	Malaysia
...	...	...	...	...	...	...	...	...	96.3	96.2	96.4	6.4 ²¹	Maldives
39,754	...	7 ²¹	1,312 ²⁹	28,332	...	3	268	...	19.0	26.7	11.9	3.0	Mali
3,447	6.6	1	754	6,362	8.4	30	1,631	6.2 ⁶	87.9	86.4	89.2	4.6	Malta
...	...	1	...	3,131	...	...	5,841	2.6	91.2	92.4	90.0	9.1	Marshall Islands
7,661 ²⁰	...	1	99 ¹³	11,755 ²⁰	...	...	3,077	5.5 ⁸	97.6	97.2	98.0	...	Martinique
3,129	12.2	4	353	9,198	26.1	4	351	1.3	51.2	59.5	43.4	3.7	Mauritania
7,326	16.9	3	461 ²¹	16,764	...	15	1,384	1.9	84.3	88.2	80.5	4.7	Mauritius
1,733	...	...	...	...	...	...	...	...	91.9	...	...	...	Mayotte
1,448,550	22.0	4,183	216,804	2,147,100	9.9	22	2,115	11.0 ⁶	90.3	92.0	88.7	5.4	Mexico
...	...	1	71	1,884	26.5	...	1,744	...	92.4	92.9	91.9	6.2	Micronesia
22,800	10.4	100	7,7										

Education (continued)

country	year	first level (primary)					general second level (secondary)					vocational second level ^{1a}	
		schools	teachers ^b	students ^c	student/ teacher ratio	net enroll- ment ratio ^d	schools	teachers ^b	students ^c	student/ teacher ratio	net enroll- ment ratio ^d	schools	teachers ^b
Montenegro	2006–07	455	4,876	75,179	15.4	...	47	2,245	31,627	14.1	...	21	...
Morocco	2002–03	6,565 ^{2b}	135,199	4,101,157	30.3	90	1,664 ^{2b}	87,887	1,679,077	19.1	37	69 ^{2b}	5,013
Mozambique	2001–02	8,165	38,762	2,555,975	65.9	55	75 ¹⁴	13,916	381,619	27.4	12	25 ¹⁴	862
Myanmar (Burma)	2002–03	35,877 ²¹	149,001	4,889,325	32.8	84	2,091 ²¹	73,062	2,382,608	32.6	35	103 ⁴	2,462 ⁴
Namibia	2002–03	1,362 ¹⁷	14,330	404,783	28.2	78	114 ¹³	5,869	138,099	23.5	44	17 ¹³	56 ²
Nauru	2002	5	64	1,566	24.5	81	4	40	609	15.2	...	1	63 ⁰
Nepal	2001–02	24,943	96,659	3,853,618	39.9	71	11,453	57,165	1,690,198	30.0	...	...	1,025
Netherlands, The	2002–03	7,039	...	1,290,625	...	99	692	72,296	925,726	12.8	89	137	35,853
Netherlands Antilles	2002–03	83 ²⁹	1,145	22,687	19.8	88	23 ²⁹	639	9,180	14.4	68	10 ²⁹	542
New Caledonia	2001	289	1,837	36,996	20.1	98	64	2,371	29,036	12.2	72	14 ²⁰	...
New Zealand	2003	2,177	23,358	456,782	19.6	100	333	15,596	257,586	16.5	93	24	4,714
Nicaragua	2002–03	7,224 ¹⁴	26,226	923,391	35.2	86	451 ¹³	10,401	364,012	35.0	39	...	899
Niger	2001–02	5,975	18,441	760,987	41.3	38	193	2,259	81,731	36.2	6	49	1,375
Nigeria	2002	49,343	537,741	29,575,790	55.0	67	10,000	187,126	7,485,072	40.0	29	...	...
Northern Mariana Islands	2001–02	377	728 ⁷	13,323 ⁷	18.3 ⁷	...	7	7	7	7	...	...	...
Norway	2002–03	3,248	42,177	432,618	10.3	100	696 ^{5, 29}	44,230 ⁵	385,009 ⁵	8.7 ⁵	96	5	5
Oman	2002–03	294 ²⁹	14,911	314,064	21.1	72	177 ²⁸	16,941	279,302	16.5	69	15 ²⁹	1,072 ³⁰
Pakistan	2000–01	165,700 ¹²	373,900 ¹²	20,999,000 ¹²	56.2 ¹²	59	31,600	320,100	6,576,000	20.5	...	580	7,062
Palau	2001–02	23	235	3,033	12.9	96	6	132	1,168	8.8	...	...	...
Panama	2002–03	2,866 ¹⁴	17,296	419,904	24.3	100	417 ¹⁴	15,613	147,878	9.5	63	...	5,664
Papua New Guinea	1999	2,790 ⁴	16,297	594,444	36.5	74	135 ³	3,046	74,042	24.3	24	117 ³	878 ²
Paraguay	2002–03	7,456 ¹⁷	35,709	962,661	27.0	89	1,844 ¹⁷	43,835	474,538	10.8	51	...	...
Peru	2002	33,734	177,257	4,219,800	23.8	100	9,168	139,349	2,302,099	16.5	69	2,425 ⁴	12,293 ⁴
Philippines	2002–03	41,267	337,082	12,962,745	38.5	94	7,893	119,235	6,032,440	50.6	59	...	...
Poland	2002–03	14,765	273,562	2,983,070	10.9	98	6,776	230,611	2,714,203	11.8	92	7,129	84,551
Portugal	2002–03	11,910	69,109	767,862	11.1	100	664	74,185	660,419	8.9	85	218	13,117
Puerto Rico	1998–99	2,101 ⁷	39,328 ^{4, 7}	350,714	...	...	7	7	258,841	...	...	...	...
Qatar ²⁷	2002–03	174 ²⁰	5,684	66,473	11.7	95	123 ⁴	4,990	51,331	10.3	82	3 ²⁰	121
Réunion	2002–03	357	...	76,954	...	...	119	6,343 ²¹	100,020	...	...	...	1,120 ²⁰
Romania	2002–03	12,456	154,197	2,198,312	14.3	89	1,388	60,988	740,404	12.1	81	113	7,559
Russia	2001–02	66,833 ⁷	1,350,200 ⁷	19,363,173 ⁷	14.3 ⁷	90	7	7	7	7	...	3,872	...
Rwanda	2002–03	1,710 ²	27,319	1,636,563	59.9	87	...	7,056	189,153	26.8	82	...	...
St. Kitts and Nevis ²⁷	2001–02	24	301	5,608	18.6	100	7	389	4,445	11.4	95	...	...
St. Lucia	2000–01	82	1,052	28,618	27.2	99	18	678	12,865	19.0	76	1	27
St. Vincent and the Grenadines	2002–03	60	1,061	18,629	17.6	90	21	384	7,909	20.6	58	4	53
Samoa	2002–03	155 ⁴	1,121	30,164	26.9	98	...	1,074	22,941	21.4	62	...	...
San Marino	2002–03	14	242	1,343	5.5	...	7 ⁵	227 ⁵	2,162 ⁵	8.7 ⁵	...	5	5
São Tomé and Príncipe	2001–02	71 ²¹	881	28,780	32.7	97	11 ²¹	415 ¹⁴	7,327	...	29	...	11
Saudi Arabia	2002–03	12,815	198,181	2,342,214	11.8	54	10,270	165,152	1,927,009	11.7	53	95	6,128
Senegal	2002–03	5,670	26,325	1,287,093	48.9	58	579	7,601	306,026	40.3	16 ¹⁴	12 ²⁸	384 ²⁸
Serbia	2004–05	3,832 ³⁸	38,894 ³⁸	672,472 ³⁸	17.3 ³⁸	...	146	6,059	159,736	26.4	...	77	1,475
Seychelles	2003	26	675	9,477	14.0	100	12	552	7,551	13.7	100	11	193
Sierra Leone	2000–01	2,704	14,932	554,308	37.1	...	495	5,264	134,113	25.5	...	44 ³⁵	709 ³⁵
Singapore	2003	201 ¹¹	12,025	299,939	24.9	93	180 ¹¹	10,830	206,426	19.1	44	10 ¹¹	1,956
Slovakia	2002	2,396	39,745 ²⁹	602,360	...	86	220	6,259 ²⁹	93,283	...	88	605	17,887
Slovenia	2002–03	811	6,884	87,085	12.7	93	143	8,482	103,538	12.2	93	...	5,986
Solomon Islands	2002	520 ¹³	2,514 ¹³	55,093	...	...	23 ¹³	618 ¹³	46,082	...	...	1 ¹³	...
Somalia	1990	1,125	8,208	377,000	20.9	10	82	2,109	44,000	20.3	3	21	498
South Africa	2000	17,213	183,639	6,266,223	34.1	89	10,547 ³⁹	177,084 ³⁹	5,588,866 ³⁹	31.6 ³⁹	66	187 ¹³	10,807 ¹³
Spain	2001–02	8,547	170,891	2,475,027	14.5	100	4,319 ⁵	264,484 ⁵	3,116,895 ⁵	11.8 ⁵	96	5	5
Sri Lanka	2000–01	10,977 ⁷	199,948 ⁷	4,337,161 ⁷	21.7 ⁷	...	7	7	7	7	...	36 ²¹	574
Sudan, The	1999–2000	11,923	117,151	3,137,494	26.8	54	1,694	21,114	401,424	19.0	...	...	761 ¹⁴
Suriname	2002–03	308 ²⁹	3,324	64,659	19.5	97	141 ²⁹	1,334	23,034	17.3	64	1	1,380
Swaziland	2001–02	541	6,594	212,064	32.2	75	182	3,647	61,335	16.8	32	5	228 ¹³
Sweden	2003–04	5,041 ⁷	110,157 ⁷	1,211,017 ⁷	11.0 ⁷	100	7	7	7	7	100	...	...
Switzerland	2001–02	...	39,363	536,423	13.6	99	...	36,767	375,424	10.2	87	...	11,239
Syria	2000	11,482	121,880	2,774,922	22.8	98	2,911	63,889	955,290	15.0	42	587	15,103
Taiwan	2003–04	2,638	102,793	1,912,791	18.4	...	1,192 ⁵	99,938 ⁵	1,745,073 ⁵	17.7 ⁵	...	5	5
Tajikistan	2001–02	660	100,200 ⁷	1,520,000 ⁷	15.2 ⁷	94	2,661	7	7	7	83	56	...
Tanzania ⁴²	2002–03	11,339 ²¹	112,860	5,981,338	53.0	82	491 ¹³	20,277	322,400	15.9	5	40 ¹³	1,062 ²⁰
Thailand	2003–04	31,080	295,484	6,112,887	20.7	85	2,318 ³⁵	194,298	4,385,297	22.6	...	679 ³⁵	21,500
Togo	2002–03	4,701 ²¹	27,504	975,063	35.5	91	314 ³⁵	9,001	334,864	37.2	27	...	653 ¹⁴
Tonga	1999	117	745	16,206	21.8	100	39	961	13,987	14.6	72	5	67
Trinidad and Tobago	2002–03	478 ¹⁴	7,623	141,036	18.5	91	101 ¹⁴	5,555	105,330	19.0	65	...	145
Tunisia	2001–02	4,518	60,566	1,325,707	21.9	97	1,356	57,821	1,074,391	18.6	...	...	237 ²⁰
Turkey	2000	36,072	345,015	10,480,700	30.4	86	2,747	73,418	1,487,400	20.3	51	3,544	71,665
Turkmenistan	1995	1,900 ⁷	72,900 ⁷	940,600 ⁷	12.9 ⁷	...	7	7	7	7	79	78	...
Tuvalu	2001–02	12 ²¹	56	1,427	25.5	...	21 ³	36	912	25.3	...	1	10 ³
Uganda	2001	12,280	127,038	6,900,916	54.3	...	2,400	30,425	539,786	17.7	17	...	2,094 ²¹
Ukraine	2003–04	22,100 ⁷	551,000 ⁷	6,044,000 ⁷	11.0 ⁷	84	7	7	7	7	85	953	11,438 ⁴⁴
United Arab Emirates	2001–02	...	18,704	285,473	15.3	83	...	17,563	224,740	12.8	71	91 ⁴	269
United Kingdom	2002–03	29,905 ¹⁸	262,390	4,488,162	17.1	100	...	326,095	4,404,569	13.5	95	...	157,751
United States	2002–03	118,531 ^{7, 18}	1,667,417	24,848,518	14.9	92	7	1,599,303	23,854,458	14.9	88	...	...
Uruguay	2002	2,402	16,699	362,902	21.7	90	405	26,779	269,205	10.1	73	124	8,160
Uzbekistan	2001	9,788 ⁷	454,400 ⁷	6,076,400 ⁷	13.4 ⁷	...	7	7	7	7	...	440 ²⁰	7,900
Vanuatu	2001–02	374 ⁴	1,241 ⁷	36,482	29.4	94	27 ²	7	8,743	...	28	2	80
Venezuela	2002–03	18,827 ¹⁸	186,658 ¹⁸	3,449,984	...	91	3,022 ¹⁸	61,781 ¹⁸	1,809,368	...	59	...	...
Vietnam	2002–03	13,092 ¹³	358,606	8,841,006	24.7	94	6,298 ¹³	351,900	8,955,994	25.4	65	451 ¹³	9,327
Virgin Islands (U.S.)	2000	289 ⁷	1,511 ⁷	25,620 ⁷	17.0 ⁷	...	7	7	7	7	...	—	—
West Bank ²⁶	2002–03	2,006 ⁷	35,287 ⁷	984,108 ⁷	27.9 ⁷	96	7	7	7	7	...	...	...
Western Sahara ²⁷	1995	40	925	32,257	34.9	...	13	1,267	10,541	8.3	...	...	...
Yemen ²⁷	2002–03	11,013 ¹³	113,812 ¹⁸	2,950,403	...	72	1,224 ⁴	14,083 ¹⁸	1,364,129	...	34	125 ⁴	1,406
Zambia	2002–03	4,221 ²¹	36,151	1									

			third level (higher)							literacy (2000-04)			public expenditure on education (percent of GNP) ^d	country
students ^c	student/teacher ratio	institutions	teachers ^b	students ^c	student/teacher ratio	gross enrollment ratio ^d	students per 100,000 population ^d	percent of population age 25 and over with post-secondary education ^d	over age 15					
									total (%)	male (%)	female (%)			
...	...	5	906	12,903	14.2	...	...	...	97.3	99.2	95.5	...	Montenegro
143,692	28.9	68 ²¹	10,064	276,018	27.4	11	951	...	50.7	63.3	38.3	6.6	Morocco	
20,880	24.2	3	954 ¹⁴	9,303 ²⁸	...	1	54	0.2 ⁶	46.5	62.3	31.4	2.5	Mozambique	
25,374 ⁴	10.3 ⁴	51 ²¹	17,089 ²¹	385,300 ²¹	22.5 ²¹	12	950	2.0	89.7	93.7	86.2	1.3	Myanmar (Burma)	
1,503 ¹³	...	71 ³	931	13,536	14.5	8	686	4.0	85.0	86.8	83.5	7.1	Namibia	
38 ³⁰	6.3 ³⁰	...	...	...	...	...	...	...	99.0	...	...	...	Nauru
20,546	20.0	2	4,925 ¹⁹	119,670	...	5	479	0.6	48.6	62.7	34.9	3.4	Nepal	
489,444	13.7	12 ²³	44,092	526,780	11.9	58	3,262	6.9 ⁶	100.0	100.0	100.0	5.3	Netherlands, The	
6,088	...	1	340	2,286	6.7	14	1,295	11.4	96.7	96.7	96.7	...	Netherlands Antilles	
5,916 ²⁰	...	420	55 ¹¹	2,069 ¹¹	37.6 ¹¹	5	981	10.5 ⁶	96.2	96.8	95.5	11.6	New Caledonia	
106,570	22.6	81 ¹	13,360	184,000	13.8	74	4,600	39.1	100.0	100.0	100.0	7.1	New Zealand	
18,939	21.1	108 ³⁰	6,547	100,363	15.3	18	1,949	4.0	76.7	76.8	76.6	3.2	Nicaragua	
18,400	13.4	22 ¹	355 ²¹	5,569 ²¹	15.7 ²¹	2	56	0.2	14.4	19.6	9.4	2.4	Niger	
...	...	158	35,115	947,538	27.0	8	770	...	66.8	74.4	59.4	0.7	Nigeria	
...	...	129	504 ²⁹	2,383 ²⁹	4.7 ²⁹	...	3,315	31.1	96.3	96.9	95.6	...	Northern Mariana Islands	
5	5	71	17,903	212,335	11.9	81	4,679	18.7	100.0	100.0	100.0	7.6	Norway	
16,472 ³⁰	15.4 ³⁰	123	631	19,864	31.5	8	867	3.6 ⁶	74.4	82.0	65.4	4.8	Oman	
75,000	10.6	1,187	41,673	1,087,999	25.6	3	777	2.5	48.6	61.7	35.2	1.8	Pakistan	
...	...	1	25	598	23.9	...	3,054	10.0	97.6	98.3	96.6	10.7	Palau	
103,350	18.2	141 ⁴	8,444	117,601	13.9	43	3,932	15.9	91.9	92.5	91.2	4.6	Panama	
9,941 ⁴	12.9 ²	23	815	13,761	16.9	2	264	...	57.3	63.4	50.9	2.4	Papua New Guinea	
44,516	...	111 ¹⁷	1,135 ¹⁷	146,982	...	27	2,661	5.3 ⁶	91.6	93.1	90.2	4.4	Paraguay	
270,576 ⁴	22.0 ⁴	2,161 ¹¹	57,874 ¹¹	1,495,957 ¹¹	25.8 ¹¹	32	5,764	20.4 ⁶	87.7	93.5	82.1	3.1	Peru	
...	...	1,603 ¹⁸	109,979	2,427,211	22.1	30	3,046	8.0	92.6	92.5	92.7	2.9	Philippines	
1,180,964	14.0	427	93,365	1,983,000	21.2	60	5,187	9.9	99.8	99.8	99.8	5.7	Poland	
105,753	8.1	316	36,187	400,000	11.1	56	3,849	7.7	92.2	94.8	90.0	5.9	Portugal	
...	...	44	...	171,625	...	...	4,539	28.7	94.1	93.9	94.4	7.8	Puerto Rico
557	4.6	1	650	7,826	12.0	22	1,146	13.3	89.2	...	...	3.6	Qatar ²⁷
13,547 ²⁰	12.1 ²⁰	1	286 ²¹	8,663 ²¹	30.3 ²¹	...	1,242	5.1 ⁶	88.4	86.3	90.2	...	Réunion	
332,070	43.9	125	29,619	596,297	20.0	35	2,731	7.1	97.3	98.4	96.3	3.6	Romania	
1,648,700	...	1,008	547,400	5,426,300	9.9	69	3,716	16.0 ⁶	99.4	99.8	99.2	3.8	Russia	
...	...	...	1,348	20,393	15.1	3	250	...	64.0	70.5	58.8	2.8	Rwanda
...	...	1	51 ³⁵	394 ³⁵	7.7 ³⁵	...	949	8.9	90.9	90.0	90.0	3.7	St. Kitts and Nevis ²⁷	
808 ³⁵	23.7 ³⁵	1	127	1,403	11.0	...	899	2.7 ⁶	90.1	89.5	90.6	8.2	St. Lucia	
1,715	32.3	...	...	...	...	...	...	2.6 ³⁶	96.0	...	...	10.5	St. Vincent and the Grenadines
...	...	121	28 ²¹	328 ²¹	11.7 ²¹	...	191	10.3 ⁶	98.7	98.9	98.4	4.8	Samoa	
5	5	1	27	950	35.6	...	3,338	7.0 ³⁷	98.7	98.9	98.4	...	San Marino	
40	3.6	1	27	183	6.8	1	128	1.9	73.0	85.0	62.0	3.8 ¹⁴	São Tomé and Príncipe	
68,434	11.2	92	23,350	525,344	22.5	25	2,455	...	79.4	87.1	69.3	8.2	Saudi Arabia	
3,897	...	223, 29	963 ^{23, 29}	22,157 ^{23, 29}	23.0 ^{23, 29}	4	226	...	39.3	51.1	29.2	3.7	Senegal	
159,736	26.4	...	10,374	218,508	21.1	...	...	...	...	...	...	...	Serbia
1,652	8.6	...	...	...	...	...	...	4.6	91.9	91.4	92.3	5.7	Seychelles
21,454	...	1	1,198	8,795	7.3	2	194	1.5	29.6	39.8	20.5	3.8	Sierra Leone	
23,708	12.1	81 ¹	7,318 ¹¹	111,538 ¹¹	15.2 ¹¹	39	2,776	17.8 ⁶	92.5	96.6	88.6	3.6	Singapore	
217,849	12.2	20	13,166	152,182	11.6	34	2,829	9.5	99.7	99.7	99.6	4.4	Slovakia	
86,638	14.5	49	3,109	87,205	28.0	68	4,369	10.4	99.7	99.7	99.6	6.1	Slovenia	
9,560	...	...	...	...	...	...	...	2.6	54.1	62.4	44.9	3.4	Solomon Islands
10,400	9.7	1	549 ¹⁹	4,640 ¹⁹	8.5 ¹⁹	1	70	...	24.0	36.0	14.0	0.4	Somalia	
140,531 ¹³	13.0 ¹³	21 ²³	27,099 ¹³	617,897 ¹³	22.8 ¹³	15	1,664	8.5 ⁶	82.4	84.1	80.9	5.4	South Africa	
5	5	...	98,587	1,508,116	15.3	62	3,703	13.5 ⁴⁰	97.7	98.6	96.8	4.5	Spain	
11,270	19.6	12	2,999	48,899	16.3	5	246	1.1	90.4	92.2	88.6	3.4	Sri Lanka	
26,421 ¹⁴	34.7 ¹⁴	19	1,417 ¹⁴	52,260 ¹⁴	36.9 ¹⁴	7	272	0.8	59.0	69.2	49.9	1.4	Sudan, The	
17,966	13.0	4	550	5,186 ²⁹	...	12	1,126	...	92.2	93.6	90.7	3.5	Suriname	
2,958 ¹³	13.0 ¹³	1	326	5,193	15.9	5	508	3.3	80.3	81.3	79.4	6.8	Swaziland	
...	...	71	37,692	385,323	10.2	83	4,301	26.0 ⁴¹	100.0	100.0	100.0	7.7	Sweden	
174,893	15.6	...	28,019	170,086	6.1	49	2,343	11.5	100.0	100.0	100.0	5.5	Switzerland	
134,473	8.9	4	5,664	155,137	27.4	16	980	...	82.9	91.0	74.2	3.1	Syria	
...	...	158	47,472	1,202,091	25.3	...	5,328	13.1 ⁶	94.6	97.6	91.4	5.2	Taiwan	
29,600	...	35	6,100	118,400	19.4	16	1,875	11.7	99.5	99.7	99.3	2.9	Tajikistan	
12,571 ²⁰	11.8 ²⁰	...	2,249	31,049	13.8	1	90	2.0	69.4	77.5	62.2	3.4 ²⁰	Tanzania ⁴²	
624,547	28.4	102 ¹⁴	65,548	2,251,453	34.3	38	3,558	5.1	92.6	94.9	90.5	4.7	Thailand	
9,076 ¹⁴	13.8 ¹⁴	1	443 ¹⁴	11,639 ¹⁴	26.3 ¹⁴	4	317	1.3	53.0	68.5	38.3	2.7	Togo	
755	11.3	12	192	225 ²	11.8 ²	4	234	2.8	98.9	98.8	99.0	5.0	Tonga	
2,550	17.6	31 ⁴	969	12,316	12.7	9	965	3.4	98.5	99.0	97.9	4.6	Trinidad and Tobago	
3,839 ²⁰	16.2 ²⁰	128	11,412	226,102	19.8	27	2,337	7.9 ⁴³	74.3	83.4	65.3	6.7	Tunisia	
875,200	12.2	1,273	67,880	1,607,400	23.7	28	2,384	10.8	88.3	95.7	81.1	3.7	Turkey	
26,000	...	15	...	29,435 ²⁰	...	22	689	...	98.8	99.3	98.3	3.9	Turkmenistan	
58 ¹⁹	...	...	...	...	...	...	...	2.9 ⁶	95.0	...	...	...	Tuvalu
38,500 ²¹	18.4 ²¹	...	4,908	71,544	14.6	3	298	1.8	68.9	78.8	59.2	2.6	Uganda	
326,213 ⁴⁴	28.5 ⁴⁴	1,007	177,644	2,269,800	12.8	62	4,761	...	99.6	99.7	99.2	5.5	Ukraine	
1,667	6.2	41 ⁴	2,948	56,401	19.1	35	1,617	8.6 ⁴³	77.3	75.6	80.7	2.4	United Arab Emirates	
5,202,508	33.0	148	101,040	2,287,830	22.6	64	3,857	...	100.0	100.0	100.0	5.2	United Kingdom	
...	...	4,197 ³⁰	1,167,305	16,611,711	14.2	83	5,764	45.2	95.5	95.7	95.3	5.6	United States	
65,567	8.0	6	10,524	98,798	9.4	37	3,063	17.2	97.7	97.3	98.1	2.6	Uruguay	
214,500	27.2	61	18,400	183,600	10.0	16	732	...	99.3	99.6	98.9	7.9	Uzbekistan	
892	11.2	1	27	675	25.0	4	351	5						

²⁶Data include Gaza Strip and West Bank. ²⁷Public schools only. ²⁸1999-2000. ²⁹2000-01. ³⁰2001. ³¹1988. ³²Government schools only; private education: 112 schools, 7,324 teachers, 128,204 students. ³³Includes 511 students abroad. ³⁴Includes 5,688 students abroad. ³⁵1993. ³⁶Employed only. ³⁷Age 14 and over. ³⁸2003-04. ³⁹Includes combined and intermediate schools. ⁴⁰Age 16 and over. ⁴¹Ages 16-74. ⁴²Mainland Tanzania only. ⁴³Age 10 and over. ⁴⁴2002-03.

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While *Britannica World Data* has long been based primarily on print sources, many rare in North American library collections, the burgeoning resources of the Internet can be accessed from any appropriately equipped personal computer (PC). At this writing, more than 100 national statistical offices had Internet sites and there were also sites for central banks, national information offices, individual ministries, and the like.

Because of the relative ease of access to these sites for PC users, uniform resource locators (URLs) for mainly official sites have been added to both country statements (at the end, in boldface) and individual Comparative National Statistics tables (at the end of the headnote) when a source providing comparable international data existed. Many sites exist that are narrower in coverage or less official and that may also serve the reader (on-line newspapers; full texts of national constitutions; business and bank sites) but space permitted the listing of only the top national and intergovernmental sites. Sites that are wholly or predominantly in a language other than English are so identified.

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Index

This index covers both *Britannica Book of the Year* (cumulative for 10 years) and *Britannica World Data*. Biographies and obituaries are cumulative for 5 years.

Entries of major article topics in the *Book of the Year* are cumulative for 10 years; an accompanying year in **dark type** gives the year the reference appears, and the accompanying page number in light type shows the page on which the reference appears. For example, "military affairs" **10:270; 09:270; 08:270; 07:258; 06:247; 05:248; 04:248; 03:277; 02:278; 01:276** indicates that military affairs appeared every year from **2001** through **2010**. Other references that appear with a page number but without a year are references for the current yearbook.

Indented entries under a topic refer by page number to some other places in the yearbook text where the topic is discussed. Names of people covered in biographies and obituaries are usually followed by the abbreviation "(biog.)" or "(obit.)" with the year in **dark type** and a page number in light type, e.g., Jackman, Hugh (biog.) **10:91**, or Cronkite, Walter (obit.) **10:122**. In the rare case where a person has both a biography and an obituary, both words appear under the main entry and are alphabetized accordingly, e.g.:

Samak Sundaravej
biography **09:104**
obituary **10:157**

References to illustrations are by page number and are preceded by the abbreviation *il.*

The index uses word-by-word alphabetization (treating a word as one or more characters separated by a space from the next word). Please note that "St." is treated as "Saint." "Mc" is alphabetized as "Mc" rather than "Mac."

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